Elevance Health | Public Policy Institute

The Patient-Provider Relationship and Its Impact on Colorectal Cancer Screening

March 2024

Contents

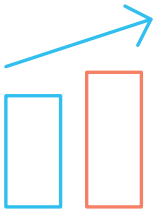
Key Takeaways

- Colorectal cancer (CRC) is the second leading cause of death from cancer, even though it is highly preventable.
- Despite improvements in CRC screening over time, racial/ethnic disparities in outcomes persist. Addressing disparities involves identifying and overcoming potential barriers at each stage of the patient journey.
- Results from this study of commercially insured adults in Virginia showed that both Black patients and White patients of physicians with a relatively racially diverse patient base had the highest likelihood of CRC screening (up to 39% higher), reinforcing the need for experience and training in cultural competencies.

Overview

Colorectal cancer (CRC) is the third most commonly occurring cancer in men and women and is the second leading cause of death from cancer in the U.S.[1,2] CRC is also highly preventable, with an estimated 68 percent of CRC incidences that could be avoided with routine screening.[3]

Although CRC mortality has decreased significantly over the past couple of decades—largely due to increases in screening and early detection—significant health disparities in CRC outcomes persist.[4]



The incidence rate of CRC is 11 percent higher among Black people relative to White people.

The incidence rate of CRC is 11 percent higher among Black people relative to White people.[5] Black people also are more likely to develop CRC at younger ages, are diagnosed further along in illness, and are more likely to die from the disease.[6] The CRC mortality rate, in fact, is 38 percent higher among the Black population relative to the White population.[7]

Racial and ethnic disparities also are prevalent in a concerning trend of rising CRC incidence among people younger than 50. "Early onset CRC" comprises approximately 1 in 10 new diagnoses, and although five-year survival from early onset CRC has improved among the White population, the Black population has experienced no improvement in survival rates.[8]

Prior studies have indicated that barriers to CRC screening, such as lack of provider recommendation, and belief that treatment would be ineffective, contribute to health disparities in CRC outcomes.[9–11] Improving patient experience is one strategy in the broader effort to address such inequities. A positive patient experience is correlated with good communication between patients and providers, patient adherence to medical care, positive clinical outcomes, and decreased utilization of unnecessary care.[12]

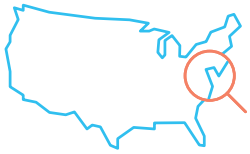
This study evaluates a central component of the patient experience—the patient-physician relationship—and assesses how race concordance (i.e., patient and physician share the same racial or ethnic background) between patients and physicians residing or practicing in Virginia, respectively, influences likelihood of CRC screening.

Some evidence suggests that race concordance between patient and provider is associated with improved adherence to preventive care recommendations and leads to lower patient mortality.[13] Research on race concordance and health, however, does not provide conclusive answers of the relative importance of race concordance to CRC screening.

Methods

Administrative claims data of commercially insured patients and their physicians were analyzed in this retrospective, cross-sectional study. The primary outcome of interest was whether a patient was up-to-date on their CRC screening from January 1, 2019, through December 31, 2021.

The patient's primary care physician (primary care physicians are central to the process of recommending cancer screenings) was attributed as the physician with whom the patient had the greatest number of visits in the preceding year.[14] Patient and physician data were supplemented with area-level data, including the Centers for Disease Control and Prevention's Social Vulnerability Index and state health planning region data. All patients and physicians lived or practiced in Virginia during the study period.



Claims data of commercially insured patients and their physicians located in Virginia were used for analysis.

All physician data was self-reported, and patient race/ethnicity was derived based on a prioritization method, where Hispanic/Latino ethnicity was first drawn from any one of three sources: electronic health records (EHRs), patient enrollment files, or imputation algorithms. Next, race data was drawn from EHRs, patient enrollment files, and imputation algorithms.

Statistical Analysis

Patient and physician characteristics were summarized with descriptive statistics and were stratified by race/ethnicity and racial/ethnic concordance of the patient-physician dyad. Concordance between only non-Hispanic Asian (*hereafter, Asian*), non-Hispanic Black (*hereafter, Black*), or non-Hispanic White (*hereafter, White*) patient-physician dyads were analyzed due to the low sample size of physicians in other race/ethnicity groups.

Categorical measures were summarized with frequencies and proportions, and continuous measures were summarized with means and standard deviations.

