

Colorectal Cancer Screening of African Americans by Internal Medicine Resident Physicians Can Be Improved with Focused Educational Efforts

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Colorectal cancer causes significant morbidity and mortality in the United States. African Americans are disproportionately affected by this malignancy. There is evidence to suggest that resident physicians inconsistently screen for colorectal cancer in African Americans, perhaps because of a deficiency in knowledge and limited resources. This study evaluated internal medicine resident physicians' colorectal screening practices in African Americans prior to and following a focused educational intervention.

A medical record review of internal medicine resident physicians' adherence to colorectal cancer screening recommendations was conducted. Physicians' performance of rectal exams, fecal occult blood testing, flexible sigmoidoscopy and colonoscopy was evaluated for six months prior to and six months following an educational intervention that focused upon issues related to racial disparities in colorectal cancer. Statistical significance was assessed using Fischer's exact test.

There were 116 patients included in the preintervention assessment and 132 patients included in the postintervention assessment. There was no statistical significance in the rate at which rectal exams ($p=0.6605$) and fecal occult blood testing ($p=0.7748$) were performed prior to and following the educational initiative. However, there was a statistically significant difference in the rate at which endoscopic assessments ($p<0.0001$) were performed.

Educational interventions that are focused upon racial disparity in colorectal cancer may improve resident physicians' performance of endoscopic exams in African Americans. Continued effort to enhance resident physicians' colorectal cancer screening practices in African Americans is important.

Key words: colorectal cancer screening ■ African Americans ■ resident physicians

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INTRODUCTION

Colorectal cancer is the third most common type of nonskin cancer and the second most common cause of cancer death in the United States. Each year, >147,000 new cases are diagnosed, and >57,000 people die from colorectal cancer.¹ Numerous studies indicate that African Americans have the highest incidence of colorectal cancer of any racial or ethnic group in the United States.² In comparison to whites, African Americans are less likely to survive five years after a colorectal cancer diagnosis and are less likely to present with localized cancers or early-stage disease.³

Colorectal cancer screening in asymptomatic, average-risk individuals ≥ 50 years of age has been shown to be a cost-effective strategy to reduce mortality from colorectal cancer. Evidence suggests that screening can result in the detection of premalignant or localized lesions and that the treatment of localized cancer results in a significantly greater survival rate when compared to more advanced disease.⁴ Several modalities have been utilized for evaluation of the colon. Fecal occult blood testing each year, flexible sigmoidoscopy every five years, fecal occult blood testing each year combined with flexible sigmoidoscopy every five years, double-contrast barium enema every 5–10 years and colonoscopy every 10 years are all recommended modalities that are used frequently.⁵

Colonoscopy may be the most sensitive and specific screening test. It has been recommended that physicians consider performing a colonoscopy for colorectal screening in African Americans due to their increased risk of proximal colon lesions compared to other ethnic groups.² Despite the availability of published guidelines and surveillance technology, there is evidence to suggest that, among primary care physicians and internal medicine residents, adherence to recommendations is variable. A number of studies have noted that inadequate screening practices are the result of deficient knowledge and limited resources.⁶ The purpose of our study was to evaluate internal medicine resident physicians' colorectal screening practices in African Americans prior to and following a focused educational intervention.

METHODS

A medical record review of internal medicine resident physicians' adherence to colorectal cancer screening recommendations was conducted. Consecutive African-American patients ≥50 years of age who were of average risk for colorectal cancer and presenting for a health maintenance evaluation to an internal medicine resident clinic were included in the study. All participants were insured, none had undergone prior endoscopic evaluation, and all were offered endoscopy on site. African-American patients who refused screening were excluded. Physicians' performance of rectal exams, fecal occult blood testing, flexible sigmoidoscopy and colonoscopy was evaluated for six months prior to and six months following an educational intervention that focused upon issues related to racial disparities in colorectal cancer.

