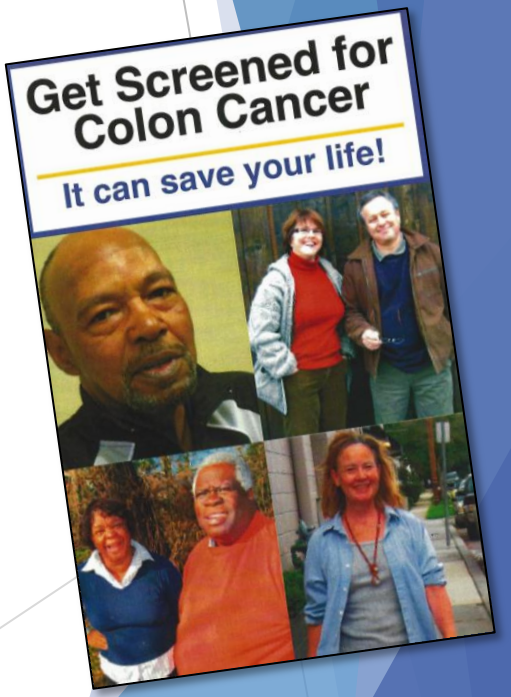
Knowledge, Attitude, Self-Efficacy, Literacy and CRC Screening in Rural Community Clinics



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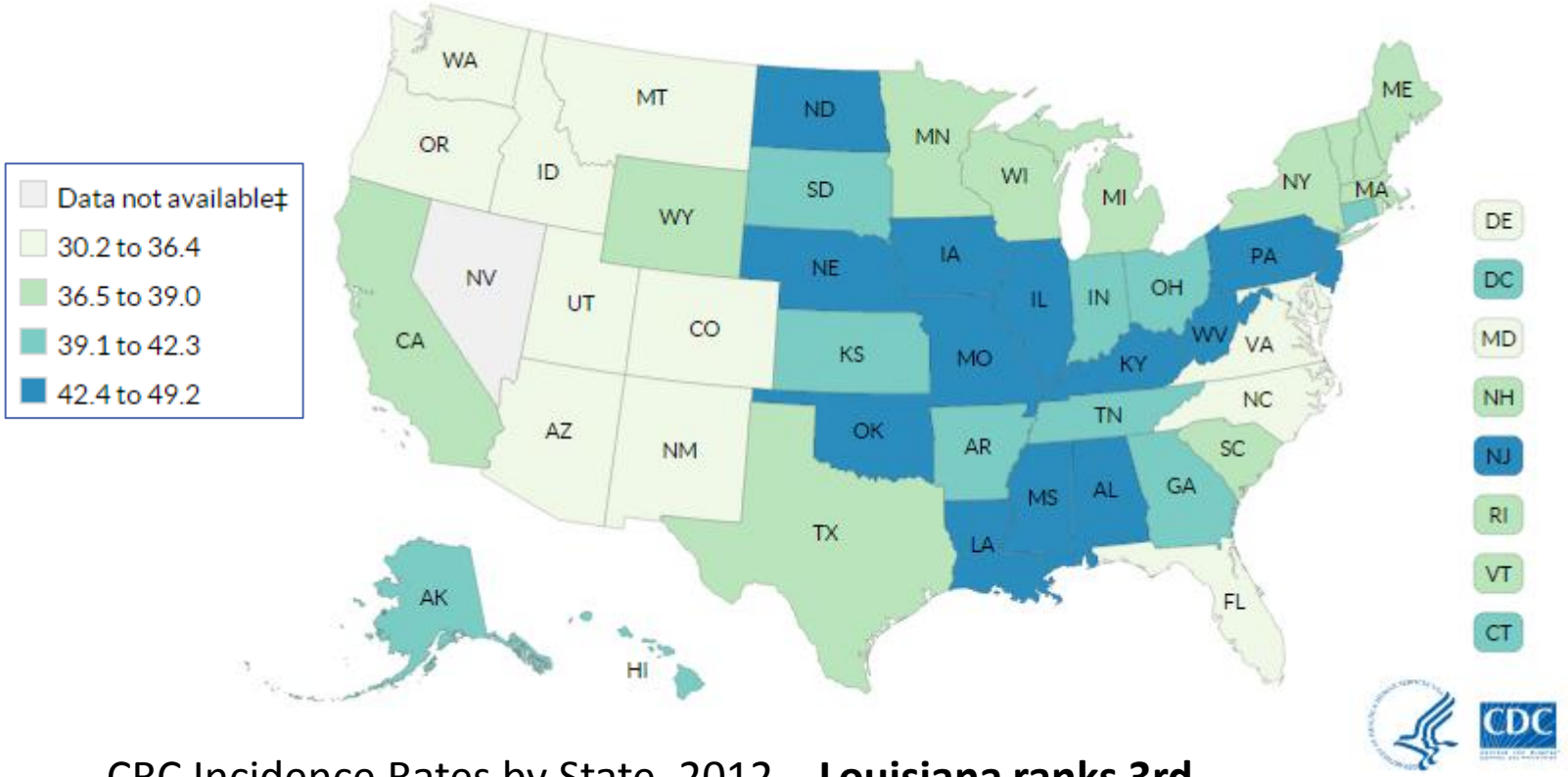
Colon Cancer is Common in U.S.

