

**Colorectal Cancer Screening and Prevention
Provider Presentation**

Speaker Notes (20-minute version)

Slide 6	<p>Colorectal Cancer in Oregon, 1999–2005</p> <p>Source: <i>Cancer in Oregon, 2005</i>. http://www.oregon.gov/DHS/ph/oscar/arpt2005/colorectal05.pdf</p>
Slide 8	<p>USPSTF Guidelines for Routine Screening</p> <p>Basis for USPSTF recommendations for CRC screening:</p> <p>Design: Decision analysis using 2 colorectal cancer micro-simulation models from the Cancer Intervention and Surveillance Modeling Network.</p> <p>Target Population: U.S. average-risk 40-year-old population.</p> <p>Interventions: Fecal occult blood tests (FOBTs), flexible sigmoidoscopy, or colonoscopy screening beginning at age 40, 50, or 60 years and stopping at age 75 or 85 years, with screening intervals of 1, 2, or 3 years for FOBT and 5, 10, or 20 years for sigmoidoscopy and colonoscopy.</p> <p>Outcome Measures: Number of life-years gained compared with no screening and number of screening tests required.</p> <p>Results of Base-Case Analysis: Beginning screening at age 50 years was consistently better than at age 60. Decreasing the stop age from 85 to 75 years decreased life-years gained by 1% to 4%, whereas colonoscopy use decreased by 4% to 15%. Assuming equally high adherence, 4 strategies provided similar life-years gained: colonoscopy every 10 years, annual Hemoccult SENSА (Beckman Coulter, Fullerton, California) testing or fecal immunochemical testing, and sigmoidoscopy every 5 years with mid-interval Hemoccult SENSА. Hemoccult II and flexible sigmoidoscopy every 5 years alone were less effective.</p> <p>Source: Updated USPSTF guidelines: <i>Annals</i>.2008;149(9):627-637 http://www.annals.org/cgi/content/full/149/9/627. Accessed 3/25/09.</p>
Slide 9	<p>Rationale for Recommendations</p> <p>Equally effective in life-years gained, assuming equally high adherence:</p> <ul style="list-style-type: none"> • colonoscopy every 10 years • annual Hemoccult SENSА (Beckman Coulter, Fullerton, California) testing • annual fecal immunochemical testing (FIT) • sigmoidoscopy every 5 years with mid-interval Hemoccult SENSА <p>Not as effective in life-years gained:</p>

- Hemoccult II
- flexible sigmoidoscopy every 5 years alone

The modeling analysis used life-years gained relative to the number of colonoscopies required for each strategy to calculate the net benefit, where the number of colonoscopies represents a proxy for resource utilization as well as adverse events from screening. The life-years gained relative to the number of colonoscopies for the scenarios allowed for an ordinal ranking of the different screening modalities,¹⁴ as follows:

1. colonoscopy (associated with 271 life-years gained for every 1000 persons screened);
2. high-sensitivity gFOBT (Hemoccult SENSA), Fecal Immunochemical Test (FIT), and flexible sigmoidoscopy (associated with 259, 256, and 257 life-years gained, respectively, for every 1000 persons screened); and
3. Hemoccult II and flexible sigmoidoscopy (218 and 199 life-years gained, respectively, per 1000 persons screened).

Source: Zauber AG et al. Evaluating test strategies for colorectal cancer screening: a decision analysis for the U.S. Preventive Services Task Force. *Annals*.2008;149(9):659–669. Abstract: <http://www.annals.org/cgi/content/abstract/149/9/659>. Accessed 3/25/09.

Slide 10 American College of Gastroenterology recommendations for African Americans

From 1996 to 2000, incidence rates in African Americans as a group were 12.3% higher than those in Caucasians, 9.5% higher in African American men when compared with Caucasian men, and 17.5% higher in African American women when compared with Caucasian women. The reasons for higher incidence rates in African Americans are unclear; however, dietary/nutritional factors, rates of physical inactivity, variability in screening rates, lower use of diagnostic testing, and increasing smoking rates have been most commonly implicated.

African Americans with colorectal cancer have decreased survival compared with Whites. From 1992–1999, the five-year survival rate for African Americans was 53%, compared with 63% for Whites. Part of the explanation for the decreased survival of African Americans with colorectal cancer is that a large proportion present with Stage IV diseases. This effect has been ascribed to lower screening rates, less use of diagnostic tests, and less access to health care.

For African Americans and Whites with the same stage of disease (Stage II or III), survival is lower for African Americans, except in the Veterans Administration system, where access to care is equal.

Evidence indicates that African Americans have a higher rate of right-sided colon cancers than other groups.

