Colorectal Cancer Screening: Role of the Primary Care Provider

Michael Pignone, MD, MPH
University of North Carolina

Burden of Disease

- Second leading cause of cancer death in US
- American Cancer Society estimates in 2005:
  - 145,290 new cases
  - 56,290 deaths
- Affects both women and men
- Affects people of all races

Who Is at Risk?

Cancers of the Colon and Rectum: Average Annual Age-Specific SEER Incidence and U.S. Mortality Rates By Gender, 1993-1997

Source: Cancer Statistics Review, 1973-1997

Effective Screening Options

- Fecal Occult Blood Test (FOBT) annually
- Flexible sigmoidoscopy every 5 years
- FOBT + flexible sigmoidoscopy
- Double-contrast barium enema (DCBE) every 5-10 years
- Colonoscopy, every 10 years

FOBT Screening Programs

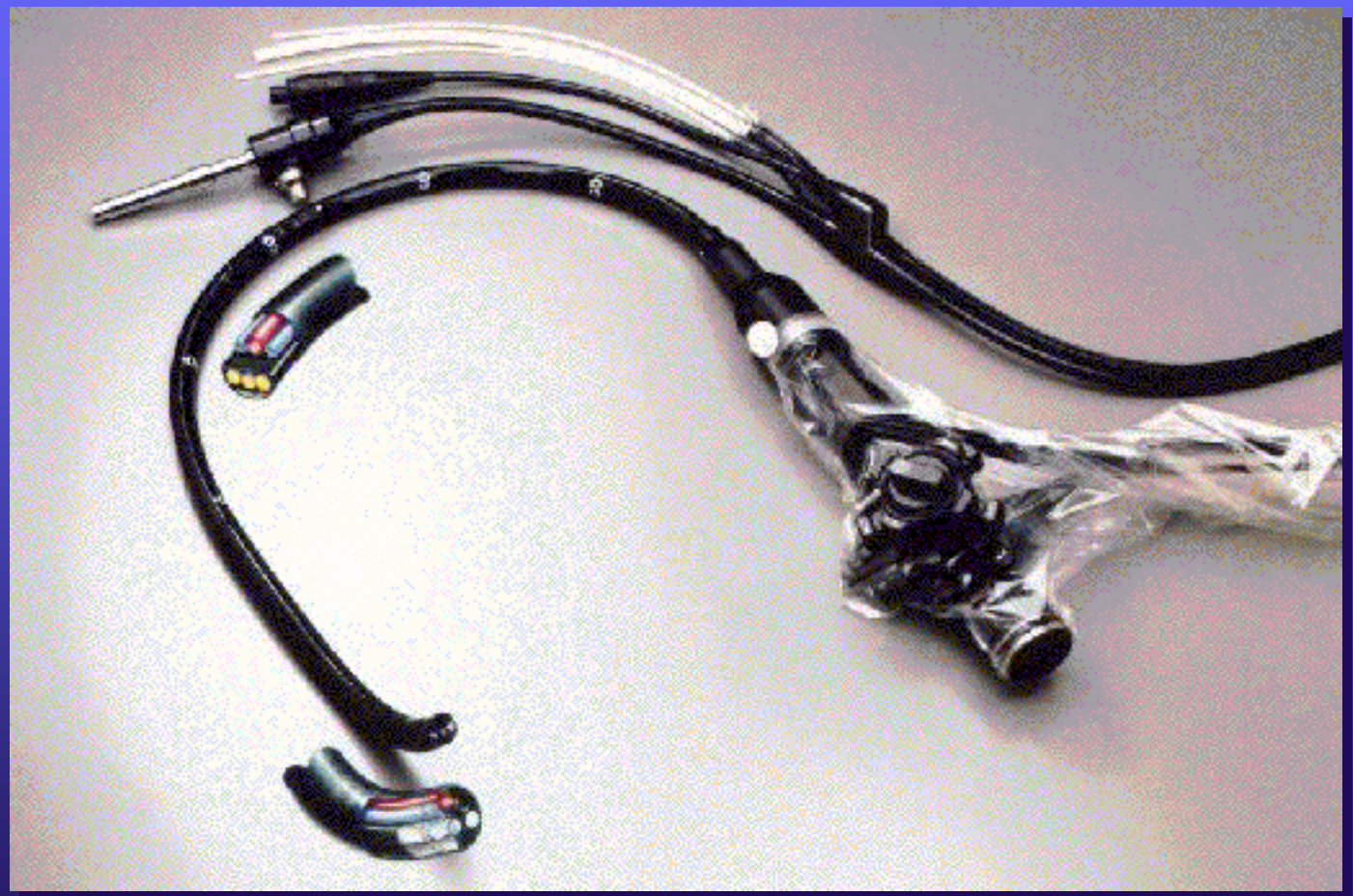
You will need:

