Flu-FIT and Flu-FOBT Program

PROGRAM SYNOPSIS

Designed to increase colorectal cancer screening (CRC) among adults, this intervention allows health care providers to promote screening to patients at the time of their annual flu vaccine, offering a fecal occult blood test (FOBT) kit, instructions, and a return envelope. The studies showed increased completion of CRC screening.

PROGRAM HIGHLIGHTS

Purpose: Designed to increase colorectal cancer screening among adults. (2009)

Age: 40-65 years (Adults), 65+ years (Older Adults)

Sex: Female, Male

Race/Ethnicity: Alaskan Native, American Indian, Asian, Black - not of Hispanic or Latino origin, Hispanic or Latino, Pacific Islander, White - not of Hispanic or Latino origin

Program Focus: Awareness building and Behavior Modification

Population Focus: *This information is not available.*

Program Area: Colorectal Cancer Screening

Delivery Location: Clinical

Community Type: Suburban, Urban/Inner City

Program Materials

Preview and order the materials from the developer

View

Program Developer

Contact Program Developer

Contact

Featured Profile

Learn more about this program and the developer who created it

Learn More

PROGRAM SCORES

EBCCP Scores

Research Integrity

4.7

Intervention Impact

2.8

Dissemination Capability

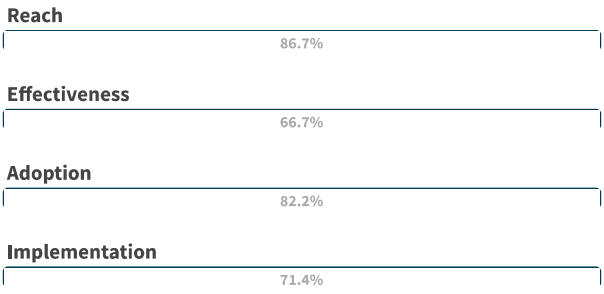
5.0

(1.0 = low 5.0 = high)

This program has been rated by external peer reviewers.

Learn more about the ratings

RE-AIM Scores



This program has been evaluated on criteria from the RE-AIM framework, which helps translate research into action.

Learn more about the ratings

THE NEED

Colorectal cancer is the second-leading cause of cancer death in the United States. Colorectal cancer mortality can be reduced with screening. The U.S. Preventive Services Task Force recommends colorectal cancer screening (CRCS) for average-risk adults aged 50-75 years using annual fecal occult blood testing (FOBT) or fecal immunochemical testing (FIT); sigmoidoscopy every 5 years, with high-sensitivity FOBT or FIT every 3 years; or colonoscopy every 10 years. Despite these testing options, in 2010 only 58.6% of eligible adults aged 50-75 reported being up to date with guideline-recommended screening, and disparities in CRCS rates persist for socioeconomically disadvantaged populations. In primary care sites serving these populations, financial constraints often limit CRCS options to FOBT or FIT. Successful and sustainable approaches to achieve high rates of FOBT or FIT in these settings may require multiple strategies, including using non-physician clinic staff to provide this testing to eligible patients at least once per year.

THE PROGRAM

The Flu-FIT and Flu-FOBT Program allows health care providers to increase access to colorectal cancer screening by offering home tests to patients at the time of their annual influenza (flu) vaccination. The program is designed to increase CRCS rates by conveying the importance of screening and getting an annual flu shot. The message to patients is that "just like a flu shot, you need FIT or FOBT every year."

Nurses or medical assistants are provided a variety of tools to assist with offering a home FIT or FOBT kit to eligible patients, including visual aids for explaining the test to patients (including foods to avoid to prevent false positive results), simple written instructions for how to self-administer the test, video instructions, and stamped envelopes for completing and returning the kit to the laboratory. These materials are provided in English, Cantonese, Mandarin, Russian, Spanish, and Vietnamese. Nurses are encouraged to use whichever materials they find most useful to encourage patients to complete FIT or FOBT.

COMMUNITY PREVENTIVE SERVICES TASK FORCE FINDING

This program uses intervention approaches **recommended** by the Community Preventive Services Task Force: **small media interventions** (Colorectal Cancer Screening), **one-on-one education interventions** (Colorectal Cancer Screening) and **multicomponent interventions** (Colorectal Cancer Screening).