	<p>Source: ACG press release, 2005. http://www.gi.org/media/releases/march212005.asp. Accessed February 5, 2009. Restatement of recommendations in 2008.</p>
Slide 11	<p>CT Colonography</p> <p>The accuracy of computed tomographic colonography for detection of large lesions appears to be in the 80%–90% range, which is lower than the accuracy of colonoscopy. Current data suggest that computed tomographic colonography is an effective colon cancer screening modality in the United States. However, it is not ready for widespread implementation, largely because of lack of standards for training and reading, and the fact that the number of skilled readers is limited.</p> <p>In some studies, CT colonography finds 90% of large, precancerous polyps, with a 14% false-positive rate.</p>
Slide 12	<p>Relative Benefits of Screening for CRC vs. for Breast Cancer</p> <p>Oregon data source: <i>Cancer in Oregon, 2005</i>.</p> <p>National data source: CDC. <i>Screening to Prevent Cancer Deaths</i>. (Series: Preventing Chronic Diseases: Investing Wisely in Health). Revised August 2008. http://www.cdc.gov/nccdphp/publications/factsheets/prevention/pdf/cancer.pdf.</p>
Slide 19	<p>Screening Barriers Attributable to Providers</p> <p><u>Screening barriers for all providers:</u></p> <ul style="list-style-type: none"> • Failure to recommend screening for every eligible patient, identify and work with patient to eliminate barriers (e.g., fears, transportation, needing to take time off work, etc.), follow up with those who don't complete recommended tests, clearly communicate about CRC screening tests, and make a strong enough case with patients about benefits of testing for them (information about CRC risk and test benefits). • Failure to communicate with patients effectively about CRC risk, and risks and benefits of tests. • Failure to inquire about and discuss barriers, including transportation, financial, fears, etc. <p><u>Barriers for providers with paper record:</u> No or incomplete flow sheet.</p> <p><u>Barriers for providers with EHR:</u> Documentation doesn't feed flow sheet or patient status view, alerts not activated, or alerts ignored.</p>

Slide 20 Screening Barriers Attributable to Patients

Impact of insurance status on test completion: Uninsured patients were two to three times more likely to be diagnosed for all cancers at late stages (Stage III or State IV) than at Stage I. Greatest disparities for cancers can be detected through screening or symptom assessment. Halpern MT et al. Association of insurance status and ethnicity with cancer stage at diagnosis for 12 cancer sites: a retrospective analysis.

Source: Halpern MT et al. *Lancet*. 2008;9(3):221–232.

African American community focused interventions to increase test completion: A five-part multimedia RCT intervention was designed for predominately African American members of 15 senior centers, with random assignment to 1 of 3 groups:

Group 1: a cultural and self-empowerment group, which received a video titled "Telling the Story To Live Is God's Will," a brochure to accompany the video, a calendar designed to address key points about CRC and provide key spiritual messages each month, a poster outlining the importance of CRC screening, and a flier on the FOBT procedure, distributed over a nine-month period

Group 2: a modified cultural group, which received a CRC video only

Group 3: a control group. Participants were primarily African-American females with a mean age of 73.

Those in Group 1 were most likely to complete FOBT screening (61%) at the end of 12 months, compared with those in Group 2 (46%) and Group 3 (15%).

Source: Powe BD, Ntekop E, Barron M. Improving multiple behaviors for colorectal cancer prevention among African-American church members. An intervention study to increase colorectal cancer knowledge and screening among community elders. *Public Health Nurs*. 2004;21:435–442.

Provider focused interventions to increase test completion: An educational intervention targeting attending physicians, residents, and nurses using pre–post test. Study designed to increase use of flexible sigmoidoscopy among low-income, predominantly uninsured urban minority patients. Education provided by GI physicians and nurses through monthly lectures and informal weekly morning reports. Clinicians were also given a questionnaire for identifying candidates for flexible sigmoidoscopy screening. At five-month followup, there was a 42% increase in flexible sigmoidoscopy in the clinic, although the absolute number of patients screened (71) was modest. Only 56% of those whose flex sig indicated

	<p>need for colonoscopy completed a colonoscopy.</p> <p>Source: Zubarik R, Eisen G, Zubarik J, et al. Education improves colorectal cancer screening by flexible sigmoidoscopy in an inner city population. <i>Am J Gastroenterol.</i> 2000;95:509–512.</p>
Slide 21	<p>More Screening Barriers Attributable to Patients</p> <p>Studies of recommendation vs. test completion:</p> <p>Using data from the Behavioral Risk Factors Surveillance System, Cardarelli and Thomas show that having a personal health care provider is associated with a 3-times higher likelihood of screening.</p> <p>Source: Berg AO. The aftermath of efficacy. <i>Annals of Family Medicine</i> 7:3-4 (2009). Quoting: Cardarelli R, Thomas JE. Having a personal health care provider and receipt of colorectal cancer testing. <i>Ann Fam Med.</i> 2009;7(1):5–10)</p>
Slide 22	<p>How colonoscopy information might look to a patient with limited literacy</p> <p>Note: This text is intentionally difficult to read.</p> <p>Source: Dalton C. Health literacy: recognition and treatment of a hidden problem. Powerpoint presentation. University of Virginia Health System, 2006. http://www.healthsystem.virginia.edu/internet/som-hlc/Master-Lecture-Health-Literacy2006.ppt . Downloaded February 5, 2009.</p>
Slide 23	<p>Strategies That Increase Adherence to CRC Screening Recommendations</p> <p>Five tips for increasing patient compliance with FOBT.</p> <p>Source: Adapted from Hemocult: Five Tips for Increasing Patient Compliance (202K). Beckman Coulter, 2003. http://www.beckmancoulter.com/literature/ClinDiag/601-9.pdf. Accessed 2/5/09.</p> <p><u>Tip #1: Patient education</u></p> <p>Educate patients on CRC, explain the lifetime risks for contracting the disease, and show them how it can be prevented through early detection.</p> <p>A study conducted by the University of North Carolina showed that patients who received educational materials were much more likely to accept an FOBT or flexible sigmoidoscopy versus those who did not (47.2% vs. 26.4%). The study demonstrated that actual screening compliance increased more than 62% with patients who received educational material.</p> <p>Source: Bond JH, Burt RW. How to increase colorectal screening rates. <i>Patient</i></p>

Care. February 15, 2002, pp 32–39.