Multivariable logistic regressions were used to assess the relationship between CRC screening and race/ethnicity concordance, patient characteristics (e.g., age, gender), clinical outcomes (Elixhauser Comorbidity Index score), patient engagement in care (e.g., length of patient-physician relationship), physician characteristics (e.g., gender), and area-level data (e.g., urbanicity of patient's residence, state region, Social Vulnerability Index). SAS Version 8.3 was used to complete analyses.

Results

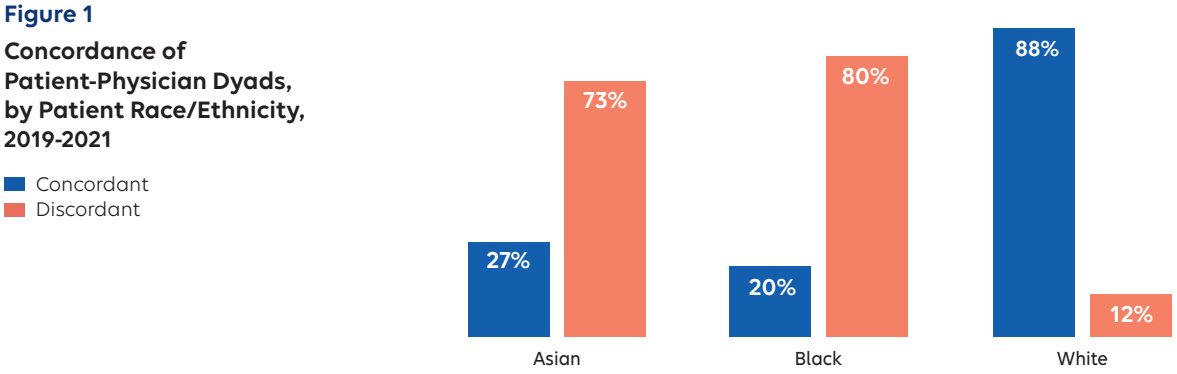
Overall, 66 percent of the patients were up-to-date on their CRC screening, which is consistent with national numbers for commercially insured individuals.[15,16] Asian patients had a 58 percent rate of screening, Black patients had a 67 percent rate of screening, and White patients had a 66 percent rate of screening.

Characteristics of Racially/Ethnically Concordant Patient-Physician Dyads

Selection into a racially/ethnically concordant patient-physician relationship varied by race/ethnicity. Most White patients (88 percent) were in racially/ethnically concordant dyads (i.e., patient and physician both identified as White). Most Asian and Black patients, in contrast, were in racially/ethnically discordant dyads. (Figure 1)

Figure 1

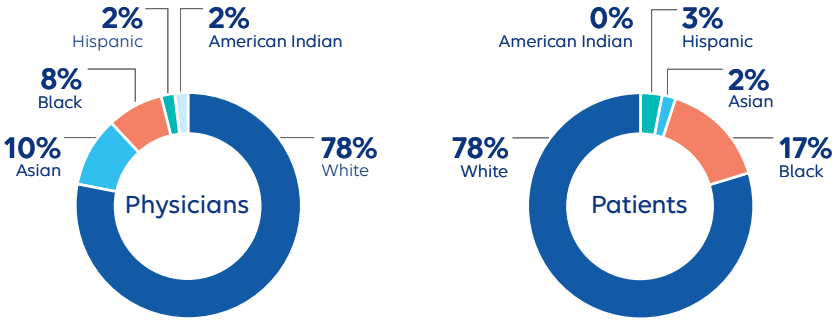
Concordance of Patient-Physician Dyads, by Patient Race/Ethnicity, 2019-2021



As shown in Figure 2, the number of White physicians was proportionate to the number of White patients in VA. The number of Black physicians, however, would need to double to be in proportion to the number of Black patients in VA.

Figure 2

Proportion of Physicians and Patients by Race/Ethnicity in Virginia, 2019-2021



The racial/ethnic distribution of where patients and physicians lived and practiced also varied. Whereas more than half (53 percent) of Black patients resided in Central Virginia, fewer than half (44 percent) of Black primary care physicians in VA practiced there. Similarly, while 34 percent of White patients resided in Central Virginia, only 26 percent of White physicians practiced there. (Table 1)

Table 1

Distribution of Patients and Physicians Across Regions in Virginia, by Race/Ethnicity, 2019-2021

	Asian		Black		White	
	Patients N=1,222	Physicians N=156	Patients N=8,955	Physicians N=119	Patients N=44,156	Physicians N=1,220
Northern VA	40%	58%	12%	22%	31%	35%
Central VA	29%	17%	53%	44%	34%	26%
Eastern VA	16%	13%	25%	30%	11%	17%
Western VA	15%	11%	10%	4%	24%	22%

These statistics illustrate, in sum, that racial/ethnic concordance of patient-physician dyads do not occur at random and vary by racial/ethnic group and where patients and physicians reside. The characteristics of racially concordant dyads in some regions of the state differed from the characteristics of racially concordant dyads in other regions of the state. These characteristics, in turn, could also be associated with likelihood of CRC screening, which was incorporated into adjusted analyses.

