Colorectal cancer screening: What is our goal? How can we reach it?

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- National Colorectal Cancer Roundtable
- Agency for Health Care Research and Quality
- Improving Performance in Practice (national demo) (RWJF/ABMSS)
  - Governor’s Office of Health Care Reform
  - Pennsylvania Chronic Care Commission

Outline

- Pennsylvania goals on CRC screening
- Epidemiology of CRC in Pennsylvania
- Current screening rates/trends in PA
- 2008 Screening Guidelines
- Why screening rates are not higher
- How we can increase screening rates
  - Tools/Models available to help us
- Patient Centered Medical Home as a model for increasing screening rates
- Explore what some PA primary care practices are doing

Colorectal Cancer

- Colorectal cancer (CRC) is 2nd leading cause of cancer deaths in U.S.
- In 2007: estimated 153,760 cases and 52,180 deaths in the United States
- In Pennsylvania in 2007: 8,861 cases and 2,783 deaths
Where we want to be:
PA CRC SCREENING GOALS

- Increase the percentage of CRC Screening in the Pennsylvania adult population age 50 and above to 80% by 2014.

- Decrease the incidence of late-stage CRC diagnoses among Pennsylvania adults age 50 and above to 44% by 2014.

Where We Are: CRC Screening in PA & US (Age 50 and over; BRFSS, CDC)

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<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>Stool Tests (2 yrs)</td>
<td>29%</td>
<td>30%</td>
<td>19%</td>
<td>21%</td>
</tr>
<tr>
<td>Endoscopy* (ever)</td>
<td>38%</td>
<td>48.6%</td>
<td>62%</td>
<td>62.5%</td>
</tr>
</tbody>
</table>

*Endoscopy=Colonoscopy or Sigmoidoscopy

Percent of People who have had Colon-Cancer Screening Tests

- FOBT in Past Year
- Sigmoidoscopy in Past 5 Years
- Colonoscopy in Past 10 Years
- FOBT in Past Year or Sigmoidoscopy in Past 5 Years or Colonoscopy in Past 10 Years
Percent of CRC Incidence by Age in PA (2005-2007)

<table>
<thead>
<tr>
<th>Age Range</th>
<th>Percent</th>
</tr>
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<tbody>
<tr>
<td>25-49</td>
<td>1%</td>
</tr>
<tr>
<td>40-49</td>
<td>6%</td>
</tr>
<tr>
<td>50-59</td>
<td>15%</td>
</tr>
<tr>
<td>60-69</td>
<td>20%</td>
</tr>
<tr>
<td>70-79</td>
<td>29%</td>
</tr>
<tr>
<td>80 and over</td>
<td>29%</td>
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Risk of Colorectal Cancer

- An individual’s risk of colorectal cancer is elevated if:
  - There is a first degree relative with CRC or an adenomatous polyp under age 60
  - There are two relatives of any age with CRC or with an adenomatous polyp
  - There is a history of chronic inflammatory bowel disease for > 8 years or a hereditary syndrome.

The evidence for this assessment of risk comes from a meta-analysis of 27 studies back to 1966 that assessed familial risk of colorectal cancer and adenomatous polyps. (Johns LE, Houlston RS. A systematic review & meta-analysis of familial colorectal cancer risk. Am J Gastroenterol 2001; 96: 2992-3003.)

CRC Incidence in Pennsylvania vs U.S.*

<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>TOTAL Population</td>
<td>45.9</td>
<td>60.4</td>
<td>54.6</td>
</tr>
<tr>
<td>Asian or Pacific Islander</td>
<td>NA</td>
<td></td>
<td>37.4</td>
</tr>
<tr>
<td>Black or African American</td>
<td>56.2</td>
<td>67.8</td>
<td>59</td>
</tr>
<tr>
<td>White</td>
<td>45.3</td>
<td>63.6</td>
<td>53.9</td>
</tr>
<tr>
<td>Hispanic or Latino</td>
<td>38</td>
<td>NA</td>
<td>32.6</td>
</tr>
</tbody>
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Rate per 100,000, age adjusted. EpiQMS, DOH.
Decline in PA CRC Death Rate & U.S. Target

U.S. 2010/2020 Target: 13.9 deaths per 100,000 population.