The Community Guide
What works to promote healthy communities.

TIME REQUIRED

The intervention takes just a few minutes per patient and is implemented concurrently at seasonal flu vaccination clinics. One to 2 hours of staff training are required initially, with periodic brief review and reinforcement of program procedures and progress by a practice team leader or supervisor during the intervention.

INTENDED AUDIENCE

The Flu-FIT and Flu-FOBT Program is designed for patients aged 50-75 years who are both due for CRCS and receive annual flu shots during primary care visits or at drop-in flu shot clinics. Patients are considered due for CRCS if they have not had one of the following: FOBT or FIT in the past year, a flexible sigmoidoscopy in the past 5 years, or a colonoscopy in the past 10 years.

SUITABLE SETTINGS

The Flu-FIT and Flu-FOBT Program can be implemented in community health centers, pharmacies, managed care organizations, and other health care settings where flu shots are provided and where FIT or FOBT is offered for average-risk colorectal cancer screening. To be successful, health care organizations offering Flu-FIT and Flu-FOBT Programs must be able to assure follow up of abnormal FIT or FOBT tests with diagnostic colonoscopy.

REQUIRED RESOURCES

Required resources to implement the program include the following:
- Mailed FLU-FIT and FLU-FOBT announcements
- Clinic posters to advertise the program
- Algorithms for patient flow and for using electronic medical records to assess FIT or FOBT eligibility
- Script to introduce/explain FIT or FOBT with flu shots to patients
- Visual aids to use when offering FIT or FOBT to patients
- Multilingual materials to explain why colorectal cancer screening is important, completion instructions, and video instructions
- Pre-addressed and pre-stamped mailing pouches
- Log sheet to record flu shots and kits dispensed
- Clinic nursing staff

Downloadable, customizable versions of most of the required materials, as well as staff training slides and video demonstrations of how to use them, are available through the program website.

For costs associated with the program, please contact the developer: Michael Potter. (See products page on the RTIPs website for developer contact information.)

ABOUT THE STUDY

Three studies were reviewed for this summary. Located in the San Francisco and Fresno, California, metropolitan areas, the study sites included:
- Six community-based primary care clinics offering flu shots (Study 1)
- A hospital-based primary care clinic offering flu clinics (Study 2)
- Five flu shot clinics operated by an integrated managed care organization (Study 3)

Study 1

Study 1, published in 2011, was conducted in six community-based adult primary care clinics providing flu shots to eligible patients during primary care visits, with nurses often offering the vaccinations proactively without waiting for a physician's order. At the start of the study, CRCS was typically provided at these clinics only by physician order. Each clinic was randomly assigned to provide FOBT with flu shots (FLU-FOBT) or flu shots only (FLU-only) in alternating 1-week blocks. During FLU-FOBT weeks, nurses were given standing orders to offer FOBT, if due, to patients aged 50-75 years who received a flu shot. During FLU-only weeks, nurses had standing orders to provide FOBT to patients who received flu shots only if the primary care clinician ordered the FOBT as part of usual care. The blocks were arranged so that in any given week, three clinics performed the FLU-FOBT protocol and three clinics performed the FLU-only protocol, thereby balancing exposure to the intervention and control arms over the 18-week study period.

The study included 677 patients in the control group and 695 in the intervention group, for a total of 1,372 participants. The average age was 60. The sample was 54.9% male and 37.1% African American, 29.5% non-Latino White, 20.4% Latino, and 11.1% Asian American. Outcomes examined include completion of FOBT and any other CRCS tests, tracked using electronic medical records.

Study 2

Study 2, published in 2009, was conducted at a primary care clinic providing flu shots within a large hospital. The flu shot clinics were run by multilingual medical assistants and health workers. Over a 3-month period, 17 half-day flu clinics were randomized into 9 intervention sessions, in which clinic staff provided flu shots and FOBT kits to patients eligible for CRCS by the end of the flu season, and 8 control sessions, in which staff provided flu shots only. The day before each flu shot clinic, a member of the research team reviewed the electronic medical records of scheduled patients to determine who was eligible for FOBT. The list of eligible patients was provided to the clinic staff so they would know in advance who needed FOBT. After their flu shots, eligible patients attending the intervention sessions were offered an FOBT kit with instructions and postage-paid return envelopes. Patients who did not return a completed kit within 3 weeks of receiving the kit received a telephone call reminder; those who did not return a completed kit within 6 weeks received another telephone call reminder.

