

# Variables Related to Colon Cancer Screening Among Male Veterans and Non-Veterans: A Secondary Data Analysis

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## Background

- Colorectal cancer (CRC), the third most common cancer and the fourth leading cause of cancer deaths worldwide, has been identified by the CDC as a preventable cancer.
- The CDC recommends a colon cancer screening colonoscopy beginning at age 50 years, and every 10 years thereafter. Fecal occult blood testing (FOBT), sigmoidoscopy, or colonoscopy have been shown to be effective in early detection of colorectal cancer (CDC, MMWR, 2011).
- A colonoscopy is the only screening test that allows the physician to view the entire colon and rectum. The sensitivity and specificity of this colon screening test exceeds all other related diagnostic test available (National Cancer Institute, 2012).
- Up-to-date, there is limited literature regarding colorectal cancer screening practices among male Veterans.

## Objectives

### PURPOSE

The purpose of this study was to explore associations of selected variables with male Veterans' CRC screening and to compare Veterans and non-Veterans in meeting the recommended guidelines for CRC screening.

### RESEARCH QUESTION

What is the association of CRC screening among male Veterans and non-Veterans?

### RESEARCH HYPOTHESES

Among male Veterans, there are differences in the rate of meeting CRC screening recommendations :

- Based on age
- Among White, African American, Hispanics
- Based on income
- Based on education level
- Based on marital status

## Methods

### DESIGN

- Descriptive-comparative
- Secondary data analysis using data from 2014 Behavior Risk Factor Surveillance System (BRFSS)

### SAMPLE

- BRFSS surveys are conducted using both telephone land lines and mobile phones.
- Random, nationally representative sample from the 50 states, Puerto Rico, Guam, and the US Virgin Islands

### Inclusion Criteria:

- Males
- Aged 50 to 74 years
- Three race/ethnicity groups: White, African American, Hispanics

### MEASUREMENT

Colorectal cancer screening is measured as meet or not meet the screening recommendations.

### Other variables include:

- Veteran status (yes or no)
- Age (50-64 versus 65+)
- Income
- Education
- Marital Status

### DATA ANALYSIS

Descriptive and Chi-squared models. Alpha level set at 0.05.



## Results

Demographic variables and meeting CRC recommendation among veterans

Variables	Total (n, %)	Meeting Colorectal Screening Recommendation		χ <sup>2</sup>
		Yes	No	
Age (years)				
• 50-64 years	11,947 (40.9)	7534 (68.9)	3405 (31.1)	592.91
• 65-74 years	17,284 (59.1)	12,826 (74.2)	2865 (16.6)	
Race				23.93
• White	26,095 (89.3)	18,284 (70.1)	5594 (21.4)	
• Black	2084 (7.1)	1424 (68.3)	398 (19.1)	
• Hispanic	1052 (3.6)	652 (62.0)	278 (26.4)	
Income				529.55
• Less than \$35,000	4770 (16.3)	3165 (59.8)	1605 (30.3)	
• >= \$35000	19,418 (66.4)	15344 (73.5)	4074 (19.5)	
Education				300.20
• Less than High school/GED	1076 (3.68)	596 (55.4)	358 (33.3)	
• >= High school	28,057 (96.0)	19739 (70.4)	5903 (21.0)	
Marital status				375.63
• Married/living with a partner	19580 (67.0)	14347 (73.3)	3592 (18.3)	
• Not married	9,552 (32.7)	5,969 (62.5)	2,656 (27.8)	

	"Received recommended CRC in time interval"	"Did not receive CRC as recommended"	
Veterans	20,360 (76.5%)	6,270 (23.5%)	26,630
Not Veterans	36,183 (64.6%)	19,840 (35.4%)	56,023
Total	56,543 (68.4%)	26,110 (31.6%)	100.0%



## Results and Conclusions

- Veterans were more likely than non-Veterans to receive the recommended CRC screening (76.5% vs. 64.6%).
- Among veterans, people who were 65-74 years were more likely to have had CRC screening than people who were 50-64 years (74.2% vs. 68.9%)
- Veterans who were white had higher rate (70.1%) of meeting the CRC recommendation than Black veterans (68.3%); Hispanic veterans had the lowest rate of meeting CRC recommendations (62.0%).
- Higher income was related to higher rate of meeting CRC recommendations (73.5% vs. 59.8%).
- Veterans who received high school education or higher had higher rate of meeting CRC recommendations than those with less than high school education.
- Veterans who were married or living with a partner had higher rate of meeting CRC recommendations (73.3%) than veterans who were not married (62.5%).
- Male Veterans had a higher rate of meeting CRC screening recommendations than non-Veterans and social economic status were significant factors. Evidence generated from this study can be used to design targeted strategies to improve CRC screening among Veterans..

## Limitations

Because only male Veterans were investigated, generalizability is limited. Further research including female Veterans is recommended.

## Acknowledgments

Kathleen Griffith PhD, RN  
Cathie Guzzetta PhD, RN