- FOBT kits
- Assigned roles for office staff
  - Instructing and encouraging patients
  - Developing cards
  - Recording results
  - Notifying patient and clinician

FOBT: Counseling Your Patients

- Explain exactly what to expect
- Don’t rely solely on instructions in kit
- Consider patient educational materials
- Reminder systems increase adherence

Flexible Sigmoidoscopy



Fiberoptic sigmoidoscope

To Begin an Office Flexible Sigmoidoscopy Screening Program

You will need

- Trained clinician(s)
- Equipment
  - Flexible sigmoidoscope
  - Light source
  - Suction device
  - Videoscreen preferable
- Procedure room with bathroom nearby
- Assigned roles for office staff
  - Patient scheduling and instruction
  - Equipment setup, cleaning, and maintenance
  - Assistance with procedure
- Informed consent policy

To Begin a Program of Referring to Another Facility for Flexible Sigmoidoscopy or Colonoscopy

You will need

- Identified partner site
- Mechanism for direct referral for the procedure
  - Includes pre-procedure testing and risk assessment
- Method for communicating results

Flexible Sigmoidoscopy: Counseling Your Patients

- Use patient education material
- Expect moderate discomfort (like gas pain)
- Most patients report that it's not as bad as they thought it would be
- Sedation not routinely used
- Exam lasts approximately 20 minutes
- Patients able to return to work and don't need a ride

To Begin a Barium Enema Screening Program

You will need

- Identified, experienced radiology site
- Assigned tasks for office staff
  - Patient education
  - Scheduling
- Plan for communicating results and arranging follow-up testing with colonoscopy

DCBE: Counseling Your Patients

- Use patient education material
- Expect moderate discomfort
- Requires patient to change position during exam
- Sedation is not used
- Exam lasts about 20 to 30 minutes
- Patient could return to work but will have frequent barium stools or constipation

Colonoscopy: Counseling Your Patients

- Use patient education material
- Expect moderate discomfort with preparation, but actual procedure performed under sedation
- Some patients experience discomfort during recovery
- Exam lasts approximately 30 to 45 minutes
- Patient requires ride home after procedure and usually misses 1 work day

Which tests should I offer?

- Determine local resources
  - Tests offered
  - Infrastructure for follow-up
- Decide as a practice whether to emphasize one test or offer a menu of tests
- Identify process for patients to determine coverage and co-payment information
- If offering options, need to be able to assess patient preferences and help patients obtain their preferred test

Developing an office strategy for improving colon cancer screening

Predictors of CRC screening

- Provider recommendation*
- Age
- Education
- Health insurance
- Usual source of care
- Most unscreened patients (64-72%) were unaware of need for testing and over 90% had not received a recommendation from their provider

Wee Preventive Medicine 2005
National Health Interview Survey

Primary care providers

- Are busy
- Have multiple responsibilities
- Endorse colon cancer screening
- Overestimate their performance
- Fail to screen half of eligible adults
- Often lack systems resources

Patient Barriers

- Lack of knowledge about CRC
- Lack of perceived susceptibility
- Lack of awareness of screening options
- Lack of access to care
- Out-of-pocket costs
- Competing demands
- Concerns about discomfort or hassle

Provider Barriers

- Low provider knowledge and interest
- Competing demands
- Perception that patients don’t want screening

System Barriers

- Lack of appropriate information systems (e.g. no reminder system)
- Inconsistent / unclear insurance coverage (e.g. multiple payers, lack of clear information on co-payments)
- Missed opportunities for communication

Improving screening -office practice

- Educational approaches
- Audit and feedback
- Reminder systems
  - Provider
  - Patient
- Decision aids
- Practice reorganization
- Combinations

Educational approaches

- Easiest to implement
- Lectures alone have little or no effect
- Interactive workshops have mixed results
- Few good examples for CRC screening
- Dietrich 1992 found no effect of CME on FOBT screening