The study included 246 patients in the control group and 268 in the intervention group, for a total of 514 participants. The average age was 64.7. The sample was 63.6% female and 52.1% Asian/Pacific Islander, 30.5% Latino, 8.8% non-Latino White, and 5.9% African American. The primary outcome, tracked using electronic medical records, was change in up-to-date CRCS status from being due for a screening test to having completed the FOBT. Patients were considered due for a screening test if they did not have FOBT in the past year, a flexible sigmoidoscopy or double-contrast barium enema in the past 5 years, or a colonoscopy in the past 10 years, or if they had any previously unevaluated abnormal FOBT results or recent unevaluated rectal bleeding.

Study 3

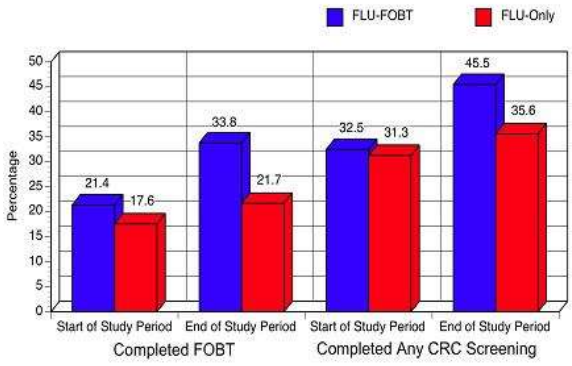
Study 3, published in 2013, was conducted at five flu shot clinic sites operated by an integrated managed care organization for its members. Two sites participated in the first 2-month study period, and the remaining three sites participated in a second 2-month study period one year later. Each site provided a list of flu shot clinic dates to be randomly assigned to the intervention or control arms. Using blocks of 2 or 4 days, each date within each site was assigned to either the intervention arm (FLU-FIT arm providing FIT kits to eligible patients along with flu shot) or to the control arm (FLU-Only arm, providing flu shots only). On FLU-FIT days, the clinic staff were asked to provide FIT kits to eligible patients either immediately before their flu shot or while they registered for the shot. Patients' member cards and electronic medical records were used to identify patients eligible for CRCS. The clinic staff provided FIT kits to eligible members they identified, with any combination of brief verbal messages, such as "Just like a flu shot, you need to complete a colon test every year", "This test is free and could save your life", or "You can do FIT today and mail it in tomorrow." Patients with questions were directed to read the kit instructions (available in multiple languages with an added message about the importance of CRCS) or contact their primary care clinician.

The study included 2,884 patients in the FLU-only control group and 3,351 in the FLU-FIT treatment group, for a total of 6,235 participants. The average age was 61.5. The sample was 57.4% female and 46.6% White, 16.7% Asian/Pacific Islander, 5.7% Black, and 5.1% multiracial. Almost 22% identified themselves as Hispanic (21.7%). The primary outcome, tracked using electronic medical records, was change in CRCS up-to-date status from being due for a screening test to having completed the FIT. Patients were considered due for a screening test if they did not have FIT in the past year, a flexible sigmoidoscopy in the past 5 years, or a colonoscopy in the past 10 years.

KEY FINDINGS

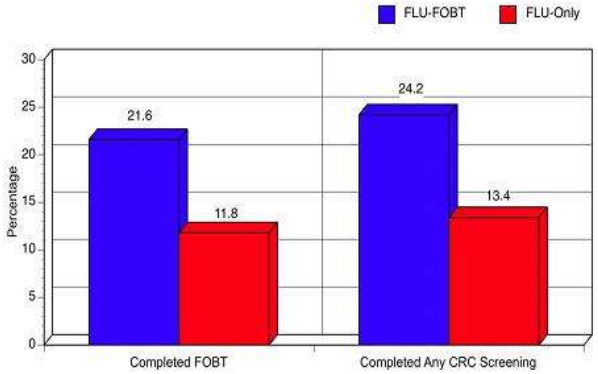
Study 1

Figure 1. Change in Past-Year Colorectal Cancer Screening Rates (FOBT and any CRCS Test) during Study Period



- Past-year CRCS rates, based on completion of the FOBT or any CRCS test in the past 12 months, increased in both study groups during the study period. The proportion of patients completing FOBT in the past year increased in the intervention group from 21.4% to 33.8% (12.4 percentage points), compared with an increase from 17.6% to 21.7% (4.1 percentage points) in the control group (p=.01). Likewise, the proportion of patients completing any CRCS test in the past year increased in the intervention group from 32.5% to 45.5% (13.0 percentage points), compared with an increase from 31.3% to 35.6% (4.3 percentage points) in the control group (p=.018).