<table>
<thead>
<tr>
<th></th>
<th>PA ('98)</th>
<th>PA ('08)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Population</td>
<td>23.4</td>
<td>18</td>
</tr>
<tr>
<td>By Race/Ethnicity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asian or Pacific Islander</td>
<td>NA</td>
<td>14.5</td>
</tr>
<tr>
<td>Black or African American</td>
<td>29</td>
<td>21.9</td>
</tr>
<tr>
<td>White</td>
<td>23</td>
<td>18</td>
</tr>
<tr>
<td>Hispanic or Latino</td>
<td>15.5</td>
<td>6.4</td>
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Where we want to be:
PA CRC SCREENING GOALS

- Increase the percentage of CRC Screening in the Pennsylvania adult population age 50 and above to 80% by 2014.
- Decrease the incidence of late-stage CRC diagnoses among Pennsylvania adults age 50 and above to 44% by 2014.

Percent of Colon and Rectal Cancer Incidence Early and Late Stage, 1997-1999 to 2005-2007
How Can We Reach Our Goal? Where Do We Want to Be; How We Should Approach this....

» Colonoscopy and
» Stool Blood Tests

Can the guidelines help us?

The NEW 2008 CRC Guidelines*

* American Cancer Society

* U. S. Multi-Society Task Force on Colorectal Cancer
  - American Gastroenterological Association
  - American College of Gastroenterology
  - American Society of Gastrointestinal Endoscopists
* American College of Radiology

* Pennsylvania will follow USPSTF guidelines

2008 CRC Guidelines: What’s New?

CRC screening tests are grouped into two categories:

* Tests that detect cancer and precancerous polyps*

* Tests that primarily detect cancer

* It is the strong opinion of the ACS CRC Advisory Group that colon cancer prevention should be the primary goal of CRC screening.
Screening guidelines

• These screening recommendations are evidence based.

EB CME

The evidence for these screening recommendations is based on the following sources: Stool blood test - three randomized controlled trials (RCTs), all using the Hemoccult® test kit, showed reductions in risk of death from colorectal cancer from 15% to 33% from periodic SBT screening. Flex Sig - Current evidence concerning the effectiveness of sigmoidoscopy comes from several well-designed case-control studies, and a randomized controlled trial. Two randomized controlled trials reported that a one-time SBT detected fewer neoplasms than SBT plus FS. Colonoscopy - A study of screening sigmoidoscopy followed by colonoscopy demonstrated a lower colorectal cancer mortality [21,25]. One case-control study demonstrated that colonoscopy is associated with lower incidence of colon cancer [27]. In addition, the decreased mortality that results with SBT screening is dependent on the ensuing colonoscopy during which the offending polyps or cancers are located and removed. Colonoscopy is considered by the USPSTF to be the most sensitive and most specific screening test available.

2008 CRC Screening Guidelines:

• Exams that are designed to detect both early cancer and precancerous polyps should be encouraged if resources are available and patients are willing to undergo an invasive test

• If the full range of screening tests are not available, physicians should make every effort to offer at least one test from each category

2008 CRC Screening Guidelines

Average risk adults age 50 and older

• Tests that detect adenomatous polyps and cancer
  - Flexible sigmoidoscopy (FSIG) every 5 years*, or
  - Colonoscopy every 10 years, or
  - Double contrast barium enema (DCBE) every 5 years*, or
  - CT colonography (CTC) every 5 years*

*Note: All positive screening tests should be followed up with colonoscopy  **Must detect at least 50%
2008 CRC Screening Guidelines

- Tests that primarily detect cancer **
  - Annual guaiac-based fecal occult blood test (gFOBT)* with high test sensitivity for cancer, or
  - Annual fecal immunochemical test (FIT)* with high test sensitivity for cancer, or
  - Stool DNA test (sDNA)*, with high sensitivity for cancer, interval uncertain

*Note: All positive screening tests should be followed up with colonoscopy  **Must detect at least 50%

If tests that can prevent CRC are preferred, why not recommend them alone? 3 Reasons