- Colorectal cancer (CRC) is the 3rd most common cancer & 2nd leading cause of cancer deaths in the US

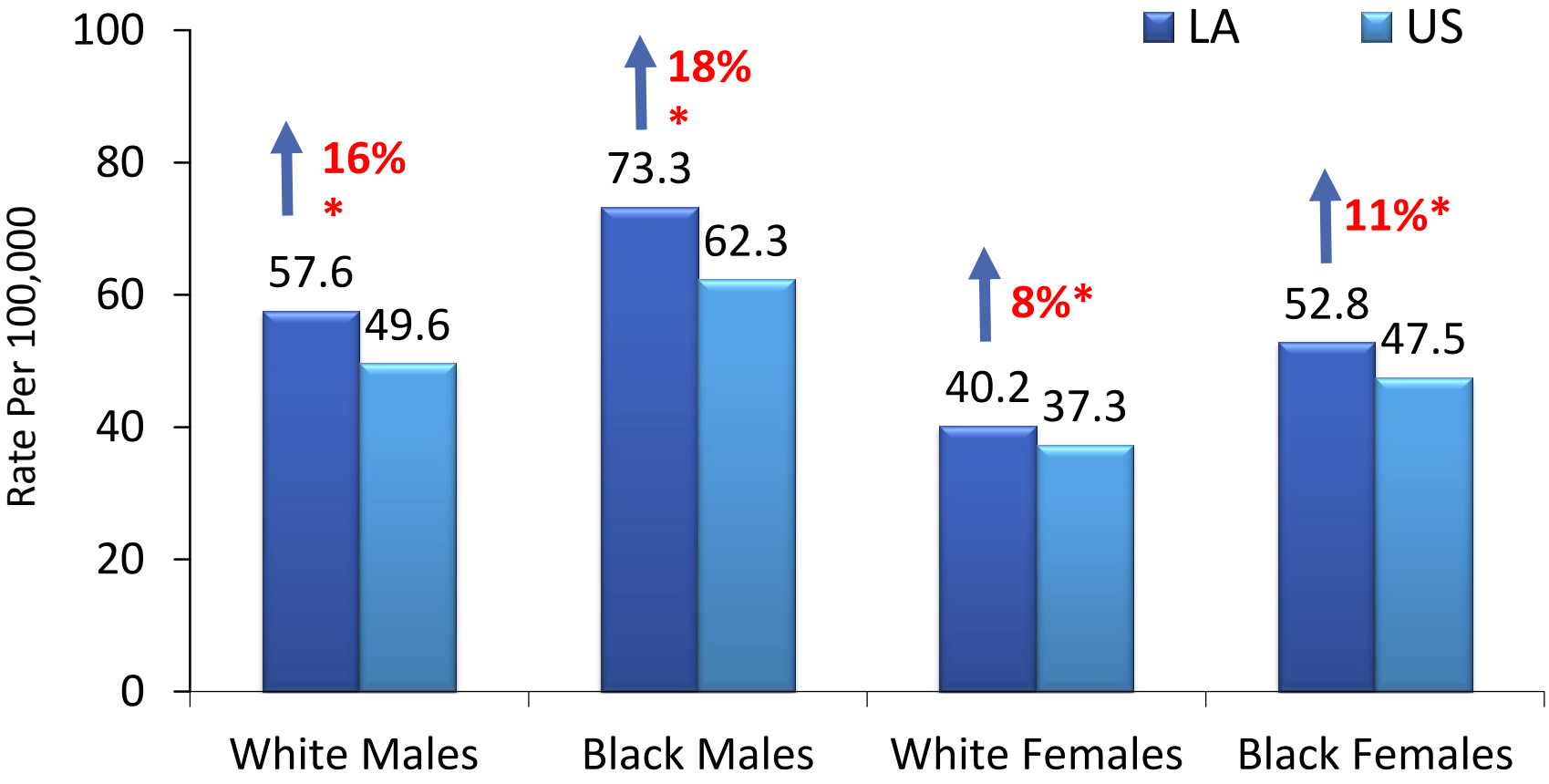


CRC Incidence Rates by State, 2012 – **Louisiana ranks 3rd**

http://www.cdc.gov/cancer/colorectal/statistics/state.htm

Colon Cancer Higher in Louisiana

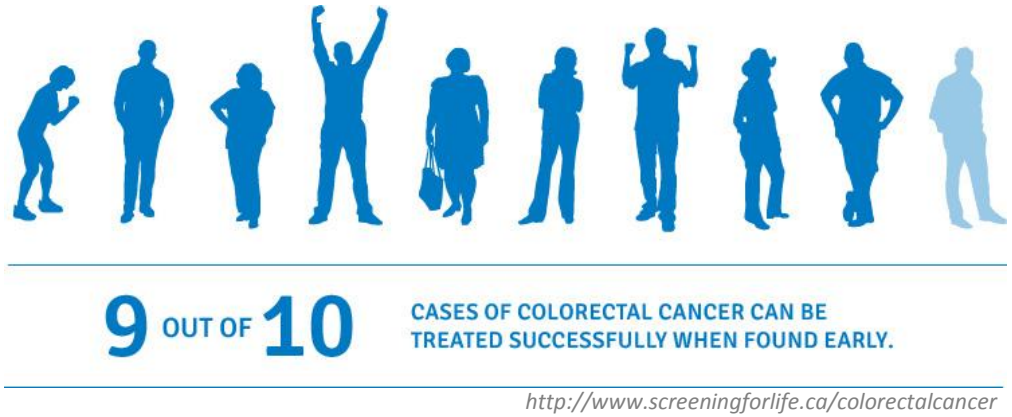
CRC Incidence Rate US vs LA, 2007-2011



Age-adjusted to the 2000 US standard population. 2Data source:18 SEER registries.

CRC Screening is Effective

- FOBT can decrease mortality by 15-33%
- Annual FIT/FOBT screening is an effective CRC tool, but year screening adherence is low
- FOBT/FIT tests are appropriate /recommended screening tool where gastroenterologists and colonoscopy feasibility are limited



http://www.screeningforlife.ca/colorectalcancer

httwww.cdc.gov/cancer/colorectal/basic_info/index.htm
Colorectal Cancer Facts & Figures 2014-2016, ACS
Rex DK, et al. Colorectal Cancer Screening. Am J Gastroenterol 2009;104:739–750
Zauber AG, et al. Evaluating Test Strategies for Colorectal Cancer Screening: A Decision Analysis for the U.S. Preventive Services Task Force. Ann Intern Med. 2008 Nov 4;149(9):659-69.