Tip #2: Staff training

Nurses, nurse practitioners, physician assistants, and other support staff should have a good understanding of CRC screening, when it should be done, and how often patients need to be reminded.

A 2002 randomized controlled trial demonstrated that intervention by licensed practical nurses resulted in significantly more patient orders of FOBT in the study group than in the control group (52% vs. 15%). Testing was completed as frequently in the study group as the control group (44% vs. 48%).

Source: Bond JH, Burt RW. How to increase colorectal screening rates. *Patient Care*. February 15, 2002, pp 32–39.

Tip #3: Reminder systems

Reminder systems have been shown to help increase compliance with cancer screening tests and are a direct or implicit endorsement by a healthcare professional.

Software or paper-based reminder systems can be used as surveillance systems to identify patients who have received but not yet returned their Hemoccult test.

Source: Levin B et al. Promoting early detection tests for colorectal carcinoma and adenomatous polyps. A framework for action: the strategic plan of the National Colorectal Cancer Roundtable. *Cancer*. 2002;95:1618–1628.

Tip #4: Patient contract/release form

When distributing the Hemoccult test, request that patients sign a release form indicating that they have received the test kit and agree to complete and return it by mail or in person. The form allows patients to understand that their physician cannot do their job without their help.

A 1996 study conducted by the Palo Alto Medical Foundation (PAMF) showed that compliance rates of 75% were achieved using Hemoccult II SENSE (8,593 returned of 11,501 distributed). PAMF required all patients to sign a release form stating they had received the test and agreed to return it to their physician.

Source: Paaso BT. Community-based colorectal cancer screening, *Point of Care*. 2002;1(1):20–27.

Tip #5: Let the patient decide

Inform patients of the risks, benefits, and supporting evidence of each type of CRC screening technique (FOBT, flexible sigmoidoscopy, colonoscopy, barium

	<p>enema) and let him or her decide which procedure is best.</p> <p>A 2001 study showed that patients regard test features (e.g., accuracy, discomfort, frequency, complications) of colorectal cancer tests differently than healthcare professionals. The survey pointed out that, in general, physicians misperceive test features that are most valued by the patient.</p> <p>Source: Ling BS et al. Attitudes toward colorectal cancer screening tests. a survey of patients and physicians. <i>J Gen Int Med.</i> 2001;16:822–830.</p> <p><u>Discuss strategies for adherence:</u></p> <ul style="list-style-type: none"> • Does the patient have other behaviors (e.g., preventive health behaviors) that provide a link to CRC screening behavior? • Does the patient believe that he or she can perform this behavior successfully? Maintain a positive attitude and praise the effort to consider screening or to perform it. • Be optimistic that the patient will be having a positive impact on his or her health • Does the patient need to talk with someone who has done any or all of the CRC screening tests? Be prepared to refer the patient to a peer who can provide the patient rather than the clinician’s perspective on these tests. <p>Are there any patient education materials (videos, brochures) that will be of benefit to this patient?</p>
<p>Slide 24</p>	<p>Tip #1: Education That Matters</p> <p>Source: Patient education material from CDC <i>Call to Action</i> (PowerPoint presentation).</p>
<p>Slide 26</p>	<p>Tip #2: Staff Training/Tip #3: Reminder Systems</p> <p><u>Staff training:</u></p> <p>Nurses, nurse practitioners, physician assistants, and other support staff should have a good understanding of CRC screening, when it should be done, and how often patients need to be reminded.</p> <p>A 2002 randomized controlled trial demonstrated that intervention by licensed practical nurses resulted in significantly more patient orders of FOBT in the study group than in the control group (52% vs. 15%). Testing was completed as frequently in the study group as the control group (44% vs. 48%).</p> <p>Source: Bond JH, Burt RW. How to increase colorectal screening rates. <i>Patient Care.</i> February 15, 2002, 32–39.</p>

	<p><u>Reminder systems:</u></p> <p>Reminder systems have been shown to help increase compliance with cancer screening tests and are a direct or implicit endorsement by a health care professional.</p> <p>Software or paper-based reminder systems can be used as surveillance systems to identify patients who have received but not yet returned their Hemoccult Test.</p> <p>Source: Levin B et al. Promoting early detection tests for colorectal carcinoma and adenomatous polyps. A framework for action: the strategic plan of the National Colorectal Cancer Roundtable. <i>Cancer</i>. 2002;95:1618–1628.</p>
<p>Slide 27</p>	<p>Tip #4: Patient Contract (release form)</p> <p>When distributing the Hemoccult test, request that patients sign a release form indicating that they have received the test kit and agree to complete and return it by mail or in person. The form allows patients to understand that their physician cannot do their job without their help.</p> <p>A 1996 study conducted by the Palo Alto Medical Foundation (PAMF) showed that compliance rates of 75% were achieved using Hemoccult II SENSA (8,593 returned of 11,501 distributed). PAMF required all patients to sign a release form stating they had received the test and agreed to return it to their physician.</p> <p>Source: Paaso BT. Community-based colorectal cancer screening," <i>Point of Care</i>. 2002;1(1):20–27.</p>
<p>Slide 28</p>	<p>Tip #5: Let the Patient Decide</p> <p>Inform patients of the risks, benefits, and supporting evidence of each type of CRC screening technique (FOBT, flexible sigmoidoscopy, colonoscopy, barium enema) and let him or her decide which procedure is best.</p> <p>A 2001 study showed that patients regard test features (e.g., accuracy, discomfort, frequency, complications) of colorectal cancer tests differently than do healthcare professionals. The survey pointed out that, in general, physicians misperceive test features that are most valued by the patient.</p> <p>Source: Ling BS et al. Attitudes toward colorectal cancer screening tests. A survey of patients and physicians. <i>J Gen Int Med</i>. 2001;16:822–830.</p> <p>Shared decision making is the process and the dialogue that occurs within the context of a supportive clinician–patient relationship. While the shared decision making model has been widely accepted as necessary in treatment decisions concerning serious illness, the applicability to cancer screening is relatively new. As the preventive guidelines for CRC and prostate cancer screening allow for several equally effective testing options, shared decision making becomes an</p>

