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Prevalence of colorectal cancer screening test use by test type and age among older adults in the United States

Emily E. Adam, MS[a,b], **Mary C. White, ScD**[a], **Jean A. Shapiro, PhD**[a]

[a]Centers for Disease Control and Prevention, Division of Cancer Prevention and Control, Epidemiology and Applied Research Branch, Atlanta, GA

[b]Oak Ridge Institute for Science and Education (ORISE) Fellow, Oak Ridge, TN

Background

The United States Preventive Services Task Force (USPSTF) creates age-based recommendations for colorectal cancer (CRC) screening. Their most recent statement, published in 2021, recommends screening for adults aged 45–49 years (B-grade) and 50–75 years (A-grade), selective screening for adults aged 76–85 years (C-grade), and does not recommend screening for adults aged 86 years and older (no grade assigned).[1] Several types of tests are available to screen for CRC, and the potential harms and potential benefits of screening vary by test type and age group.[1] We provide national estimates of CRC screening test use among adults aged 65 years and older by test type and age group.

Methods

The National Health Interview Survey (NHIS) is designed to produce estimates representative of the civilian non-institutionalized US adult population. Additional documentation is available online.[2] The 2019 dataset included 9,295 adults aged 65 years and older. We excluded adults who reported a personal history of CRC (n = 155) or had unknown information about their test type or test timing (n range = 138–376). SAS 9.4 (SAS Institute Inc, Cary, NC) survey procedures adjusted for household non-response (adult response rate = 59.1%) and accounted for the complex sampling design.

We calculated population-weighted prevalence of test use (colonoscopy, any stool test, flexible sigmoidoscopy, CT colonography) in the past year. Traditional analyses of NHIS screening data report test receipt within time intervals corresponding to USPSTF recommendations.[3–5] Because we sought to understand current test use at ages 65 years and older, we focused our analyses on tests that occurred no more than 1 year before the interview. We also present estimates of having never received any CRC test. We present all

Emily Adam, Epidemiology and Applied Research Branch, Division of Cancer Prevention and Control, CDC, 4770 Buford Hwy, MS S107-4, Atlanta, GA 30341, plv6@cdc.gov, Twitter: @Emily_E_Adam.

Author Contributions

EE Adam analyzed the data and prepared the manuscript. EE Adam, MC White, and JA Shapiro all contributed to the design of the study, data interpretation, and review and revision of the manuscript. All authors gave final approval of the submitted manuscript.

Conflict of Interest

The authors do not have any financial or personal conflicts to declare.

results stratified by age groups aligned as closely as possible with age groups used by the USPSTF (65–75 years, 76–84 years, 85 years and older). It was not possible to present data for adults aged 86 years and older because the public-use datafile top-coded age at 85 years.

Results

In 2019, about 1 in 4 (25.2%) adults aged 65–75, 1 in 6 (17.2%) adults aged 76–84, and 1 in 12 (8.0%) adults aged 85 years and older in the United States reported receipt of a CRC test in the past year (Figure 1). Across the 3 age groups, colonoscopy was the most common test received, followed by stool testing (Supplemental Table 1). Less than 2% of older Americans reported receipt of flexible sigmoidoscopy or CT colonography in 2019. Across each age group, some adults reported having never received any type of CRC test: 65–75 years: 15.6 (14.4, 16.9), 76–84 years: 16.1 (14.1, 18.1), 85 years and older: 25.7 (22.1, 29.5). Supplemental Table 1 contains additional point estimates and 95% confidence intervals.

Conclusions

Well over half of all cases of CRC are diagnosed among adults aged 65 years and older; 3 in 10 are diagnosed at ages 75 years and older.[6] Among the age groups included in our analyses, colonoscopy was the most common test type. Given elevated risk of colonoscopy harms among older adults, including postcolonoscopy bleeding,[7] several experts have called for increased consideration of stool testing among adults aged 76 years and older.[7,8] Our study found stool testing was less common than colonoscopy among older Americans in 2019, and CT colonography and flexible sigmoidoscopy were rarely used. These patterns by test type mirror 2018 test use patterns reported for US adults aged 50–75 years.[3] Colonoscopy was also the most common test used among adults aged 65 years and older in 2000 and 2005.[5]

In 2010, colonoscopy was the test type most recommended by physicians for adults aged 76–84 years who had never been screened.[4] The proportion of US adults who reach age 76–84 years having never received a CRC test has declined over time, from 33%−37% in 2000 to 26%−30% in 2005 and 23% in 2010.[4,5] Our results report a further decline to 16% in 2019. These findings suggest that about 1 in 6 older adults currently “age out” of routine CRC screening without being checked for early cancer or precancerous polyps.