Screening Disparities

- Adherence to screening recommendation is lower than other cancer screening initiatives
- Significant disparities exist in certain populations
- Risk factors for poor CRC screening adherence:
  - **Low SES**
  - **Low health literacy**
  - **Minority race/ethnicity**
  - **Rural locality**
- Barriers:
  - Screening information not patient friendly, requires high literacy skills
  - Lack of recommendation & annual prompting
  - Lack of access to tests

Cancer Screening Test Use — United States, 2013 Weekly May 8, 2015 / 64(17);464-468
Colorectal Cancer Facts & Figures 2014-2016, ACS,
Davis et al. Strategies to Improve Repeat Fecal Occult Blood Testing Cancer Screening

US Health Agencies call for Improvement

Healthy People 2020 objectives:

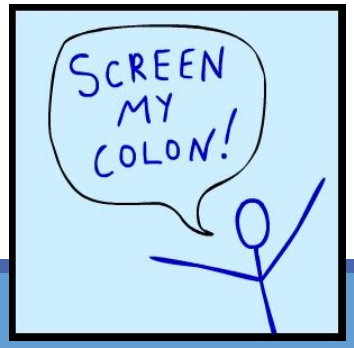
- Reduce annual CRC deaths
- Increase the proportion of adults who receive a colorectal cancer screening based on the most recent guidelines*
- Improve the health literacy of the population
- Reduce health disparities resulting from social determinants of health

National CRC Roundtable - Set goal of 80% screening by 2018

- Called for Federally Qualified Health Centers (FQHCs) to be central focus for addressing national screening challenges

DHHS National Action Plan 2010

- Provide health information and services that are accurate, assessable understandable and actionable



*HP 2020 leading health indicator

Healthy People 2020. Washington, DC: U.S. Department of Health and Human Services, Office of Disease Prevention and Health Promotion

Federally Qualified Health Centers

Uniquely Positioned to Address Disparities

- Government supported clinics provide services to >23 million regardless of insurance status
- 44 states; over half in rural areas
- 30% rural,65% belong to racial and ethnic minorities, 72% at or below poverty line
- In 2015 60% designated as Patient Centered Medical Homes (encouraged & incentivized to have EHR & health coaches)

MADISON PARISH, LOUISIANA

CRC Screening: Benefits of FOBT (FIT)

- FIT, the most sensitive FOBT, proven effective for the early detection of cancer
- More cost effective, easier to use than traditional FOBT, less restrictions and simpler instructions
- Patients living in rural areas have more difficulty getting colonoscopies.

InSure FIT Kit Sample

"Health Literacy Interventions to Overcome Disparities in CRC Screening"

5 year RCT in 4 rural FQHCs: 650 patients, ages 50-75

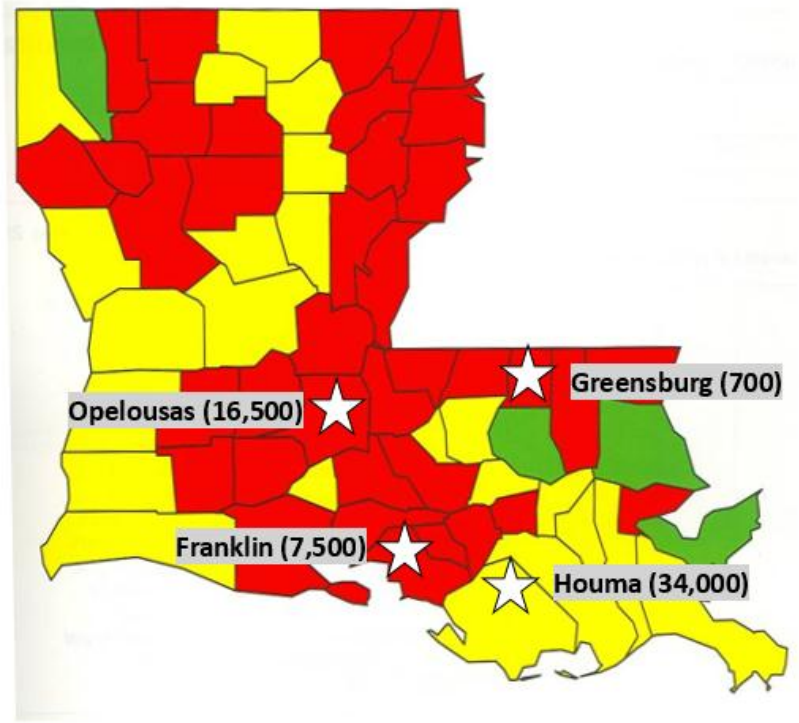
- Compare effectiveness & cost effectiveness of personal calls vs. automated calls to improve initial and repeat CRC screening.
- Conduct process evaluation to investigate implementation and barriers.
- Determine if the effects of either strategy vary by patients' literacy.
- Explore patients' understanding, beliefs & self-efficacy for CRC screening over time.