	<p>important tool for negotiating the individual's screening strategy.</p> <ul style="list-style-type: none">• What options does the patient have in regard to CRC screening?• What guidelines (e.g., ACS, USPSTF) are you (the physician) using to make the recommendation for this individual?• Patients want to hear the physician's (your) recommendation. This should immediately be followed with open-ended questions to elicit the patient's values and preferences that may influence whether or not he follows your recommendation. For example, does the patient have an aversion to sampling his or her own stool for the FOBT? <p>Summarize the negotiated plan so that the patient may accept or reject it.</p>
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This material was developed through an Oregon Department of Human Services contract with Acentra Health, Inc., funded by the Centers for Disease Control and Prevention Cooperative Agreement #5U58DP00789-02. June 2009

3/25/09

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Speaker Notes (60-minute version)

Slide 5	<p>U.S. Colorectal Cancer Incidence by Race and Year of Diagnosis: 1975–2005</p> <p>Rates are per 100,000 and are age-adjusted to the 2000 U.S. standard population (19 age groups - Census P25-1130). †Rates for American Indians/Alaska Natives are based on the CHSDA (Contract Health Service Delivery Area) counties. ‡Hispanics are not mutually exclusive from Whites, Blacks, Asians/Pacific Islanders, and American Indians/Alaska Natives. Incidence data for Hispanics are based on NHIA and exclude cases from the Alaska Native Registry.</p> <p>Source: http://www.cdc.gov/cancer/colorectal/statistics/race.htm</p> <p>Content source: Division of Cancer Prevention and Control, National Center for Chronic Disease Prevention and Health Promotion</p>
Slide 6	<p>U.S. Colorectal Cancer Mortality by Race and Year of Diagnosis: 1975–2005</p> <p>Rates are per 100,000 and are age-adjusted to the 2000 U.S. standard population (19 age groups - Census P25-1130). †Rates for American Indians/Alaska Natives are based on the CHSDA (Contract Health Service Delivery Area) counties. ‡Hispanics are not mutually exclusive from Whites, Blacks, Asians/Pacific Islanders, and American Indians/Alaska Natives. Mortality data for Hispanics do not include cases from Connecticut, Maine, Maryland, Minnesota, New Hampshire, New York, North Dakota, Oklahoma, and Vermont.</p> <p>Source: http://www.cdc.gov/cancer/colorectal/statistics/race.htm</p> <p>Content source: Division of Cancer Prevention and Control, National Center for Chronic Disease Prevention and Health Promotion</p>
Slide 8	<p>Colorectal Cancer in Oregon, 1999–2005</p> <p>Source: <i>Cancer in Oregon, 2005</i>. http://www.oregon.gov/DHS/ph/oscar/arpt2005/colorectal05.pdf</p>

<p>Slide 10</p>	<p>USPSTF Guidelines for Routine Screening</p> <p>Basis for USPSTF recommendations for CRC screening:</p> <p>Design: Decision analysis using 2 colorectal cancer micro-simulation models from the Cancer Intervention and Surveillance Modeling Network.</p> <p>Target Population: U.S. average-risk 40-year-old population.</p> <p>Interventions: Fecal occult blood tests (FOBTs), flexible sigmoidoscopy, or colonoscopy screening beginning at age 40, 50, or 60 years and stopping at age 75 or 85 years, with screening intervals of 1, 2, or 3 years for FOBT and 5, 10, or 20 years for sigmoidoscopy and colonoscopy.</p> <p>Outcome Measures: Number of life-years gained compared with no screening and number of screening tests required.</p> <p>Results of Base-Case Analysis: Beginning screening at age 50 years was consistently better than at age 60. Decreasing the stop age from 85 to 75 years decreased life-years gained by 1% to 4%, whereas colonoscopy use decreased by 4% to 15%. Assuming equally high adherence, 4 strategies provided similar life-years gained: colonoscopy every 10 years, annual Hemocult SENSE (Beckman Coulter, Fullerton, California) testing or fecal immunochemical testing, and sigmoidoscopy every 5 years with mid-interval Hemocult SENSE. Hemocult II and flexible sigmoidoscopy every 5 years alone were less effective.</p> <p>Source: Updated USPSTF guidelines: <i>Annals</i>. 2008;149(9):627–637 http://www.annals.org/cgi/content/full/149/9/627. Accessed 3/25/09.</p>
<p>Slide 11</p>	<p>Rationale for Recommendations</p> <p>Equally effective in life-years gained, assuming equally high adherence:</p> <ul style="list-style-type: none"> • colonoscopy every 10 years • annual Hemocult SENSE (Beckman Coulter, Fullerton, California) testing • annual fecal immunochemical testing (FIT) • sigmoidoscopy every 5 years with mid-interval Hemocult SENSE <p>Not as effective in life-years gained:</p> <ul style="list-style-type: none"> • Hemocult II • flexible sigmoidoscopy every 5 years alone <p>The modeling analysis used life-years gained relative to the number of colonoscopies required for each strategy to calculate the net benefit, where the number of colonoscopies represents a proxy for resource utilization as well as adverse events from screening. The life-years gained relative to the number of colonoscopies for the scenarios allowed for an ordinal ranking of the different</p>

