

AI Patient Navigator Reduces Disparities in Colon Cancer Screening

The artificial intelligence tool nearly doubled the rate of completed colonoscopies among people who had previously missed an appointment.

May 31, 2024 By [Liz Highleyman](#)

An artificial intelligence (AI) patient navigator may help overcome barriers and re-engage people in underserved communities who have cancelled or missed a colonoscopy appointment for colon cancer screening, according to research presented at the [American Society of Clinical Oncology Annual Meeting \(ASCO 2024\)](#).

Studies have shown that Black and Latino people are [more likely to be diagnosed with advanced colon cancer](#), especially at younger ages. But people of color disproportionately face [barriers to screening and treatment](#) and are [less likely to receive care](#) in accordance with guidelines, which can mean diagnosis at a later stage when the cancer is harder to treat.

“In a time when our health care system and workforce have not fully recovered from the ravages of the pandemic and cancer disparities continue to loom large, it is critical to identify effective and efficient ways to optimize patient care without placing additional burden on the system or staff,” said lead study author Alyson Moadel, PhD, of Montefiore Einstein Comprehensive Cancer Center. “Our quality improvement project demonstrates the potential that artificial intelligence-based virtual navigation can have in meeting these criteria while promoting engagement in cancer screening in underserved populations who experience a disproportionate cancer burden in morbidity and mortality.”

To help address this disparity, Moadel and colleagues evaluated the use of an AI tool called MyEleanor, a virtual patient navigator that engages patients in personalized conversation in both English and Spanish.

The analysis included 2,400 people who received care at Montefiore cancer center in the Bronx, which largely serves people from communities of color and low-income households, many of whom were born outside the United States.

The program targeted individuals who had either cancelled or did not show up for a scheduled colonoscopy appointment in 2022 or 2023. Despite active outreach by experienced patient navigators at the center, 59% of people scheduled for colonoscopy screening appointments did

not complete them in 2022. About two thirds were women, more than 40% were Latino and nearly 40% were Black; a quarter primarily spoke Spanish. The median age was in the mid-fifties. Those who had missed appointments were more likely to be single, divorced or widowed, disabled or unemployed, and were younger than those who had not missed a screening.

MyEleanor called patients to discuss rescheduling their colonoscopy appointments, assessed barriers to engagement and provided reminder calls about preparation for the procedure. The AI offered to transfer patients to clinical staff for further assistance.

The AI navigator tool helped reduce attrition and nearly doubled the rate of completed colonoscopies, from 10% to 19%, for people who had cancelled or missed an initial appointment. More than half (57%) of the study participants engaged with MyEleanor. Of those who engaged, 58%—or 33% overall—accepted a live transfer to a human patient navigator to reschedule their procedure, and people who accepted a transfer were 25% more likely to complete a colonoscopy. Overall patient volume for colonoscopies increased by 36%.

Interviews conducted by MyEleanor revealed that more than half of the study participants reported at least two barriers to screening, including lack of transportation (38%), no perceived need (36%), not enough time (36%), absence of physician prompting (33%), medical mistrust (32%), concerns about the screening results (28%) and cost (27%). People who mainly spoke Spanish, those who declined to identify their race and those who were unemployed or retired reported more barriers. A greater number of barriers predicted actionable engagement. People who cited cost and fear of the procedure and its results were less likely to complete a colonoscopy.

The study team is currently further evaluating MyEleanor, including reminder calls regarding medication pick-up and delivery of colonoscopy pre-care instructions. They plan to assess the impact of the AI system on patient navigator staff burden and satisfaction, patient satisfaction and the cost of care. They are also evaluating the potential for MyEleanor to assist with lung cancer and breast cancer screenings.

“Given known gaps in cancer screening in minority populations living in the inner city, this program works to improve early cancer detection and decrease colon cancer disparities,” said Fumiko Chino, MD, of Memorial Sloan Kettering Cancer Center, said in an [ASCO news release](#). “The initiative leverages conversational artificial intelligence to optimize outreach capacity to vulnerable populations and delivers on the promise of technology to facilitate better, more efficient and equitable health care.”

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