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Integrated System Nearly Doubles Colorectal Cancer Screening Rate Through Distribution of Inhome Kit and Followup with Nonresponders

Snapshot

Summary

Kaiser Permanente of Northern California sends every member due for colorectal cancer screening an in-home fecal immunochemical test (more commonly known as FIT) kit accompanied by a letter from the individual's primary care physician explaining the importance of regular screening and how to complete and send in the kit for processing. Those who do not send in a specimen receive a followup reminder letter after 6 weeks, and those who fail to respond to this followup may receive any of a variety of additional reminders, such as phone calls and secure e-mail communications, from local Kaiser medical centers and physician offices. The program nearly doubled screening rates between 2004 and 2009, allowing Kaiser to almost reach the 90th percentile of performance among commercial health plans, and achieve a target set by Kaiser leaders 5 years ahead of schedule.

Evidence Rating *(What is this?)*

Moderate: The evidence consists of pre- and post-implementation comparisons of the percentage of Kaiser members up to date on screening for colorectal cancer as specified by USPSTF guidelines, along with comparisons to national benchmark performance for commercial health plans on the HEDIS measure for colorectal cancer screening.

Developing Organizations

Kaiser Permanente-Northern California

Date First Implemented

2005

Kaiser Permanente of Northern California began pilot testing different methods of fecal occult blood testing in 2005, and settled on FIT in 2006. Full program rollout began in 2007.

What They Did

Problem Addressed

Roughly 140,000 individuals are diagnosed with colon or rectal cancer each year, with more than 50,000 dying from the diseases. Although regular screening can help to prevent such cancers and/or catch them before they progress to a more lethal stage, screening rates for at-risk populations (especially minorities) remain low.

- **Common, deadly diseases:** The National Cancer Institute estimates that in 2010, roughly 103,000 new cases of colon cancer and nearly 40,000 cases of rectal cancer will be diagnosed, and that more than 51,000 individuals will die from these diseases.[1]
- **Unrealized potential of screening:** Regular screening can help to prevent colon and rectal cancer by removing precancerous growths—or polyps—before cancer develops. Screening can also help to catch cancers that have formed early, before they progress to a more lethal stage. Yet screening rates for at-risk populations remain quite low, with only about 55 percent of those over the age of 50 years old being screened according to United States Preventive Services Task Force (USPSTF) guidelines.[2] Kaiser Permanente of Northern California's performance on colorectal cancer screening lagged that of the rest of the nation, with a 35 percent screening rate among commercial enrollees in 2004.
- **Especially for minorities:** Lack of screening is especially prevalent among minorities; for example, African Americans are twice as likely as whites to be diagnosed with late-stage colorectal cancer,[2] a strong indication of inadequate screening in this population.

Description of the Innovative Activity

Kaiser Permanente of Northern California sends every member due for colorectal cancer screening an inhome FIT kit accompanied by a letter from the individual's primary care physician (PCP) explaining the importance of regular screening and how to complete and send in the test for processing. Those who do not send in a specimen receive a followup reminder letter after 6 weeks, and those who fail to respond to this followup may receive any of a variety of additional reminders, such as phone calls and secure e-mail communications, from local Kaiser medical centers and physician offices. Key elements of the program are described below:

- **Identifying those in need of screening:** At the beginning of each calendar year, program staff use Kaiser's electronic systems to identify and generate a list of enrollees due for colorectal cancer screening, as determined by USPSTF guidelines, which call for regular screening via any of a variety of testing regimens in all individuals between 50 and 75 years of age. (USPSTF recently reduced the upper end of this range from 80 to 75). Each year, this process identifies approximately 400,000 members (out of 900,000 to 1 million in the target age range) as due for screening.
- **Mailing kit, with explanation and instructions from PCP:** Through an external vendor, Kaiser

mails an inhome FIT kit to each identified individual, accompanied by a one-page insert from the individual's PCP that clearly explains the importance of regular testing and how to conduct and send back a specimen to the processing laboratory. The kit and mailing have been designed to make it as easy as possible for members to complete the test and mail back the stool sample for processing. The vendor sends out the kits in batches on a weekly basis. Going forward, the vendor will also send out a "premailing" postcard to alert members of the kit's arrival and to explain what they should do when it arrives.