	<p>screening modalities,14 as follows:</p> <ol style="list-style-type: none"> 1. colonoscopy (associated with 271 life-years gained for every 1000 persons screened); 2. high-sensitivity gFOBT (Hemoccult SENSAs), Fecal Immunochemical Test (FIT), and flexible sigmoidoscopy (associated with 259, 256, and 257 life-years gained, respectively, for every 1000 persons screened); and 3. Hemoccult II and flexible sigmoidoscopy (218 and 199 life-years gained, respectively, per 1000 persons screened). <p>Source: Zauber AG et al. Evaluating test strategies for colorectal cancer screening: a decision analysis for the U.S. Preventive Services Task Force. <i>Annals</i>. 2008;149(9):659–669. Abstract: http://www.annals.org/cgi/content/abstract/149/9/659. Accessed 3/25/09.</p>
<p>Slide 12</p>	<p>Higher Prevalence of Large Polyps in African Americans</p> <p>David A. Lieberman, MD, and his team concluded based on evaluation of records of more than 85,000 people from 67 gastrointestinal practices over two years: “Compared with white individuals, black men and women undergoing screening colonoscopy have a higher risk of polyps sized more than 9 mm, and black individuals older than 60 years are more likely to have proximal polyps sized more than 9 mm.”</p> <p>Among 80,061 Whites and 5,464 Blacks, large (>9mm) colorectal adenomatous polyps were found in 4,964 (6.2%) of Whites and 422 (7.7%) of Blacks. These advanced adenomas have the most risk of developing into colon or rectal cancer. While Black men were about 13 percent more likely to have a large polyp, Black women were even more at risk, with a 62 percent increased likelihood of polyps over 9 millimeters.</p> <p>Overall, there was no difference between Blacks and Whites in the risk of polyps in the proximal colon. However, when age was considered, Blacks over 60 were more likely to have large adenomas in the proximal colon, the area farthest from the rectum. The proximal colon cannot be viewed during a sigmoidoscopy. Colonoscopy is necessary to see polyps that high in the colorectal tract.</p> <p>Source: Lieberman DA et al. Prevalence of colon polyps detected by colonoscopy screening in asymptomatic black and white patients. <i>JAMA</i>. 2008;300(12):1417–1422. Abstract: http://jama.ama-assn.org/cgi/content/abstract/300/12/1417?etoc. Accessed February 4, 2009.</p>

<p>Slide 13</p>	<p>American College of Gastroenterology recommendations for African Americans</p> <p>From 1996 to 2000, incidence rates in African Americans as a group were 12.3% higher than those in Caucasians, 9.5% higher in African American men when compared with Caucasian men, and 17.5% higher in African American women when compared with Caucasian women. The reasons for higher incidence rates in African Americans are unclear; however, dietary/nutritional factors, rates of physical inactivity, variability in screening rates, lower use of diagnostic testing, and increasing smoking rates have been most commonly implicated.</p> <p>African Americans with colorectal cancer have decreased survival compared with Whites. From 1992–1999, the five-year survival rate for African Americans was 53%, compared with 63% for Whites. Part of the explanation for the decreased survival of African Americans with colorectal cancer is that a large proportion present with Stage IV diseases. This effect has been ascribed to lower screening rates, less use of diagnostic tests, and less access to health care.</p> <p>For African Americans and Whites with the same stage of disease (Stage II or III), survival is lower for African Americans, except in the Veterans Administration system, where access to care is equal.</p> <p>Evidence indicates that African Americans have a higher rate of right-sided colon cancers than other groups.</p> <p>Source: ACG press release, 2005. http://www.gi.org/media/releases/march212005.asp. Accessed February 5, 2009. Restatement of recommendations in 2008.</p>
<p>Slide 14</p>	<p>The New York Times: Imperfect Test for a Cancer</p> <p>A recently published Canadian study demonstrated that although colonoscopy remains the gold standard, colonoscopy does miss lesions (predominantly right-side lesions). Colonoscopy reduces mortality for left-side lesions but not right-side lesions.</p> <p>Source: Baxter NN, Goldwasser MA, Paszat LF, et. al. Association of colonoscopy and death from colorectal cancer. <i>Annals</i>. 2009;150(1); 1-8.</p>
<p>Slide 15</p>	<p>CT Colonography</p> <p>The accuracy of computed tomographic colonography for detection of large lesions appears to be in the 80-90% range, which is lower than the accuracy of colonoscopy. Current data suggest that computed tomographic colonography is an effective colon cancer screening modality in the United States. However, it is</p>

