



Racial and Ethnic Disparities in Colonoscopic Examination of Individuals With a Family History of Colorectal Cancer

Christopher V. Almario,^{*,‡} Folasade P. May,^{*,‡} Ninez A. Ponce,^{§,||} and Brennan M. R. Spiegel^{*,§}

^{*}Cedars-Sinai Center for Outcomes Research and Education (CS-CORE), Los Angeles, California; [‡]Division of Digestive Diseases, Department of Medicine, UCLA, Los Angeles, California; [§]Department of Health Policy and Management, and ^{||}UCLA Center for Health Policy Research, UCLA Fielding School of Public Health, Los Angeles, California

BACKGROUND & AIMS: Guidelines recommend that persons with a high-risk family history of colorectal cancer (CRC) undergo colonoscopy examinations every 5 years, starting when they are 40 years old. We investigated factors associated with colonoscopy screening of individuals with a family history of CRC, focusing on race and ethnicity.

METHODS: In a retrospective study, we analyzed data from the 2009 California Health Interview Survey on persons 40–80 years old with a first-degree relative (mother, father, sibling, or child) with CRC who had visited a physician within the past 5 years. Our study included an unweighted and population-weighted sample of 2539 and 870,214 individuals with a family history of CRC, respectively. We performed a survey-weighted logistic regression analysis to adjust for relevant demographic and socioeconomic variables and used estimates to calculate relative risks and 95% confidence intervals (CIs) for colonoscopy examination within the past 5 years.

RESULTS: In the weighted sample, 60.0% of subjects received a colonoscopy within the past 5 years. A physician recommendation for CRC screening increased the odds that an individual would undergo colonoscopy examination (relative risk, 1.89; 95% CI, 1.61–2.24). Latinos were 31% less likely to receive colonoscopies than whites (95% CI, 7%–55%). Among individuals 40–49 years old, blacks were 71% less likely to have had a colonoscopy than whites (95% CI, 13%–96%).

CONCLUSION: On the basis of an analysis of data from the California Health Interview Survey, less than two-thirds of individuals with a family history of CRC reported receiving guideline-recommended colonoscopy examinations within the past 5 years. We observed racial and ethnic disparities in colonoscopy screening of this high-risk group; Latinos and blacks were less likely to have had a colonoscopy than whites.

Keywords: Colon Cancer; Prevention; Demographics; Detection.

Colorectal cancer (CRC) is the third leading cause of cancer-related deaths in the United States.¹ Yet during the past 2 decades, CRC incidence and mortality have decreased as a result of CRC screening programs.² For individuals with a high-risk family history of CRC, it is recommended they undergo screening colonoscopy every 5 years starting by age 40 or 10 years younger than the age at diagnosis of the youngest affected relative.^{3,4} Earlier screening for those with a CRC family history is vital because of their markedly increased personal risk for developing CRC compared with those without a CRC family history.^{5,6} Moreover, 30% of all CRCs have an inherited component.^{7,8}

There is increasing attention to suboptimal CRC screening uptake and poorer CRC outcomes in racial/ethnic minorities in the United States when compared

with white Americans.^{9–18} However, few studies have examined the impact of race/ethnicity on CRC screening rates among individuals with a family history of CRC.^{19–21} Because individuals with a family history of CRC are at marked risk for also developing CRC and have the most to benefit from colonoscopy screening, we evaluated whether racial/ethnic disparities in screening persist in this high-risk group. On the basis of known racial/ethnic disparities in the broader CRC screening

Abbreviations used in this paper: CHIS, California Health Interview Survey; CI, confidence interval; CRC, colorectal cancer; FPL, federal poverty level; RR, relative risk; USOC, usual source of care.

population, we theorized that these disparities would also be evident in subjects with a family history of CRC. We hypothesized that when compared with white subjects, racial/ethnic minorities with a family history of CRC would be less likely to receive guideline-recommended colonoscopy. To test our hypothesis, we performed a survey-weighted logistic regression model by using data from the California Health Interview Survey (CHIS), because it is the largest state health survey and captures the rich racial/ethnic and linguistic diversity of California.