- **Ongoing monitoring of response, followup with nonresponders:** Each week, program staff keep track of who has returned the test, enabling the creation of a running response rate. After 6 weeks, those who have not responded receive a followup reminder letter encouraging them to complete and send in a specimen for processing.
- **Additional local-level followup:** Local Kaiser medical centers and physician groups engage in various activities designed to encourage testing among those who fail to respond to the initial mailing and followup letter. The timing and nature of specific interventions vary by locality, although such efforts generally commence 10 to 12 weeks after mailing of the kit. Common interventions include the following:
    - **Reminders prompted by office visit:** Physicians and support staff receive an electronic prompt at the time a patient registers for an office visit in any Kaiser department. After seeing this prompt, staff can remind the patient to return the kit and/or provide another kit, if needed.
    - **Telephone reminders:** Some Kaiser medical centers and physician offices within the region use medical assistants to phone members who have not responded to the initial mailing and followup letter. Most nonrespondents appreciate the personal outreach, although some object to it. Those who do are flagged by Kaiser so that they receive no additional reminders.
    - **Secure messages:** Some medical centers and physician offices send written reminders via Kaiser's secure electronic messaging system to nonresponding members who have signed up for this messaging service.
- **Test processing, followup with those testing positive:** All samples come directly to a centralized Kaiser laboratory for the region; the center has multiple pieces of equipment that can each process roughly 70 specimens per hour. The laboratory sends test results to the member's PCP, after which the physician or his/her staff informs the member of the results. For any member testing positive (indicating the possibility of cancer and the need for additional screening), the physician explains the meaning of the result to the member, and provides a referral to a gastroenterologist for a colonoscopy. Kaiser staff follow up to ensure that those testing positive come in for this additional screening.

References/Related Articles

Associated Press. At-home stool test can help halt colon cancer. February 15, 2010. Available at: http://www.msnbc.msn.com/id/35407223/ns/health-cancer/.

Contact the Innovator

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Did It Work?

Results

The program nearly doubled screening rates between 2004 and 2009, allowing Kaiser to almost reach the 90th percentile of performance among commercial health plans and achieve a target set by organizational leaders 5 years ahead of schedule.

- **Near doubling of screening rates:** Between 2003 and 2008 [Healthcare Effectiveness Data and Information Set (HEDIS) reporting years 2004 and 2009], Kaiser Permanente of Northern California's screening rates nearly doubled in its commercial population, rising from 35 percent to 69 percent, a level just below the 90th percentile for commercial health plans in reporting year 2009. Over the same time period, screening rates among Medicare enrollees rose from 46 percent to 75 percent. Performance in 2010 will likely improve further, as the 10-week response rate for the region (i.e., the percentage of members receiving the kit who returned a sample for processing) rose from 45 percent in April 2009 to 51 percent in April 2010.
- **A cost-effective approach:** Kaiser internal analysis has concluded that performing a FIT each year on those members 50 to 75 years of age represents the least costly approach to screening within USPSTF guidelines. Supplementing the annual FIT with a one-time colonoscopy at the age of 65 creates a screening system equivalent in performance (i.e., in detecting cancers) to doing colonoscopies every 10 years beginning at age 50 (the traditional screening regimen for those who have no abnormal findings), while maintaining most of the cost savings of the annual-FIT approach.
- **Ongoing analysis of impact on incidence and staging:** Program leaders are currently analyzing the program's impact on the incidence of colorectal cancer among members, and on the stage at which such cancers are identified. These data will likely be published in a future journal article.

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Moderate: The evidence consists of pre- and post-implementation comparisons of the percentage of Kaiser

members up to date on screening for colorectal cancer as specified by USPSTF guidelines, along with comparisons to national benchmark performance for commercial health plans on the HEDIS measure for colorectal cancer screening.