	<p>not ready for widespread implementation, largely because of lack of standards for training and reading, and the fact that the number of skilled readers is limited.</p> <p>In some studies, CT colongraphy finds 90% of large, precancerous polyps, with a 14% false-positive rate.</p>
<p>Slide 16</p>	<p>Relative Benefits of Screening for CRC vs. for Breast Cancer</p> <p>Oregon data source: <i>Cancer in Oregon, 2005</i>.</p> <p>National data source: CDC. <i>Screening to Prevent Cancer Deaths</i>. (Series: Preventing Chronic Diseases: Investing Wisely in Health). Revised August 2008. http://www.cdc.gov/nccdphp/publications/factsheets/prevention/pdf/cancer.pdf. Accessed 3/25/09.</p>
<p>Slide 19</p>	<p>Oregon BRFSS 2006</p> <p><u>Caveats:</u></p> <p>Medical record audits document overreporting by survey respondents for receipt of tests within the designated timeframes (by as much as 50% for African American women in one study).</p> <p>Source: Powe BD, Cooper D. Self-reported cancer screening rates versus medical record documentation: incongruence, specificity, and sensitivity for African American women. <i>Oncology Nursing Forum</i>. March 2008;35(2):199–204. http://findarticles.com/p/articles/mi_6854/is_2_35/ai_n28506048/pg_1. Accessed February 4, 2009.</p> <p>Medicare claims data underestimate compliance with screening guidelines for people who received colonoscopy or sigmoidoscopy within the recommended timeframe but prior to entering the Medicare program.</p> <p>Source: BRFSS 2006</p>
<p>Slide 20</p>	<p>Medicare Claims Data: Oregon CRC Screening Rates, 2005</p> <p>Source: The Carolinas Center for Medical Excellence. Colorectal Cancer: Testing in the Medicare Population for 1998–2005. http://www2.thecarolinascenter.org/crc/crc.aspx?tabid=221. Accessed February 5, 2009.</p> <p>Denominator</p> <p>All non-HMO Medicare enrollees, ages 50–114 as of January 1, who were continuously enrolled in Medicare Part B or who had a lapse in coverage up to</p>

	<p>30 days, and were alive at the end of the calendar year specified.</p> <p>Numerators (by specific rate)</p> <p><u>Any CRC Test Rate</u>: Medicare enrollees in the denominator who have at least one Medicare-paid claim for any of the four covered colorectal cancer tests (screening or diagnostic) conducted during the calendar year specified.</p> <p><u>BE Rate (NOT PRESENTED IN THE TABLE)</u>: Medicare enrollees in the denominator who have at least one Medicare-paid claim for a double contrast barium enema conducted during the calendar year.</p> <p><u>Colonoscopy Rate</u>: Medicare enrollees in the denominator who have at least one Medicare-paid claim for a colonoscopy conducted during the calendar year.</p> <p><u>Endoscopy Rate</u>: Medicare enrollees in the denominator who have at least one Medicare-paid claim for an endoscopy (colonoscopy or sigmoidoscopy) conducted during the calendar year.</p> <p><u>FOBT Rate</u>: Medicare enrollees in the denominator who have at least one Medicare-paid claim for an FOBT conducted during the calendar year.</p> <p><u>Sigmoidoscopy Rate</u>: Medicare enrollees in the denominator who have at least one Medicare-paid claim for a sigmoidoscopy conducted during the calendar year.</p> <p><u>CIM (Current in Medicare)</u>: Medicare enrollees in the denominator who have at least one Medicare-paid claim for FOBT during the calendar year OR sigmoidoscopy or double contrast barium enema during the calendar year or 4 years prior OR colonoscopy during the calendar year or up to 9 years prior (see Appendix 3 in the source for additional information about this measure).</p> <p>*The Current in Medicare rate is available for calendar years 2002 and later. This measure does not reflect tests done prior to Medicare enrollment or that were not otherwise billed to Medicare.</p>
<p>Slide 23</p>	<p>Oregon 2005 Screening Rates for Medicare Beneficiaries</p> <p>Source: The Carolinas Center for Medical Excellence. Colorectal Cancer: Testing in the Medicare Population for 1998–2005. http://www2.thecarolinascenter.org/crc/crc.aspx?tabid=221. Accessed February 5, 2009.</p>
<p>Slide 24</p>	<p>National Goals for CRC Screening</p> <ul style="list-style-type: none"> • Healthy People 2010 contains the prevention agenda for the United States. This document builds upon two overarching goals—to increase quality and years of life and to eliminate health disparities—with content