American Cancer Society®

Study Sites

4 South Louisiana Rural Community Clinics*

*CRC screening Rate 3% - 5%



Patient Enrollment to Date	**(N = 599)**
Race	
African-American	64%
White	36%
Gender	
Female	56%
Male	44%
Literacy	
< 9th Grade Reading Level	40%
>= 9th Grade Reading Level	60%

Methods

Enrollment: RA gives patients CRC survey, screening recommendation, HL patient education, simplified FIT instructions, and FIT kit. Patients randomized to PC or ATC arm

IF No FIT kit returned:
4 Weeks & 8 weeks

PC Arm: a personal follow-up call from a prevention coordinator reminding patients to complete & mail FIT kits & discuss any barriers perceived by the patient

ATC Arm: automated follow-up call with voice recording uses plain language and motivational messages encourages patients to complete & mail the FIT

6 Months

Central RA calls & re-administers baseline survey as well as satisfaction survey with all patients

12 Months

PC Arm: mail outreach reminder cards and FIT kits for CRC rescreening, re-implement personal call strategy at 4 & 8 weeks

ATC Arm: mail outreach reminder cards and FIT kits for CRC rescreening, re-implement automated call strategy at 4 & 8 weeks

24 Months

PC Arm: mail outreach reminder cards and FIT kits for CRC rescreening, re-implement personal call strategy at 4 & 8 weeks

ATC Arm: mail outreach reminder cards and FIT kits for CRC rescreening, re-implement automated call strategy at 4 & 8 weeks

Survey Instruments

Questionnaire (Pre and Post):

- Structured survey measuring patient knowledge, beliefs, and self-efficacy about CRC screening
- Administered at baseline and 6 months after enrollment

Literacy assessed by the REALM

List 1	List 2	List 3
fat	fatigue	allergic
flu	pelvic	menstrual
pill	jaundice	testicle
dose	infection	colitis
eye	exercise	emergency
stress	behavior	medication
smear	prescription	occupation
nerves	notify	sexually
germs	gallbladder	alcoholism
meals	calories	irritation
disease	depression	constipation
cancer	miscarriage	gonorrhea
caffeine	pregnancy	inflammatory
attack	arthritis	diabetes
kidney	nutrition	hepatitis
hormones	menopause	antibiotics
herpes	appendix	diagnosis
seizure	abnormal	potassium
bowel	syphilis	anemia
asthma	hemorrhoids	obesity
rectal	nausea	osteoporosis
incest	directed	impetigo

40. **If I find cancer through a FOBT stool test or FIT, my cancer treatment may not be as bad.**
   - *Strongly agree*
   - *Agree*
   - *Disagree*
   - *Strongly disagree*
   - *Don't Know*

41. **Having a FOBT stool test or FIT is a good way for me to find colon cancer early.**
   - *Strongly agree*
   - *Agree*
   - *Disagree*
   - *Strongly disagree*
   - *Don't Know*

