

Large variations in colorectal cancer screening rates exist throughout the united states

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Colorectal cancer (CRC) screening rates varied widely between U.S. states and counties, according to estimates based on 2014 data, which were published in *Cancer Epidemiology, Biomarkers & Prevention*, a journal of the American Association for Cancer Research.

"In 2014, nearly 140,000 Americans were diagnosed with [colorectal cancer](#), and over 50,000 Americans died from the disease," said Zahava Berkowitz, MSPH, MSc, a statistician with the National Center for Chronic Disease Prevention and Health Promotion, Centers for Disease Control and Prevention (CDC), Atlanta. "Routine [screening](#) for colorectal cancer, starting at age 50, saves lives. However, more than 30 percent of adults have not had recommended colorectal cancer screening."

The main purpose of the study was to estimate the percentage of adults who are current with [colorectal cancer screening](#) in the U.S. at the county level, and to examine geographic patterns in these results. "This analysis can shed light on how close states and counties are to meeting the goal of 80 percent of adults ages 50 and older being regularly screened for colorectal [cancer](#) by 2018," Berkowitz added. The goal of an 80 percent screening rate is shared with the National Colorectal Cancer Roundtable.

Most previous analyses have estimated the prevalence of CRC screening

nationally or by state. In this study, Berkowitz and colleagues estimated CRC screening rates in all U.S. counties, which enabled them to identify where CRC screening rates are the lowest.

Using 2014 data from the CDC's Behavioral Risk Factor Surveillance System (BRFSS), the researchers developed models to estimate CRC screening rates. They used information from 251,360 BRFSS respondents ages 50 to 75 and U.S. Census Bureau population estimates for all 3,142 counties. To be current with screening recommendations, individuals must have completed one of the following: colonoscopy during the past 10 years; fecal occult blood testing (FOBT) during the past year; or sigmoidoscopy during the past five years concurrent with FOBT during the past three years.

Nationwide analysis revealed that 67.3 percent of the adult population ages 50 to 75 was current with CRC screening. Screening varied by ethnicity; 69.2 percent of non-Hispanic whites were current with screening, while only 56.8 percent of Hispanics were current. Colonoscopy was the most popular method of CRC screening, as 63.7 percent of the adult population ages 50 to 75 had undergone the procedure within 10 years.

Model-based state estimates found that Wyoming had the lowest prevalence of any CRC screening (58.9 percent), while Massachusetts had the highest prevalence (75.0 percent).

Model-based county estimates found that the county with the lowest prevalence in any CRC screening was in Alaska (40.1 percent), while the county with the highest prevalence in any CRC screening was found in Florida (79.8 percent). Variability between counties was lowest in Connecticut (a range of 3.6 percent) and highest in South Dakota (a range of 28.6 percent).

"We anticipated county variations of CRC screening rates within the states because we know there are differences between urban and rural areas in adherence to screening recommendations," noted Berkowitz. "However, we were struck by differences of more than 20 percentage points among counties in some states.

"On a state level, our results identify counties where CRC screening rates are the lowest," said Berkowitz. "These findings can help guide interventions that could increase CRC screening rates in these areas."

A limitation of the study is that the data are generated by a model; the results are estimates. "The predicted percentages might be more appropriate for program planning than for program evaluation," said Berkowitz. "Additionally, our estimates might have overestimated areas with extremely low CRC screening rates and underestimated areas with extremely high CRC screening rates. Lastly, the questions used in the survey did not indicate whether the tests were performed for screening or diagnostic/treatment purposes; the results therefore indicate a measure of CRC test use for any reason."

Provided by American Association for Cancer Research

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