Audit and feedback

- Systematic collection and reporting of provider or practice-specific performance measures (e.g. screening rates)
- Modest effect (5-10%) in previous trials
- Limited when not tied to specific patients
- Effect may wane over time

Reminders to providers

- Balas reviewed the effect of reminders to physicians about preventive care
- Overall, reminders increased preventive care performance by 13%
- Effect on FOBT was 14%
- Method of prompting did not appear to affect results

Reminders to patients

- Tested in a large number of studies
- Effect variable- may be related more to population and method of test ordering
- Meta-analysis by Stone and colleagues found OR = 2.75 (1.9, 4.0) for increase in screening rates
- Often coupled with education

Practice reorganization

- Potentially powerful approach
- Includes:
  - Separate clinic for screening
  - Planned screening visits
  - CQI strategies
  - Designation of responsibility to non-physician
- Meta-analysis by Stone found increased odds of CRC screening by 17 (12-25)

Practice reorganization

- Belcher (1990) performed a 5 year, three arm randomized trial in the Seattle VA:
  - provider education and feedback
  - patient education
  - nurse-led prevention clinic
- Only the nurse-led prevention clinic increased screening (22% to 78% for FOBT)

Patient-directed Decision Aids

- CRC screening a good topic for informed or shared decision making because of the multiple options for screening
- Several trials have examined the effect of patient-directed decision aids
- Effect of screening rates inconsistent

CRC screening decision aid trials

Study	Modality	Effect on screening
Barnas	Videotape	+ 3%
Pignone	Videotape	+ 14%*
Wolf	Verbal script	No change in interest
Dolan	Interview	- 3%

* Statistically significant

Randomized Controlled Trial of a Patient Education Video to Improve Colon Cancer Screening

Michael Pignone, MD, MPH

Russ Harris, MD, MPH

Linda Kinsinger, MD, MPH

Making Prevention Work

Lineberger Cancer Center

UNC Div. of General Internal Medicine

Methods

- site = three primary care practices in NC
- eligibility criteria:
  - 50-75 years of age
  - no personal or family history of colon cancer
  - no recent testing
- eligible subjects randomized to:
  - intervention (CRC video + targeted brochure)
  - control (auto safety video + standard brochure)