Impact of Racial/Ethnic Concordance on Screening

Results from adjusted analyses revealed an inconsistent relationship between race/ethnicity concordance and CRC screening:

- Asian concordant dyads (i.e., patient and physician both identified as Asian) showed a 55 percent *higher* odds of CRC screening ($p<0.01$).
- Black concordant dyads showed a 26 percent *lower* odds of CRC screening ($p<0.01$).
- White concordant dyads did not show any statistically significant associations with CRC screening.

A more consistent relationship was observed, however, among patients of both Black physicians and White physicians who had a relatively larger proportion of Black patients in their total patient panel. Patients of these physicians showed a higher odds of CRC screening, relative to physicians with the smallest proportion of Black patients in their panel. (Figure 3)

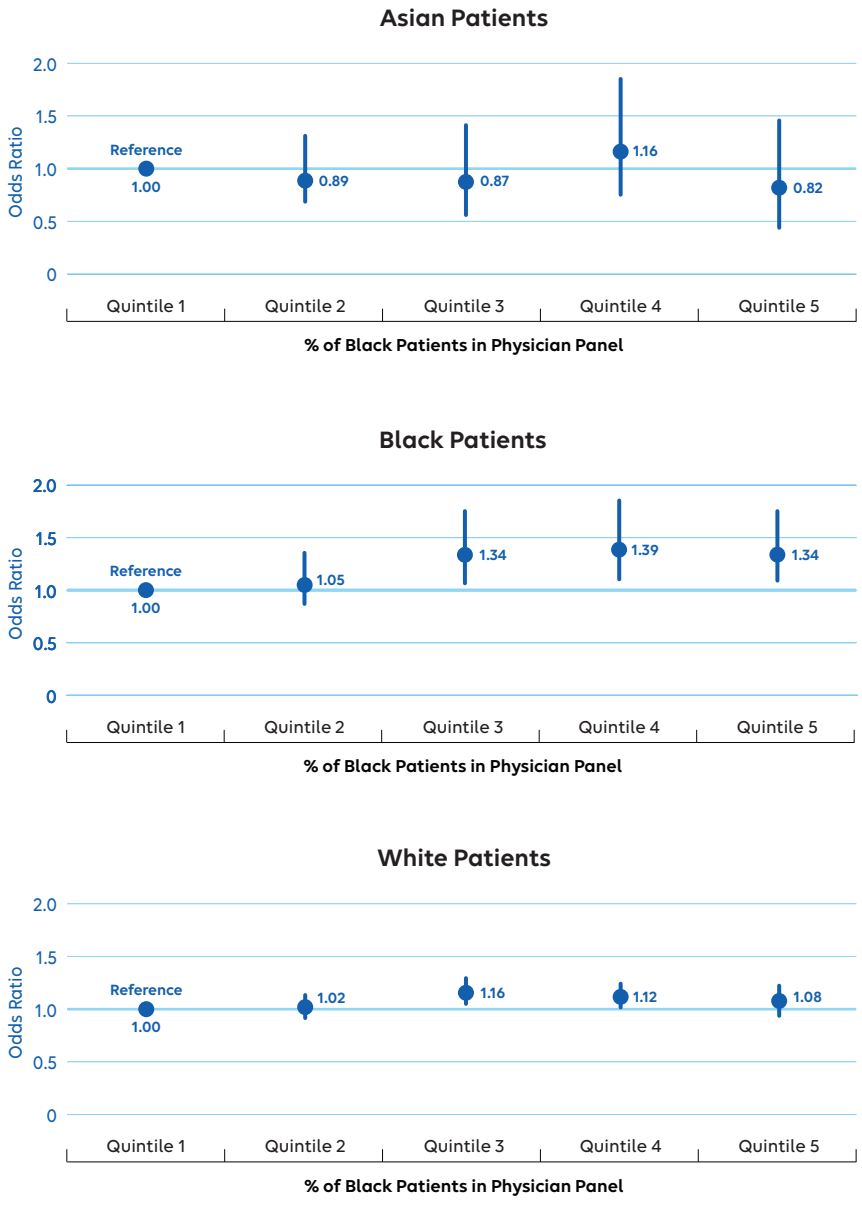
Independent of race/ethnicity concordance:

- Black patients who saw physicians with a relatively higher proportion of Black patients in their total patient panel had 34-39 percent increase in odds of CRC screening.
- White patients who saw physicians with a relatively higher proportion of Black patients in their total patient panel had a 12-16 percent increase in odds of CRC screening.
- No significant relationship was observed among Asian patients between the racial/ethnic composition of their physicians' patient panels and their odds of CRC screening.