Study strengths include a national probability sample, inclusion of adults aged 76 years and older, and a focus on test use in the last year. Study limitations include self-reported data and possible recall bias. The estimates presented in our analyses may reflect overscreening for some and underscreening for others. Individual screening decisions may consider comorbidities, frailty, family history, polyp history, and other factors beyond chronologic age.[1,8–10] Future research could examine interventions to influence appropriate screening by test type among older adults.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

Sponsor's Role

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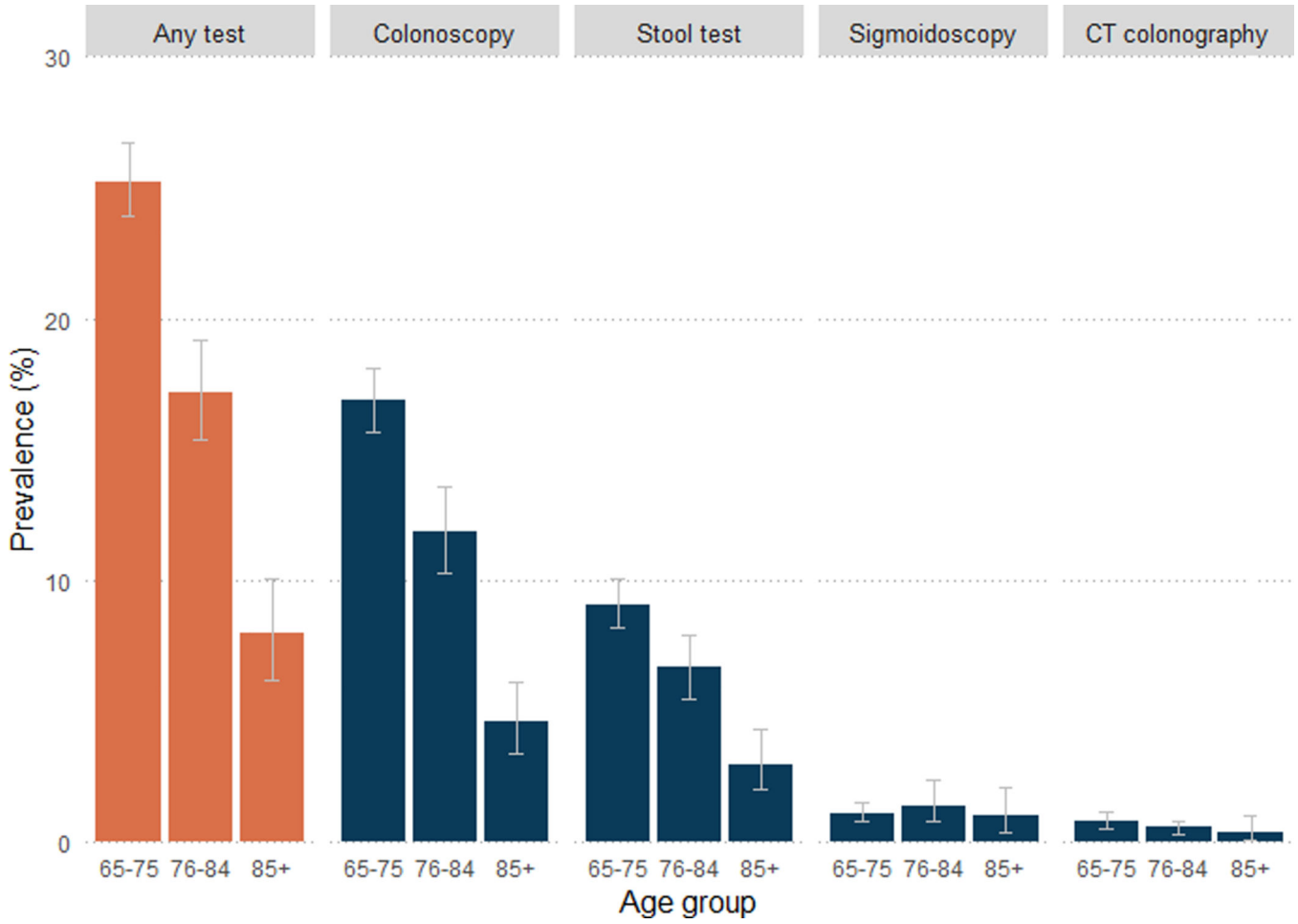

Figure 1.

Colorectal cancer test use among older Americans in the last year, United States, 2019. FIT-DNA, Fecal Immunochemical Test-Deoxyribonucleic Acid; FIT/FOBT, Fecal Immunochemical Test/Fecal Occult Blood Test. Error bars reflect 95% confidence intervals. Survey respondents were not asked about their use of FIT-DNA tests unless they indicated that they had ever had a FIT/FOBT. This might have led to a small underestimate of stool test use in 2019.