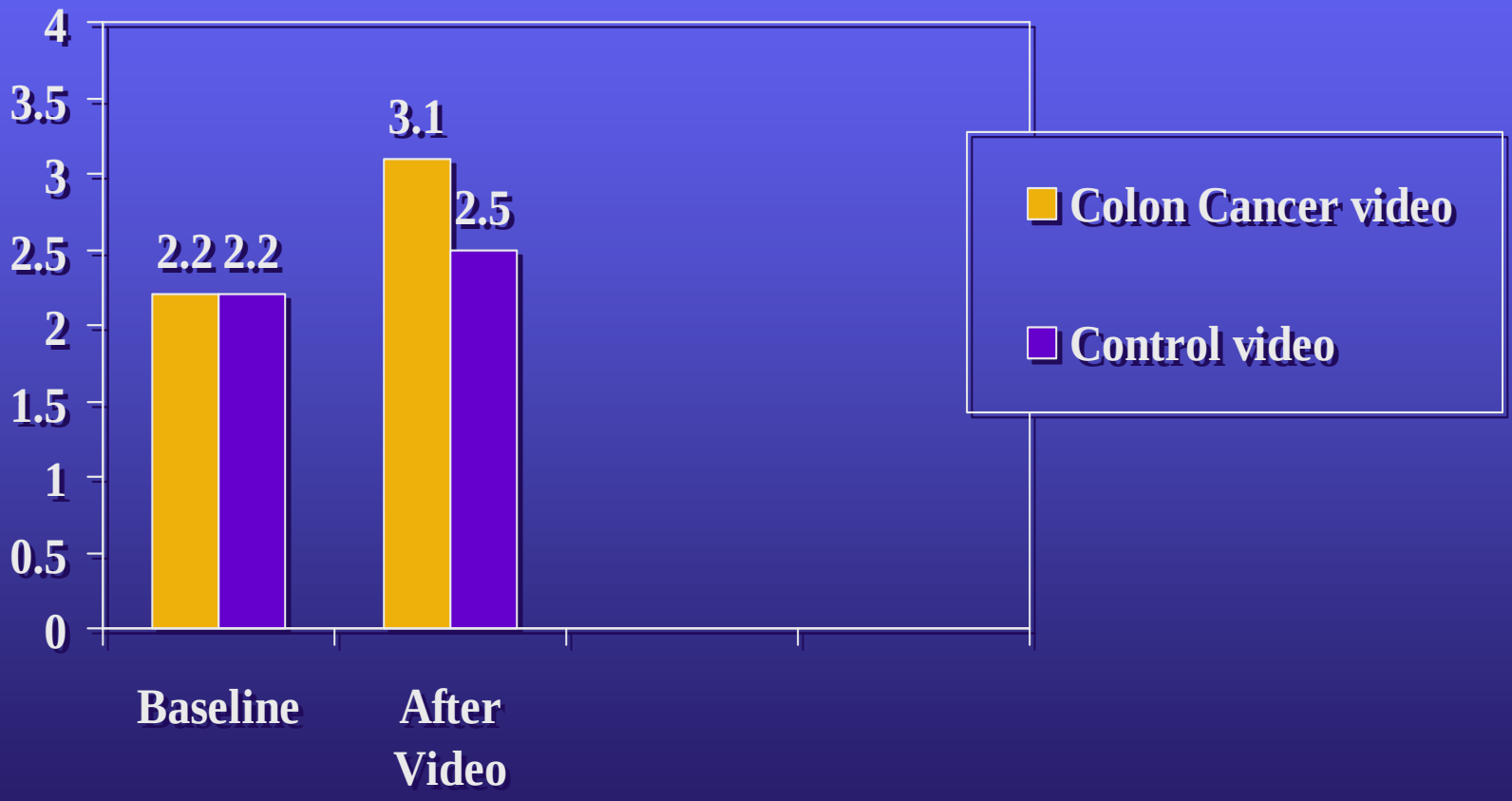
Results

- 1240 potential participants contacted
- 651 participated (52%)
- 249 patients (39%) randomized

Eligible Subjects

- Mean age = 63
- 61% female
- 87% White; 13% African-American
- 86% high school graduates or GED
- all insured (52% Medicare, 3% Medicaid)

Intent to Ask for Screening



Choice of Brochure Among Intervention Subjects (n=124)

- Green: Ready To Be Tested = 53%
- Yellow: Wants More Information = 22%
- Red: Does Not Want Testing Now = 23%
- data missing = 2%

Conversations about CRC screening

- Patient self-report, collected immediately after visit with provider
- 69% of intervention patients reported a conversation about CRC screening, compared with 43% of controls
- Having a conversation strongly predictive of test ordering (OR =21) and completion (OR =6)

Tests Ordered - Patient Self-Report

- Intervention = 47%
- Control = 26%
- Difference 21% (95% CI 9%, 33%)

Proportion with a test ordered by choice of brochure

- Intervention - Green Brochure = 69%
- Intervention - Yellow Brochure = 41%
- Intervention - Red Brochure = 7%

- Control = 26%

Proportion Completing A Test

- Chart review done 3-6 months after visit
- Proportion of patients who completed either FOBT or flex sig:
  - intervention group = 37%
  - control group = 23%
  - difference 14% (95% CI 3%, 25%)

Proportion with a test completed by choice of brochure

- Intervention - Green Brochure = 55%
- Intervention - Yellow Brochure = 33%
- Intervention - Red Brochure = 4%