Figure 2. Colorectal Cancer Screening Rates (FOBT and Any CRCS Test) by End of Study Period

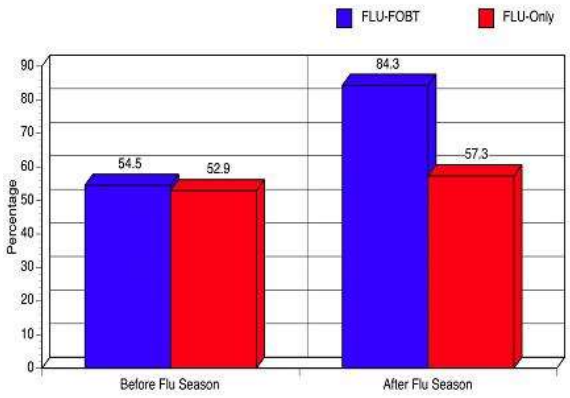


- By the end of the study period, 21.6% of the intervention group completed FOBT and 24.2% completed any CRCS test, compared with 11.8% and 13.4%, respectively, of the control group (p<.001 for both analyses).

- Among patients due for CRCS when they received their flu shot, participants in the intervention group were more than twice as likely to complete FOBT (OR=2.25) and become up to date with CRCS (OR=2.22) by the end of the study period compared with patients in the control group (p<.05 for both analyses).

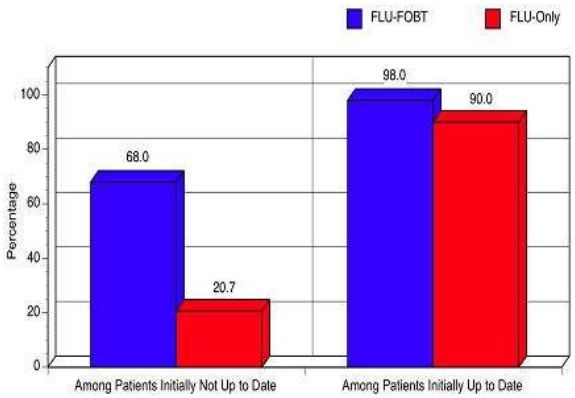
Study 2

Figure 3. Change in Percentage of Patients up to Date with Colorectal Cancer Screening During Flu Season



- From the start of the flu season to the end of the flu season, the percentage of patients up to date with CRCS increased more in the intervention group (from 54.5% to 84.3%) than in the control group (from 52.9% to 57.3%) (p<.001).

Figure 4. Percentage of Patients up to Date with Colorectal Cancer Screening by End of Flu Season: Subgroup Analyses

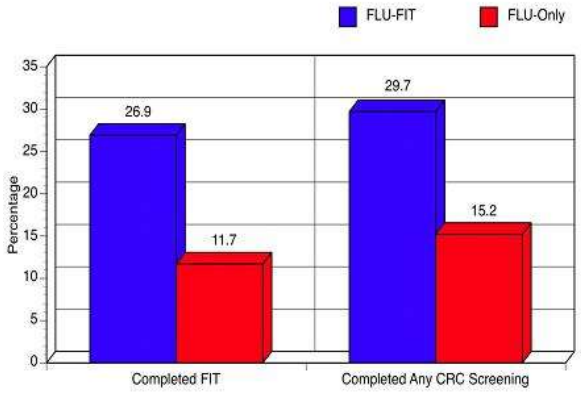


- Among patients initially not up to date with CRCS guidelines, the percentage of patients who became up to date by the end of the flu season was significantly higher in the intervention group (68.0%) than in the control group (20.7%) (p<.001). Further analyses demonstrated that intervention group patients initially overdue for CRCS were 11 times more likely than control group patients initially overdue for CRCS to be up to date with CRCS when the study ended (p<.001).