	<p>organized under 28 focus areas that were developed by a consortium of 350 national organizations and 250 state health, mental health, substance abuse, and environmental agencies. The entire text of HP2010 can be found online at http://www.health.gov/healthypeople.</p> <ul style="list-style-type: none"> Data sources for this Healthy People 2010 objective were the National Health Interview Survey (NHIS), the Centers for Disease Control and Prevention, and the National Center for Health Statistics. <p>Note that these objectives are not identical to the recommended CRC screening guidelines of groups such as the United States Preventive Services Task Force (USPSTF) or the American Cancer Society. This may reflect the lack of consensus among experts on most effective screening intervals for these two tests.</p>
<p>Slide 27</p>	<p>Screening Barriers Attributable to Providers</p> <p><u>Screening barriers for all providers:</u></p> <ul style="list-style-type: none"> Failure to recommend screening for every eligible patient, identify and work with patient to eliminate barriers (e.g., fears, transportation, needing to take time off work, etc.), follow up with those who don't complete recommended tests, clearly communicate about CRC screening tests, and make a strong enough case with patients about benefits of testing for them (information about CRC risk and test benefits). Failure to communicate with patients effectively about CRC risk, and risks and benefits of tests. Failure to inquire about and discuss barriers, including transportation, financial, fears, etc. <p><u>Barriers for providers with paper record:</u></p> <p>No or incomplete flow sheet.</p> <p><u>Barriers for providers with EHR:</u></p> <p>Documentation doesn't feed flow sheet or patient status view, alerts not activated, or alerts ignored.</p>
<p>Slide 28</p>	<p>FOBT Return Rates</p> <p>Adapted from Dubé CE, Fuller BK, Rosen RK, Fagan M, O'Donnell JF, Rakowski W. <i>Clinical Communication for Male Cancer Screening: A Curriculum for Medical Students</i>. Providence, RI: Brown University, 2003. http://www.brown.edu/Research/ICHP/mcshome.shtml</p> <p>FOBT adherence rates:</p> <ul style="list-style-type: none"> Adherence or compliance in most FOBT studies is defined as a return of

	<p>specimens for laboratory testing within specified time frame. The highest published adherence rates (75% for annual FOBT screens) were found in the Minnesota Cancer Control Study (Mandel et al. 1993). Subjects were volunteers or members of local ACS chapters, a possible source of selection bias.</p> <ul style="list-style-type: none"> • In screening programs in which FOBTs were mailed to asymptomatic older adults who did not register themselves for the program, return rates of 13% to 15% were common (Myers 1990). • Acceptance of a Hemoccult kit does not equal adherence, as illustrated by this fact. Follow-up reminder systems are crucial to overall success of a screening program using FOBT. <p>In studies among first-degree relatives (Sandler et al. 1989) and twins (Richardson et al. 1995) of colorectal cancer patients, adherence rates to annual FOBT were 52% and 42%, respectively. Although higher than the rates for the general population, these rates were lower than anticipated by authors.</p>
<p>Slide 29</p>	<p>Screening Barriers Attributable to Patients</p> <p>Impact of insurance status on test completion: Uninsured patients were two to three times more likely to be diagnosed for all cancers at late stages (Stage III or State IV) than at Stage I. Greatest disparities for cancers can be detected through screening or symptom assessment.</p> <p>Source: Halpern MT et al. Association of insurance status and ethnicity with cancer stage at diagnosis for 12 cancer sites: a retrospective analysis. <i>Lancet</i>. 2008;9(3):221–232.</p> <p>African American community focused interventions to increase test completion: A five-part multimedia RCT intervention was designed for predominately African American members of 15 senior centers, with random assignment to 1 of 3 groups:</p> <p>Group 1: a cultural and self-empowerment group, which received a video titled "Telling the Story To Live Is God's Will," a brochure to accompany the video, a calendar designed to address key points about CRC and provide key spiritual messages each month, a poster outlining the importance of CRC screening, and a flier on the FOBT procedure, distributed over a nine-month period</p> <p>Group 2: a modified cultural group, which received a CRC video only</p> <p>Group 3: a control group. Participants were primarily African-American females with a mean age of 73.</p> <p>Those in Group 1 were most likely to complete FOBT screening (61%) at the end of 12 months, compared with those in Group 2 (46%) and Group 3 (15%).</p> <p>Source: Powe BD, Ntekop E, Barron M. Improving multiple behaviors for</p>

	<p>colorectal cancer prevention among African-American church members. An intervention study to increase colorectal cancer knowledge and screening among community elders. <i>Public Health Nurs.</i> 2004;21:435–442.</p>
Slide 30	<p>More Screening Barriers Attributable to Patients</p> <p>Studies of recommendation vs. test completion: Using data from the Behavioral Risk Factors Surveillance System, Cardarelli and Thomas show that having a personal health care provider is associated with a 3-times higher likelihood of screening.</p> <p>Source: Berg AO. The aftermath of efficacy. <i>Annals of Family Medicine</i> 7:3-4 (2009). Quoting: Cardarelli R, Thomas JE. Having a personal health care provider and receipt of colorectal cancer testing. <i>Ann Fam Med.</i> 2009;7(1):5–10</p>
Slide 32	<p>How colonoscopy information might look to a patient with limited literacy</p> <p>Note: This text is intentionally difficult to read.</p> <p>Source: Dalton C. Health literacy: recognition and treatment of a hidden problem. Powerpoint presentation. University of Virginia Health System, 2006. http://www.healthsystem.virginia.edu/internet/som-hlc/Master-Lecture-Health-Literacy2006.ppt . Downloaded February 5, 2009.</p>
Slide 34	<p>Strategies That Increase Adherence to CRC Screening Recommendations</p> <p>Five tips for increasing patient compliance with FOBT.</p> <p>Source: Adapted from Hemocult: Five Tips for Increasing Patient Compliance (202K). Beckman Coulter, 2003. http://www.beckmancoulter.com/literature/ClinDiag/601-9.pdf. Accessed 2/5/09.</p> <p>See slides 35 through 41.</p>
Slide 35	<p>Tip #1: Education That Matters</p> <p>Educate patients on CRC, explain the lifetime risks for contracting the disease, and show them how it can be prevented through early detection.</p> <p>A study conducted by the University of North Carolina showed that patients who received educational materials were much more likely to accept an FOBT or flexible sigmoidoscopy versus those who did not (47.2% vs. 26.4%). The study demonstrated that actual screening compliance increased more than 62% with patients who received educational material.</p> <p>Source: Bond JH, Burt RW. How to increase colorectal screening rates. <i>Patient Care.</i> February 15, 2002:32–39.</p>