- Control = 23%

Conclusions

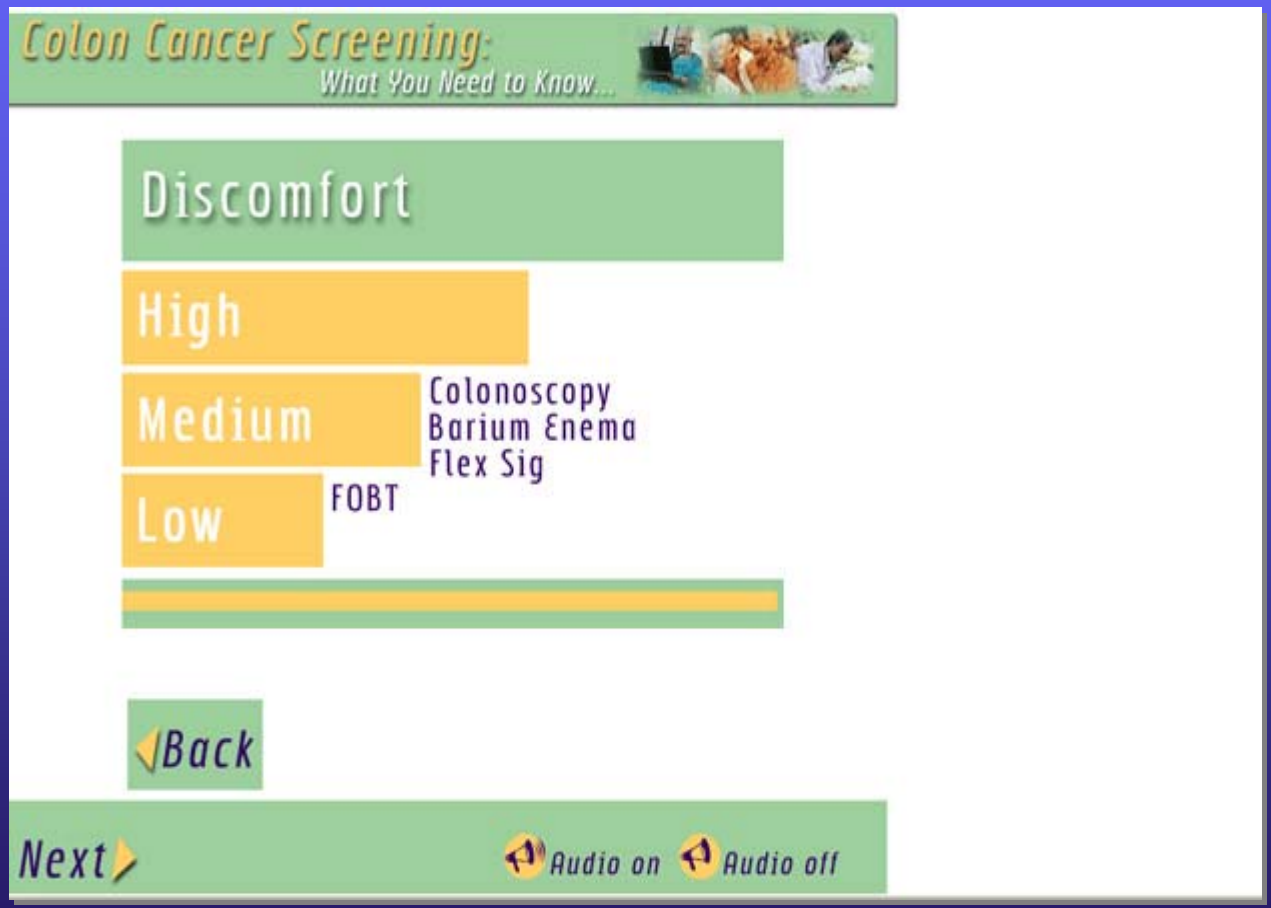
- A patient-directed colon cancer video and targeted brochure significantly increases:
  - intent to ask for screening
  - conversations about screening
  - proportion of patients having screening tests ordered (absolute difference = 21%)
  - proportion of patients completing screening tests (absolute difference = 14%)

Next Steps

- Developed updated version of decision aid that includes colonoscopy and barium enema
- Available in VHS, DVD, or computer-based formats
- Performed usability testing
- Tested new version in single-site, uncontrolled trial

Decision Aid - In-Depth Information

Decision Aid- Comparative Information



Results

- 80 patients
- Mean age 60; 41% female
- 69% White, 21% African-American
- 64% have HS education or greater
- 45% with previous history of screening
- 90% preferred to play a major role in deciding how to be screened

Results

- Mean viewing time = 19 minutes
- Intent to be screened increased from 2.8 to 3.2 on 4-point Likert scale
- Stage after viewing:
  - 60% ready to be screened
  - 18% considering
  - 22% didn’t want screening at that time
- Chart review: 48% had tests ordered, 43% completed a test

Test preferences

- 42% preferred colonoscopy
- 20% FOBT alone
- 18% FOBT + sigmoidoscopy
- Only 28% of patients had their preferred test ordered

A Call to Action

- Screening reduces incidence of and mortality from CRC
- Persons aged 50 years and older should generally be screened; high-risk individuals may need to begin earlier
- Several effective screening options are available
- Effective techniques are available to increase screening in office practice