How They Did It

Context of the Innovation

Kaiser Permanente of Northern California is an integrated health plan and provider system serving approximately 3.2 million members, roughly 1 million of whom are between the ages of 50 and 75 (the population specified in USPSTF guidelines as being eligible for regular colorectal cancer screening). The impetus for the program came in 2004, when the National Committee for Quality Assurance began requiring that commercial and Medicare plans report performance on the HEDIS measure for colorectal cancer screening. At that time, leaders at Kaiser Permanente of Northern California discovered that the plan's performance significantly lagged internal expectations and that of many other plans, with screening rates of 35 percent among commercial enrollees and 46 percent among Medicare enrollees, both well below the national average for plans at that time. In the mid-1990s, Kaiser had implemented a colorectal cancer screening program that focused on encouraging use of flexible sigmoidoscopy (which had been shown to be effective in a large trial in the early 1990s). The program did not work particularly well, in part due to excessive reliance on "opportunistic" referrals (i.e., referring patients in need of screening when they come to a Kaiser facility for another reason) and in part due to reluctance among members to undergo the procedure, which requires significant preparation and can generally be an unpleasant experience. As a result, plan leaders began considering other approaches to promoting screening, focusing in on the potential to use inhome fecal occult blood testing as a first-line screen.

Planning and Development Process

Key steps in the planning and development process included the following:

- **Pilot testing different approaches to fecal blood tests:** Beginning in 2005, Kaiser pilot tested different types of fecal occult blood tests to determine which would work best for this type of program. This testing convinced program leaders that the FIT would be preferable to more conventional, guaiac-based tests, primarily due to its greater sensitivity and specificity.
- **Choosing vendor:** In 2006, program leaders evaluated two different vendors that could provide the FIT as part of a kit mailed to members' homes. They ultimately chose a system developed by Polymedco that allowed Kaiser to process the tests out of its central laboratory; the other vendor proposed processing the tests out of its facilities, a more expensive approach for Kaiser.
- **Rolling out program regionwide:** Beginning in 2007, Kaiser began sending out the kit to all eligible members in the Northern California region due for colorectal cancer screening according to USPSTF guidelines.

- **Expanding program throughout Kaiser:** Over time, all Kaiser regions have adopted the program, with each using a centralized laboratory to process the specimens. Program expansion has been facilitated by Kaiser's Care Management Institute, which is dedicated to sharing and disseminating best practices throughout the organization.

Resources Used and Skills Needed

- **Staffing:** At the regional level, several staff spend a portion of their time on this program, including analysts who identify members in need of colorectal cancer screening. Although an external fulfillment vendor handles the preparation and mailing of kits, staff at individual Kaiser medical centers and physician offices take responsibility for following up with nonresponders. In most cases, these staff incorporate these duties into their regular job responsibilities, although in some cases, the added workload may require the hiring of additional staff.
- **Costs:** Data on overall program costs are not available, as much of the labor effort takes place in individual medical centers and physician offices. Each kit costs approximately $8 for materials, mailing, and specimen processing. The Kaiser Northern California region has 5 machines that process specimens at a rate of 70 tests per hour. These machines will be replaced over time with newer ones with greater processing capacity.

Funding Sources

Kaiser Permanente-Northern California

The program is funded internally by Kaiser Permanente of Northern California, with the FIT being a covered service for Kaiser commercial and Medicare members. The traditional Medicare program covers FIT (reimbursing roughly $22 per test), as do Medicare Advantage plans and most commercial insurers.

Tools and Other Resources

More information on the USPSTF guidelines for colorectal cancer screening is available at: http://www.ahrq.gov/clinic/uspstf/uspscolo.htm#summary.

This program seeks to improve the HEDIS measure on colorectal cancer screening. More information on this measure is available at: http://www.qualitymeasures.ahrq.gov/summary/summary.aspx?doc_id=7790&string=colorectal+AND+cancer+AND+screening.

Adoption Considerations

Getting Started with This Innovation

- **Secure leadership support:** This program will be most effective if senior leaders buy into it and establish colon and rectal cancer screening as organizational priorities, with sufficient resources

allocated to improve performance. While Kaiser had little difficulty convincing leaders of the program's merits, those considering adoption may need to share data with organizational leaders on its potential benefits, including the ability to improve historically low screening rates and reduce the incidence and costs of colon and rectal cancer.