Figure 3

Odds Ratios of CRC Screening by Race/Ethnicity Based on Proportion of Black Patients in Physician Panel, 2019-2021

Quintile 1 = <6.3%
Quintile 2 = 6.3%–12.5%
Quintile 3 = 12.6%–20.7%
Quintile 4 = 20.8%–35.3%
Quintile 5 = 35.4%–100%



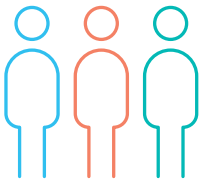
Note. All results adjusted for gender concordance between patient and physician, patient age, region where patient resides, and urbanicity.

Discussion

Although the overall prevalence of CRC screening appears similar among commercially insured Black patients and White patients, race disparities in CRC outcomes (e.g., mortality, diagnoses are more advanced stages of disease) have increased over time.[17]

Research suggests that differences in the screening methods and quality of follow-up care may contribute to disparities in outcomes that could be mitigated with improved screening.[18, 19]

This paper provides evidence to suggest that racial/ethnic concordance has a differential relationship with CRC screening, depending on race/ethnicity. Although patients in Asian concordant dyads showed a higher odds of screening, Black patients and White patients in concordant dyads did not. CRC screening was consistently higher, however, for both Black patients and White patients who have physicians with a racially/ethnically diverse patient panel.



CRC screening is higher among Black patients and White patients who have physicians with a racially diverse patient panel.

We note that although a range of patient and provider characteristics were incorporated into the analysis, some factors that we were not able to account for—specifically, organization type (e.g., individual practice, group practice, health system) and provider practice size—could have influenced the findings. Some research shows, for example, that performance on preventive care and patient experience metrics are higher for physicians in health systems relative to non-health system physicians. Effect size appears to be small, however, particularly after adjusting for practice size, but more research on the influence of provider and patient characteristics on utilization of preventive services is warranted.[20]

We also note the overlap of the study period with the timespan of the COVID-19 global health emergency, which could have potentially influenced study findings.[21] Evidence suggests, however, the COVID pandemic appeared to have a minimal impact on CRC screening when considered across all modalities. CRC screening was initially disrupted in the first several months of the COVID pandemic but ultimately did not show a decline due to an increase in stool testing (which offset the decrease in colonoscopy). The most significant shifts in stool testing occurred among non-Hispanic Black and Hispanic populations.[22,23]

Implications

Growing evidence suggests that increasing the diversity of the physician workforce is critical to reducing health disparities in access to and quality of care.[24]

Although trends in the "numbers and proportions of Black, Hispanic/Latino, and American Indian or Alaska Native medical students [have] increased [they have done so] at a rate slower than their age-matched counterparts in the U.S. population, resulting in increased underrepresentation" of these groups.[25]

Utilization of additional strategies are needed to help attune physicians' responsiveness to their patients' needs and to bolster communication and trust between patients and physicians, which research suggests leads to more consistent engagement and patient adherence with medical treatment.[26]

Physician training and/or experience working with diverse patient populations can lead to improved patient outcomes.

Training in cultural humility and bias, for example, may help bridge communication and trust gaps between physicians and patients.[27] Many online sources offer diversity, equity, and inclusion continuing medical education to help promote closing care gaps. The website, *My Diverse Patients*, is an example of one such resource that offers training, techniques, and ideas that providers can access and use to help provide more individualized and culturally relevant care to their patients.[28]

Conclusion

The findings in this study demonstrate that patients with physicians who have a diverse racial and ethnic mix of patients in their patient panel show a higher likelihood of CRC screening.

Results suggest the importance of physicians' experience with, and greater understanding of, patients who do not necessarily resemble themselves. Increased diversity of the physician workforce is a desirable goal for reasons extending beyond the scope of this brief. Results from this study suggest, however, that physician training in cultural humility and/or experience working with racially/ethnically diverse patient populations could also lead to improved patient outcomes.

The Elevance Health Public Policy Institute gratefully acknowledges the analytic contributions of Elevance Health's Health Services Research team in the conduct of this study.

Endnotes

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