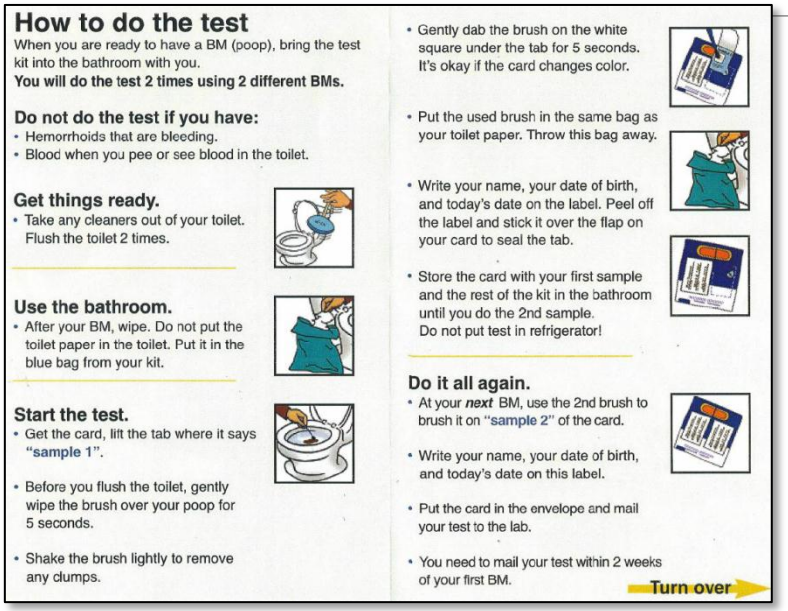
42. **Having a FOBT stool test or FIT will decrease my chances of dying from colon cancer.**
   - *Strongly agree*
   - *Agree*
   - *Disagree*
   - *Strongly disagree*
   - *Don't Know*

43. **I am afraid to do the FOBT stool test or FIT because I might find out that something is wrong.**
   - *Strongly agree*
   - *Agree*
   - *Disagree*
   - *Strongly disagree*
   - *Don't Know*

44. **I am afraid the FOBT stool test or FIT instructions will be confusing.**

Materials

Simplified FIT Instructions: 3rd Grade Reading Level



How to do the test

When you are ready to have a BM (poop), bring the test kit into the bathroom with you.
You will do the test 2 times using 2 different BMs.

Do not do the test if you have:
- Hemorrhoids that are bleeding.
- Blood when you pee or see blood in the toilet.

Get things ready.
- Take any cleaners out of your toilet. Flush the toilet 2 times.

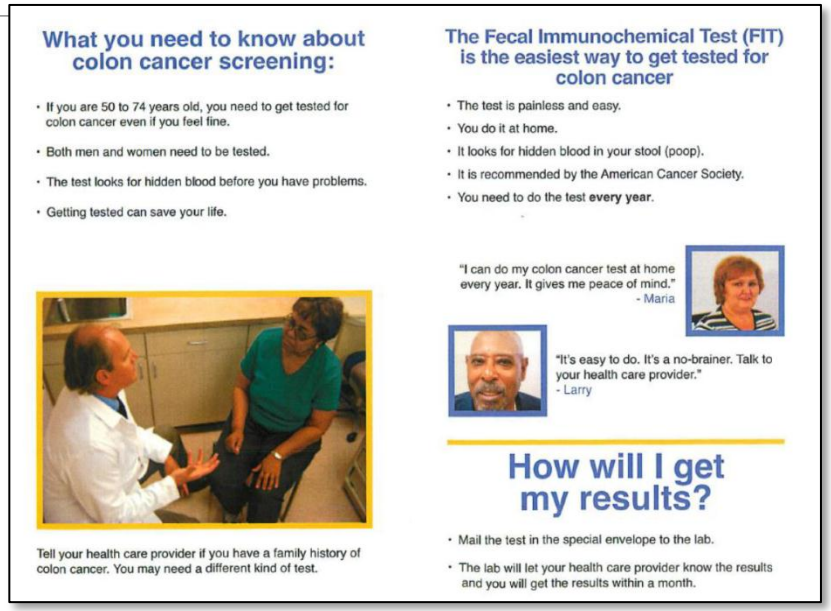
Use the bathroom.
- After your BM, wipe. Do not put the toilet paper in the toilet. Put it in the blue bag from your kit.