- 1. Greater patient requirements for successful completion
  - Endoscopic and radiologic exams require a bowel prep and an office or facility visit

- 2. More invasive than fecal testing, therefore higher potential for patient injury
  - Risk levels vary between tests, facilities, practitioners

- 3. Patient preference
  - Many individuals don't want an invasive test or a test that requires a bowel prep
  - Some prefer to have screening in the privacy of their home
  - Some may not have access to the invasive tests due to lack of coverage or local resources

Screening Options: How Can We Get to 80%

- What are the benchmarks for the main screening tests?*
  - Endoscopy (over 50, ever)
    - Delaware.......................74.3 %
    - Maine..........................72.6 %
    - Maryland.......................71.3 %
  - Stool Blood Tests (over 50, last 2 years)
    - Florida........................29 %
    - California....................27.8 %
    - Maine..........................27.7%

*BRFSS, CDC, 2008.
N.B. This does not mean up to date.
Other Stool Test Cautions

- ONLY AT-HOME TEST ACCEPTABLE
- Positive FOBT should not be repeated
  - Should be followed with a colonoscopy

Barriers to Physician Practice

Inadequate follow up of positive FOBT
- Approximately 30% of patients told they had a positive FOBT reported that this test was either followed up with a repeat FOBT, or no diagnostic work up. Every positive FOBT should lead to a diagnostic work-up.

EBM CME

This finding is based on two cross sectional surveys: the first is of 1147 physicians who responded to the National Survey of Colorectal Cancer Screening Practices, the second was based on the responses of 11,305 individual respondents to the NHIS. The physicians survey indicated that nearly 30% of positive FOBT’s were followed up with another FOBT rather than used as the basis for a complete diagnostic work-up. The NHIS survey had an identical result, with 30% of individuals indicating they did not get a diagnostic exam after a positive FOBT.*


How Can We Get to Goal of 80% Patients Screened?
KEY POINT: Most Influential Factor: Recommendation from a Physician (Clinician)

- Although other factors, such as health insurance status play a role, the evidence supporting the role of a physician’s recommendation derives from many types of research-based and population sources and is geographically constant.
- A recommendation from a primary care clinician has been identified most consistently, directly and indirectly, as the factor of prime influence.

Q: Is a Doctor’s Recommendation Really That Useful?

- A: Yes. Unequivocally!

The physician’s recommendation is the most consistently influential factor in cancer screening!

The evidence for this is based on analysis of large data bases from population based surveys, specifically the National Health Interview Surveys in 2000 & 2003, statewide cancer surveys from two states (California, Maryland), practice based interventions, and qualitative research.

Evidence from Research on Screening for CRC* (Reference numbers correspond to Toolbox)

- Receiving FOBT cards from a doctor is a strong predictor of screening status (#49)
- Ever receiving a flex sig recommendation increases the likelihood having flex sig (#48)
- Seeing a doctor within the prior year is a strong predictor of screening status (#49)
- More preventive health visits increases odds of having been screened (#50)

Do our Patients Get A Recommendation to Screen?

- 98% of doctors say they screen
- Data shows fewer
  - Chart audits, literature, surveys
- Where is the disconnect?
  - A recommendation to EVERY patient requires an opportunistic/global strategy, and a systematic way of doing things
  - Could a model help us?

Practice Models

- Benefits
  - Provide a framework for our thinking
  - Help make use of all the important evidence
  - Helps us avoid missing key steps
  - Contribute to dissemination

Two models from the Collaboratives:

1. Patient Centered Medical Home
   - SEPA collaborative members sought and achieved certification from NCQA as PCMH’s

2. Chronic Care model
   - Can we take something from it?
Informed, Activated Patient

Productive Interaction

Prepared Practice Team

Screening

**Patient – Provider At the Center**

**Focus on the Provider**

- Patient information - Age, family history (Chart Tools)
- Screening policy, i.e. guidelines (Decision Support)
- Staff roles/office flow/equipment (Referrals, FOBTs)
- Communications Plan (Patient Interaction, Practice coherence):
  - Who will discuss the options
  - Discuss logistics/answer questions
  - Follow-Up, results
  - Coordination/Alignment (Tracking System)

**Focus on the Patient**

- Are patients aware CRC screening? (waiting room brochures, posters, outreach letters, etc.)
  - Do they know they are susceptible to CRC*?
  - Do they know the benefits of screening*?
  - Do they face barriers*?
  - Do they know how to do it*? Do they know they have screening choices? (*self-efficacy*)

* Health Belief Model (theory based model)
Effective Patient Communication Systems

Theory-based communication strategies are more effective than generic approaches to education when incorporated into patient reminders.

