Trends in follow-up colonoscopy after a positive stool-based screening test for colorectal cancer among health care organizations in the United States

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BACKGROUND AND OBJECTIVE

• At-home stool-based screening tests (SBTs) are less invasive, more convenient, and potentially less expensive than colonoscopy offering an effective alternative for colorectal cancer (CRC) screening.1
• A positive SBT result requires a timely follow-up colonoscopy (FU-CY), recommended within six to nine months, to complete the CRC screening paradigm.2
• The objective of the current study was to assess FU-CY rates within the year following a positive SBT result (fecal immunochemical test (FIT) or multtarget stool DNA test (mt-sDNA)) overall, across patient-level characteristics, and by test modality, to determine which factors influenced rates of FU-CY.

STUDY DESIGN

• This mixed-methods study included retrospective analysis of de-identified administrative claims and electronic health record data between June 1, 2015, and June 30, 2021, from the Optum Labs Data Warehouse, and interviews with 7 providers from 5 health care organizations (HCOs).
• Kaplan-Meier curves were created to compare FU-CY rates within 3, 6, and 12 months of a positive SBT; a multivariate Cox proportional hazards model quantified the impact of patient characteristics, test type, and health care organization (HCO) on FU-CY rates.
• Interview questions focused on perceived barriers and facilitators of FU-CY at the patient, provider, and organization levels, as well as perceptions around the use of SBT for initial CRC screening and subsequent FU-CY.

STUDY POPULATION

• Eligible patients had a positive SBT result between June 1, 2015, and June 30, 2021,
• Patients were of average risk, between the ages of 50 and 75
• Required primary care visit in 15 months prior to SBT result, and active at least 90 days
• Excluded if prior evidence of CRC, or more frequent CRC screening requirements

Overall rates of follow-up colonoscopy are low, with significant differences across sub-populations

- Over 40% of patients fail to receive follow-up, with variability across HCOs and across patient sub-populations
- Most FU-CY occur within first 90 days after test result

Cox model (adjusted for HCO) identified patient level factors

- Over 40% of patients fail to receive follow-up
- Most FU-CY occur within first 90 days after test result
- Lack of knowledge about failure to follow-up
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IMPLICATIONS FOR POLICY AND PRACTICE

- Rates of follow-up colonoscopy after a positive SBT are alarmingly low in this screen-eligible average-risk population. Addressing this care gap is critical to achieving the population health benefits of initial screening with SBTs.
- Qualitative interviews suggested that most providers were unaware of these low FU-CY rates, suggesting a need for timely and transparent reporting of FU-CY rates.
- Additionally, significant disparities in follow-up CRC care warrant targeted interventions for minority groups focusing on their needs.

CONCLUSION

Over 40% of patients with a positive stool-based CRC screening test result failed to complete a follow-up colonoscopy within 1 year

- In our study, only 56% (95% CI 55.6%-56.6%) had a required follow-up diagnostic colonoscopy within approximately one year (360 days) of the positive SBT result (FIT or mt-sDNA).
- Few providers appreciated this care gap, with all providers interviewed in this study expressing surprise at the low rates of follow-up.

Significant disparities exist across patient subpopulations

- Significant disparities were observed according to patient race, insurance type, and number of comorbid conditions.
- Patients who used mt-sDNA rather than FIT tests were significantly more likely to complete follow-up, though the exact reason for this difference is yet to be determined.
- After adjusting for patient characteristics, organization variability remained (not shown) suggesting that HCO attributes (e.g., policies, procedures, or resources) have a large impact on follow-up rates.

REFERENCES


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