- **Secure gastroenterologist support:** Kaiser faced little difficulty in securing the support of gastroenterologists, as these salaried physicians do not rely on procedures (e.g., colonoscopies, flexible sigmoidoscopies) to generate revenues and income. Organizations where specialists rely on fee-for-service payments may face some initial resistance to the program, as gastroenterologists may fear that inhome testing will have a negative impact on procedure volume. To allay this fear, share data with them on current (low) screening rates, thus demonstrating the program's potential to expand screening—including colonoscopies—to a much broader population. Kaiser of Northern California has found that the number of colonoscopies performed has increased significantly since the program began, as the kits have encouraged some to come in for a colonoscopy rather than performing the inhome test, and has resulted in many others receiving a needed colonoscopy as followup to a positive FIT finding.
- **Set aggressive goals:** As noted, Kaiser's leadership challenged the region to double screening rates over a 10-year period, thus "lighting a fire" under the organization to improve.
- **Consider creating incentives:** Financial incentives can help to boost performance. At Kaiser, the HEDIS colorectal cancer screening measure has been part of a set of 10 to 15 quality measures included on a monthly regionwide performance report since 2006. Performance on these measures in part determines the payment of financial incentives to individual business units within the region (e.g., medical centers, physician groups).
- **Design simple, clear language, on one page:** Sending multiple pieces of paper in a mailing can confuse those receiving it, and create the potential for mixups in which information intended for one individual ends up in another member's mailing (thus increasing the risk of *Health Insurance Portability and Accountability Act* violations). To minimize such problems, the letter accompanying the kit should be no more than one page and should use clear, simple language to explain the importance of screening and how to complete and return the test for processing.

Sustaining This Innovation

- **Send kits under PCP's name whenever possible:** Individuals are much more likely to comply if the kit comes from their doctor (as opposed to a health plan or another large organization to which they have few ties). A commercial health plan in another area used a similar program, but generated poor response rates in part because the plan often did not know the name of the members' PCP, and hence could not send the kit out under the doctor's name.
- **Maintain up-to-date records:** Achieving high response rates requires having accurate, up-to-date information on members, including their address, phone number, and PCP. The aforementioned program in Florida suffered low response rates in part due to use of inaccurate addresses, which led to nearly a quarter of kits being returned as undeliverable. By contrast, Kaiser's return rate averages between 1 and 2 percent.

- **Monitor performance, address problems as they arise:** Kaiser regularly monitors and reports on its performance on the HEDIS colorectal cancer screening measure. Local teams discuss their performance and look for ways to improve it over time.
- **Tap into social media, other vehicles for outreach:** Kaiser is enhancing outreach efforts to members who do not get regularly screened by using its Web site and social media (e.g., Twitter, Facebook, YouTube) to educate members about the importance of colorectal cancer screening, and through use of a "segmentation" approach to marketing, with different outreach strategies being used with different populations depending on their screening history.

Use By Other Organizations

As noted, all Kaiser regions have adopted this program. In addition, the Veterans Health Administration mails out inhome testing kits to patients in need of screening, and engages in opportunistic screening when patients due for screening come in for other reasons. Harvard Pilgrim Health Care has used outreach mailings of kits to members, encouraging them to complete the test or come in for a colonoscopy. Aetna has used a similar approach in Florida.

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[1] National Cancer Institute. Available at: http://www.cancer.gov/cancertopics/types/colon-and-rectal.

[2] Associated Press. At-home stool test can help halt colon cancer. February 15, 2010. Available at: http://www.msnbc.msn.com/id/35407223/ns/health-cancer/.

Innovation Profile Classification

Disease/Clinical Category:	Colorectal cancer; Early detection of colorectal cancer
Stage of Care:	Preventive care
Setting of Care:	Home > Patient self-management , Health Plans and Managed Care Organizations > Health plans and managed care organizations,
Patient Care Process:	Preventive Care Processes > Screening; Active Care Processes: Diagnosis and Treatment > Laboratory tests; After Care Processes > Follow-up care; Patient-Focused Processes/Psychosocial Care > Outreach to patients; Provider-patient communication
IOM Domains of Quality:	Effectiveness
Organizational Processes:	Policies and procedures; Quality measurement, benchmarking, data

feedback; Referrals; Staffing; Technology - HIT

Developer: Kaiser Permanente-Northern California

Funder: Kaiser Permanente-Northern California

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