Start the test.
- Get the card, lift the tab where it says "sample 1".
- Before you flush the toilet, gently wipe the brush over your poop for 5 seconds.
- Shake the brush lightly to remove any clumps.
- Gently dab the brush on the white square under the tab for 5 seconds. It's okay if the card changes color.
- Put the used brush in the same bag as your toilet paper. Throw this bag away.
- Write your name, your date of birth, and today's date on the label. Peel off the label and stick it over the flap on your card to seal the tab.
- Store the card with your first sample and the rest of the kit in the bathroom until you do the 2nd sample. Do not put test in refrigerator!

Do it all again.
- At your ***next*** BM, use the 2nd brush to brush it on "sample 2" of the card.
- Write your name, your date of birth, and today's date on this label.
- Put the card in the envelope and mail your test to the lab.
- You need to mail your test within 2 weeks of your first BM.

Turn over

CRC Educational Pamphlet: 4th Grade Reading Level



What you need to know about colon cancer screening:

- If you are 50 to 74 years old, you need to get tested for colon cancer even if you feel fine.
- Both men and women need to be tested.
- The test looks for hidden blood before you have problems.
- Getting tested can save your life.

Tell your health care provider if you have a family history of colon cancer. You may need a different kind of test.

The Fecal Immunochemical Test (FIT) is the easiest way to get tested for colon cancer

- The test is painless and easy.
- You do it at home.
- It looks for hidden blood in your stool (poop).
- It is recommended by the American Cancer Society.
- You need to do the test **every year**.

"I can do my colon cancer test at home every year. It gives me peace of mind." - Maria

"It's easy to do. It's a no-brainer. Talk to your health care provider." - Larry

How will I get my results?

- Mail the test in the special envelope to the lab.
- The lab will let your health care provider know the results and you will get the results within a month.

InSure FIT Kit Sample

Baseline Survey Results

- 90% of participants reported having heard of CRC
  - However, only 64% knew a test to check for CRC
- 70% reported their provider recommending CRC screening in the past
- 91% reported they would want to know if they have CRC
- 90% indicated they would be able to return the test to the lab.

Results to Date – Year 1

599 patients enrolled to date (300 – Automated Arm / 299 – Personal Arm)

- 412 (69%) completed tests [210 (70%) Automated /202 (68%) Personal]
  - 42 (10.2%) positive
    - 42 recommended for a colonoscopy – 4 have refused
  - 8 outside lab window to analyze

Follow-up calls for Unreturned Kits

- Automated Call Arm
  - 113 people called – 26 returned FIT (23% of people called completed FIT; 12% of completed FIT in AC arm were result of call)
- Personal Call Arm
  - 115 people called – 22 returned FIT - (19% of people called completed FIT; 11% of completed FIT in PC arm were result of call)

Results to Date – Year 2

129 Second kits mailed out to-date

- **AC Arm (n=61)**
  - 29 (48%) completed kits
    - 2 (7%) positive
    - 2 returned – outside lab window to analyze
  - 44 people called – 10 returned FIT - (23% of people called completed FIT; 35% of completed FIT in PC arm were result of call)
- **PC Arm (n=68)**
  - 28 (41%) completed kits
    - 3 (11%) positive
    - 2 returned – outside lab window to analyze
  - 48 people called – 9 returned FIT - (19% of people called completed FIT; 32% of completed FIT in PC arm were result of call)

Lessons & Challenges

- Regulatory paper work is a barrier for community clinic RAs
- RAs need very concrete research instructions and frequent “teach back” of protocol
- Frequent face-to-face clinic visits with food build relationships & enhance fidelity
- Arranging for diagnostic colonoscopy for uninsured/underinsured is challenging

Implications

- Providing literacy appropriate education, demonstrating the FIT test & follow-up outreach has the potential to increase screening rates.
- There is an indication that follow-up calls are helpful in year 2
  - over 70% of patients in each arm needed a reminder call and over 30% of those who received a call completed the FIT
    - Compare that to year 1, 38% of patients needed a reminder call and the calls added just over 10% improvement in both arms.
- Improved screening rates would potentially address public health disparities and improve health outcomes

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