EBM CME

* The evidence for this recommendation comes from 45 RCT studies on mammography that evaluated patient interventions with letters, phone reminders, and prescriptions. Those reminders that utilized behavioral theories to organize the message or information produced a 24% improvement in screening rates compared to 0% improvement for reminders that were organized based on a generic education approach.

(Yabroff KR, Mandelblatt JS 1999)

Primary Care Model

The Patient Centered Medical Home
NCQA (www.ncqa.org), PCPCC (www.pcpcc.net)

Typical Practice
NCQA Criteria

• PPC – PCMH: Standards:
  ➢ PPC 1: Access and Communication
  ➢ PPC 2: Patient Tracking and Registry Functions*
  ➢ PPC 3: Care Management
  ➢ PPC 4: Patient Self-Management and Support*
  ➢ PPC 5: Electronic Prescribing
  ➢ PPC 6: Test Tracking*
  ➢ PPC 7: Referral Tracking*
  ➢ PPC 8: Performance Reporting and Improvement*
  ➢ Reminders in the pcpc.net principles version
  ➢ PPC 9: Advanced Electronic Communications
  ➢ *Must Pass

1. Access and Communication

• Written standards for patient access and communication (policies)
• Uses data to show it meets the standards for patient access and communication (written records)

2. Patient Tracking and Registry Functions

• Basic System for Managing Patient Data
• Electronic System for Clinical Data
• Use of (Electronic) Clinical Data
• Organizing Clinical data (Must-Pass)
  — Structured template for age appropriate risk factors
• Identifying Important Conditions (Must-Pass)
• Use of Population Management System (NB)
  — Patients needing reminders for preventive care (NB)
3. Care Management

• Guidelines for Important Conditions
• Preventive Service Clinician Reminders (NB)
  – Age-appropriate screening tests
• Practice Organization
  – Nonphysician staff….deliver routine preventive services (NB)
  – Nonphysician staff…coordinate care with external disease management or case management organizations.

Physician Reminders

• There is convincing evidence that physician reminders do increase cancer screening rates in office practice.  
  
EB CME

The evidence for this statement comes from two meta-analysis, the first is a meta-analysis of 35 randomized controlled trials on physician reminders for increasing mammography screening rates. (Mandelblatt, Yarbroff, Ca Ep.Biom. Prev 1999.) The second meta-analysis was of 33 RCT’s on approaches to increasing the use of preventive services in general with prompts, alerts, and reminders. (Balas EA, et. al. Arch Int Med 2000.)

Patient Reminders

• There is solid evidence that patient reminders are effective in increasing screening.
  
- EBM CME

The evidence for this recommendation comes from 45 RCT studies on mammography that evaluated patient interventions with letters, phone reminders, and prescriptions. The improvement in rates of screening was 13-17.6%. Two options worked better than one. (Yarbroff KR, Mandelblatt JS 1999)
Criteria 4, and 5

- 4. Patient Self-Management Support - the practice works to improve the patients' ability to self-manage health by providing educational resources and ongoing assistance and encouragement.
  - Intent: The practice collaborates with patients and families to pursue their goals for optimal achievable health. (NB)
  - A. Language, hearing vision barriers in the record
  - B. Assesses patient/family preferences, readiness to change and self-management abilities – (Must Pass)
    (currently tied to 3 important conditions)

- 5. Electronic Prescribing

6. Test Tracking

- Test tracking and follow-up Must-Pass
  - Tracks all laboratory tests ordered or done within the practice, until results are available to the clinician, flagging overdue results bringing them to clinician’s attention
  - Follows up with patients/families for all abnormal test results
  - Notifies patients/families of all normal tests results