- Among patients initially up to date with CRCS guidelines, the percentage of patients who were still up to date at the end of the flu season was significantly higher in the intervention group (98.0%) than in the control group (90.0%) (p<.005). Further analyses demonstrated that intervention group patients initially up to date for CRCS were 6 times more likely than control group patients initially up to date for CRCS to be up to date with CRCS when the study ended (p<.001).

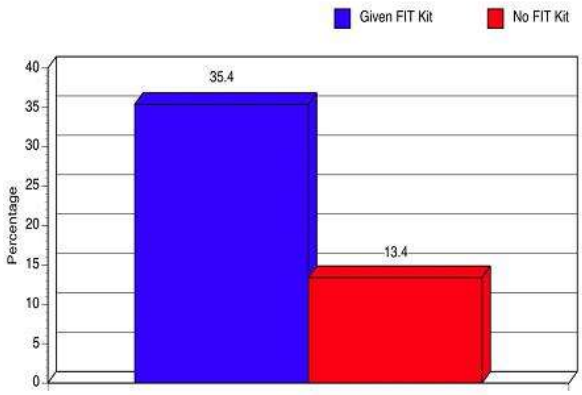
Study 3

Figure 5. Colorectal Cancer Screening Rates (FIT and Any CRCS Test) 90 Days after Flu Vaccination



- Within 90 days of their flu shot, 26.9% of patients in the intervention group completed a FIT and 29.7% completed any CRCS test, while in the control group, 11.7% completed a FIT and 15.2% completed any CRCS test (p<.0001 for both analyses).

Figure 6. FIT Screening Rates 90 Days after Flu Vaccination, Among Those Due for CRCS at Time of Vaccination



- Among patients who were due for CRCS at the time of their flu shot and given a FIT kit (approximately 54% of the intervention group plus about 1% of patients in the control group who received the kit in error), 35.4% completed a FIT within 90 days; among those due for CRCS but not given a FIT, 13.4% completed a FIT within 90 days (p<.0001).

PUBLICATIONS

Primary

Potter MB, Walsh JM, Yu TM, Gildengorin G, Green LW, McPhee SJ. (2011). The effectiveness of the FLU-FOBT program in primary care a randomized trial. American Journal of Preventive Medicine, 41 (1), 9-16.

Potter MB, Phengrasamy L, Hudes ES, McPhee SJ, Walsh JM. (2009). Offering annual fecal occult blood tests at annual flu shot clinics increases colorectal cancer screening rates. Annals of Family Medicine, 7 (1), 17-23.

Potter MB, Ackerson LM, Gomez V, Walsh JM, Green LW, Levin TR, Somkin CP. (2013). Effectiveness and reach of the FLU-FIT program in an integrated health care system: a multisite randomized trial. American Journal of Public Health, 103 (6), 1128-1133.

Additional

Walsh, J. M. E., Gildengorin, G., Green, L. W., Jenkins, J., & Potter, M. B. (2012). The FLU-FOBT Program in community clinics: Durable benefits of a randomized controlled trial. Health Education Research, 27 (5), 886-894.

Potter, M. B., Somkin, C. P., Ackerson, L. M., Gomez, V., Dao, T. T., Horberg, M. A., & Walsh, J. M. E. (2011). The FLU-FIT Program: An effective colorectal cancer screening program for high volume flu shot clinics. The American Journal of Managed Care, 17 (8), 577-583.

Potter, M. B., Yu, T. M., Gildengorin, G., Yu, A. Y., Chan, K., McPhee, S. J., Green, L. W., & Walsh, J. M. E. (2011). Adaptation of the FLU-FOBT Program for a primary care clinic serving a low-income Chinese American community: New evidence of effectiveness. Journal of Health Care for the Poor and Underserved, 22 (1), 283-294.

Potter, M. B., Gildengorin, G., Wang, Y., Wu, M., & Kroon, L. (2010). Comparative effectiveness of two pharmacy-based colorectal cancer screening interventions during an annual influenza vaccination campaign. Journal of the American Pharmacists Association, 50 (2), 48-54.

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