Methods

Study Design

We performed a cross-sectional study by using CHIS 2009 data, because it was the latest year in which CRC screening information was collected.²² CHIS is a population-based telephone survey of California's population that has been conducted by the UCLA Center for Health Policy Research every other year since 2001. It is the largest health survey conducted in any state and also one of the largest health surveys nationwide.²² CHIS collects extensive data for all age groups on health status, health conditions, health-related behaviors, insurance status, as well as access to healthcare.

The CHIS sample is designed to provide estimates for most counties and groups of counties with small populations and to also provide estimates of California's overall population as well as major and smaller racial/ethnic groups. To achieve this, CHIS used a multistage sample design and used random-digit dial to both landline and cellular services to contact potential participants. Our study was exempt from institutional board review.

Study Population

Individuals who were between 40 and 80 years old, had a family history of CRC, and visited a physician within the past 5 years were included in this study. Although national guidelines define high-risk family history as having a single first-degree relative with CRC or advanced adenoma diagnosed at age <60 years or 2 first-degree relatives with CRC or advanced adenomas,^{3,4} CHIS did not acquire all this information. Therefore, family history of CRC in this study was pragmatically defined as having a first-degree relative diagnosed with CRC at any point during their lifetime. CHIS 2009 also did not ascertain information regarding personal history of CRC. Therefore, we were unable to exclude individuals with a history of CRC.

Outcomes

Our primary outcome measure was colonoscopy use within the past 5 years. The 5-year limit was chosen because

guidelines recommend that all individuals with a high-risk family history of CRC undergo a colonoscopy every 5 years.^{3,4} Each CHIS participant older than the age of 40 years was asked: "Have you ever had a colonoscopy?", and those who said "yes" were then asked: "When did you have your most recent colonoscopy to check for colon cancer?"

Our secondary outcome was provision of any CRC screening, which included performing a colonoscopy, a sigmoidoscopy within the past 5 years, or a fecal-based test within the past year. These time limits were used because they are the recommended intervals for average CRC risk individuals.^{3,4}

Covariates

Drawing on the Anderson Behavioral Model of Access to Health Services,²³ we identified predisposing (personal demographics and socioeconomic status), enabling, and need factors that may have influenced colonoscopy use. Race/ethnicity was defined according to the UCLA Center for Health Policy Research classification of 5 mutually exclusive racial/ethnic categories: white, black, Latino, Asian, and Other (American Indian, Alaskan Native, multiracial). Other demographic variables included age, gender, marital status, number of years in the United States, English proficiency, general health condition, and household size. Socioeconomic status variables included employment status and highest level of education. Enabling variables included federal poverty level (FPL), insurance status, and usual source of care (USOC) other than the emergency department. Our variable for evaluated need was physician recommendation for CRC screening. CHIS asked all participants older than 40 years whether their doctor recommended a colonoscopy, sigmoidoscopy, or stool blood test within the past 5 years.

Statistical Analysis

All statistical analyses were performed in Stata 13.1 (StataCorp LP, College Station, TX), and a two-tailed *P* value less than .05 was considered statistically significant. We applied survey weights to the sample data to produce population estimates, consistent with previous CHIS studies.^{17,18,20,21} Categorical and continuous variables were compared by using the χ^2 test and adjusted Wald test, respectively.

We performed multivariate analyses to adjust for potentially confounding factors. All variables previously described were included in the regression models. Initially, we performed a survey-weighted bivariate probit regression model because of possible unobserved differences between individuals who received a physician recommendation for CRC screening and those who did not, thereby raising concern for selection bias. However, the Wald test of rho from the bivariate probit regression model did not reveal evidence of endogeneity (*P* = .99), arguing against selection bias. In the absence

Download English Version:

<https://daneshyari.com/en/article/3281358>

Download Persian Version:

<https://daneshyari.com/article/3281358>

[Daneshyari.com](https://daneshyari.com)