The educational intervention was composed of didactic seminars on surveillance recommendations, observation of colonoscopies and flexible sigmoidoscopies, a 25-question pretest and posttest, and required charting of the performance of cancer screening on summary forms in the medical record. The didactic sessions were case-based learning discussions moderated by an internal medicine attending physician. For each case, the screening guidelines were reviewed. Then the appropriate screening modality was chosen, taking the patient's race, age, gender and family history into account. Statistical significance was assessed using Fischer's exact test.

RESULTS

There were 116 patients included in the preintervention assessment. Forty-eight (41.4%) had rectal exams, 46 (37.7%) had fecal occult blood testing, and 31 (26.7%) had endoscopic exams. There were 132 patients included in the postintervention assessment. Fifty-one (38.6%) had rectal exams, 50 (37.9%) had fecal occult blood testing, and 78 (59.1%) had endoscopic exams (Table 1). There was no statistical significance in the rate at which rectal exams (p=0.6605) and fecal occult blood testing (p=0.7748) were performed prior to and following the educational initiative. However, there was a statistically significant difference in the rate at which endoscopic assessments (p<0.0001) were performed.

DISCUSSION

More than 57,000 Americans will die of colorectal cancer this year, accounting for approximately 10% of all cancer deaths. In the United States, colorectal cancer ranks second to lung cancer as a cause of cancer death.¹ African Americans have the highest incidence of colorectal cancer of any racial or ethnic group in the United States. However, population studies have identified lower rates of colorectal cancer screening among African Americans when compared to whites.³ The potential reasons for this finding include organizational, patient-related and physician-related factors. Lack of access to healthcare, physician recommendations, cost and patient preference all affect screening rates. Nonetheless, when African Americans are screened for colorectal cancer, the accepted guidelines, which include endoscopic evaluation, have variable adherence.⁴

In our study, internal medicine residents inconsistently followed colorectal cancer screening guidelines for African Americans. Rectal exams, fecal occult blood testing and referral for endoscopic exams were performed in 41%, 38% and 27% of African-American patients, respectively. However, once an educational intervention—which consisted of didactic seminars, observation of endoscopic procedures and the implementation of cancer screening forms—was provided to the residents, there was a statistically significant improvement in the rate at which endoscopic assessment was performed.

Educational interventions have proven to be effective at other internal medicine residency programs. At one program in Boston, MA, didactic sessions on the epidemiology of colorectal cancer, case-based seminars with potential screening scenarios and distribution of Palm Pilot devices (Palm Inc., Sunnyvale, CA) with screening tools was effective in increasing internal medicine residents' knowledge about colorectal cancer.⁷

As with our study, improved knowledge led to more appropriate adherence to screening guidelines.

Studies have outlined reasons that internal medicine residents may fail to adhere to colorectal cancer screening recommendations. Some residents believed that they were doing the procedures improperly and therefore avoided doing them.^{8,9} Other residents were unsure of actual guidelines, such as the proper age to initiate screen-

Table 1. The number of patients that had a rectal exam, fecal occult blood test or an endoscopic procedure prior to and after an educational intervention

Modality of CRC Screening Employed by Internal Medicine Residents	Number of Patients Receiving the Modality Preintervention	Number of Patients Receiving the Modality Postintervention
Rectal exam	48	51
Fecal occult blood test	46	50
Endoscopic procedure	31	78

ing and the frequency at which screening exams should be performed.^{6,10} Finally, some residents were unsure how to manage high-risk populations such as African Americans, those with positive fecal occult blood tests and those with a family history of colon cancer.^{6,7,10}

While this study is limited due to the relatively small study population, it offers important information. It emphasizes that it is critical that all patients are offered colorectal cancer screening and particularly important that African Americans undergo colonoscopic assessment due to the higher likelihood of proximal colonic lesions. It also demonstrates that there can be significant variability in resident physicians' adherence to accepted screening recommendations. Educational interventions focused upon racial disparity in colorectal cancer may improve physicians' performance of endoscopic exams in African Americans.

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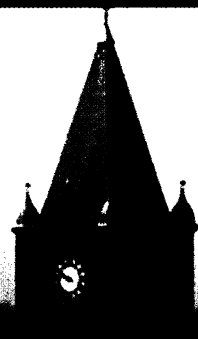


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