Electronic System for Managing Tests

7. Referral Tracking

- “The practice systematically documents and tracks referrals and referral results.” Must-Pass
  
  Requires coordination
  (system alignment, system coherence)
8. Performance Reporting

- Measures of performance  Must-Pass
- Reporting to physicians  Must-Pass
- Setting goals and taking action
- Reporting standardized measures  
  (IBC, Keystone Mercy Health Plan, Aetna)

9. Advanced Electronic Communication

Local Pennsylvania Survey of Practice
Steps on CRC Screening

- Are we fulfilling the PCMH criteria ?
- What are we doing? And not doing?

20 Primary Care Practices in PA

- Intervention to increase CRC screening rates
  - Started 2007
  - AHRQ funded
- 6 Lehigh Valley practices in state Learning Collaboratives also participated in the project;
  - 4 intervention practices completed the task of identifying patients who required screening
  - Dr. Brian Stello & Melanie Johnson  (Epicnet, PBRN) worked with the practices to identifying lists.
  - All practice members did baseline survey & focus groups
  - Answered survey questions on screening steps
  - Stool blood tests
  - Colonoscopy
Baseline Survey on Screening Steps – Stool Blood Tests (“I do it” or “Someone does it.”)

• Step 1. Gives SBT cards to patient
• Step 2. Contacts SBT card non-responder
• Step 3. Gives results to patients
• Step 4. Refers SBT positive patients for CX
• Step 5. Schedules SBT + patients for follow-up colonoscopy
• Step 6. Contacts SBT + follow-up colonoscopy no shows
• Step 7. Reschedules SBT+ follow-up colonoscopy no shows

* Over 85% survey respondents say these steps are done in their practice.

Screening Steps – Stool Blood Tests
(“I do it” or “Someone does it”)

• Step 1. Gives SBT cards to patient
• Step 2. Contacts SBT non-responders………..45%
• Step 3. Gives results to patients
• Step 4. Refers SBT positive patients for CX*
• Step 5. Schedules SBT + patients for follow-up……75%
• Step 6. Contacts SBT + follow-up no shows………..60%
• Step 7. Reschedules SBT+ follow-up no shows……..61%

* N.B. Colonoscopists do the procedures and are aware of no-shows in real time

Screening Steps – Colonoscopy
(“I do it” or “Someone does it”)

• Step 1. Recommends colonoscopy (86%)
• Step 2. Schedules colonoscopy (71%)
• Step 3. Contacts no-shows* (36%)
• Step 4. Reschedules no-shows* (38%)

* N.B. Colonoscopists do the procedures and are aware of no-shows in real time
Can we add the missing steps?

• Some practices are completing these steps.
• Seek to answer how are they doing it?
  – Focus groups
  – Key informants interview
• How can we add these steps?

Approaches for Improving Outcomes

Remember to be Patient Centered and Engage the Patient

• How can we activate or engage the patient:
  – Make the recommendation
  – Use communication models/techniques
• Avoid discouragement:
  – If it's important you will hear about it again
  – Reminders work
• Patient focus group quotes (5)
Patient Focus Group Quotes on Reminder Letters

• “I thought it was a good idea because my family physician has been hammering home with me about having a colonoscopy. This was just a reminder. I had no problem with receiving the mailing.”

• “Like I said, I knew I had a colonoscopy in the past – but I just wasn’t sure whether it was 7 years, 8 years, 10 years. The letter prompted me to start looking into it. I was very glad I received it.”

Quotes

• “I read the letter. I’m one of those people who only goes to the doctor when I’m sick. ….. So when I got this letter I was – Maybe I should think about that. The fact that it came from my medical practice got me to think about it. I don’t know why I did – just get it (the stool blood test) off my desk.”

• “My action was the same as yours, because I put it off, put it off, because I know it would take action to initiate it. When I got the letter, I felt, Well, they’re taking the action, so if I follow through it’s the least I can do.”

More Quotes

• “… my physician said something to me that ‘You should do this,’ and that (invitation) came right afterwards, and I thought, Well, at least I’m making an effort by doing something.”
The End

• Thank You!
• Questions?

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