Slide 37

Tip #1: Education That Matters

Smoking:

Both women and men who are heavy smokers (>30 pack years) who were still smoking or had quit less than ten years ago have twice the risk of colorectal cancer or an advanced colon polyp as people who never smoked. However, women who smoke less (<30 pack years) have the same risk as men who are heavier smokers. Women require less exposure in pack-years to have an increase in risk.

Source: Anderson JC et al. "Smoking and colorectal neoplasia: women require less tobacco exposure for similar increased risk as compared to men." American College of Gastroenterology Annual Scientific Meeting, October 6, 2008.

Diet:

Both Mormons and Seventh Day Adventists have lower than average rates of colon cancer, although Mormons eat amounts of meat, fat, and fiber similar to the general U.S. population, whereas Seventh Day Adventists in general eat meat <1 weekly. Among Adventists, vegetarians had lower rates of colon cancer than did nonvegetarians. Colon cancer incidence in Mormons was 37% below the U.S. average, and that of non-Mormons living in Utah was 18% below the U.S. average.

Sources: Lyon JL, Sorenson AW. Colon cancer in a low-risk population (Mormons). *AJCN*. 1978; 31: S227–S230.

Fraser GE. Associations between diet and cancer, ischemic heart disease, and all-cause mortality in non-Hispanic white California Seventh-day Adventists. *AJCN*. 1999; 70(3): 532S–538S.

Obesity:

Obesity is associated with increased incidence of colon cancer. New research suggests that this is due to association of a variant of the gene coding for adiponectin with increased risk of obesity, diabetes, and risk of colon cancer.

Source: Kaklamani VG, Wisinski KB, Sadim M, et al. Variants of the Adiponectin (ADIPOQ) and Adiponectin Receptor 1 (ADIPOR1) genes and colorectal cancer risk. *JAMA*. 2008; 300(13): 1523–1531.

Alcohol:

Compared with people who reported drinking no alcohol, people who reported drinking more than 30 gm of alcohol per day (the equivalent of 2 average-size drinks) had a small increase in risk for colorectal cancer. The increase in risk

	<p>was highest in people who drank more than 45 gm of alcohol per day (> 3 average-size drinks). The authors could not find differences in colorectal cancer risk by the type of alcoholic beverages people drank. In addition, the 8 studies showed no relationship between alcohol intake and the location of colorectal cancers within the intestine. In addition, the 8 studies showed no relationship between alcohol intake and the location of colorectal cancer in the intestine.</p> <p>Source: Cho E, Smith-Warner SA, Ritz J, et al. Alcohol intake and colorectal cancer: a pooled analysis of 8 cohort studies. <i>Annals</i>. 2004; 140(8):603–613.</p>
Slide 38	<p>Tip #1: Education That Matters</p> <p>Source: Patient education material from CDC <i>Call to Action</i> (PowerPoint presentation).</p>
Slide 39	<p>Tip #2: Staff Training/Tip #3: Reminder Systems</p> <p><u>Staff training:</u></p> <p>Nurses, nurse practitioners, physician assistants, and other support staff should have a good understanding of CRC screening, when it should be done, and how often patients need to be reminded.</p> <p>A 2002 randomized controlled trial demonstrated that intervention by licensed practical nurses resulted in significantly more patient orders of FOBT in the study group than in the control group (52% vs. 15%). Testing was completed as frequently in the study group as the control group (44% vs. 48%).</p> <p>Source: Bond JH, Burt RW. How to increase colorectal screening rates. <i>Patient Care</i>. February 15, 2002, 32–39.</p> <p><u>Reminder systems:</u></p> <p>Reminder systems have been shown to help increase compliance with cancer screening tests and are a direct or implicit endorsement by a health care professional.</p> <p>Software or paper-based reminder systems can be used as surveillance systems to identify patients who have received but not yet returned their Hemoccult Test.</p> <p>Source: Levin B et al. Promoting early detection tests for colorectal carcinoma and adenomatous polyps. A framework for action: the strategic plan of the National Colorectal Cancer Roundtable. <i>Cancer</i>. 2002;95:1618–1628.</p>
Slide 40	<p>Tip #4: Patient Contract (release form)</p> <p>When distributing the Hemoccult test, request that patients sign a release form indicating that they have received the test kit and agree to complete and return it</p>

by mail or in person. The form allows patients to understand that their physician cannot do their job without their help.

A 1996 study conducted by the Palo Alto Medical Foundation (PAMF) showed that compliance rates of 75% were achieved using Hemoccult II SENZA (8,593 returned of 11,501 distributed). PAMF required all patients to sign a release form stating they had received the test and agreed to return it to their physician.

Source: Paaso BT. Community-based colorectal cancer screening," *Point of Care*. 2002;1(1):20–27.

Discuss strategies for adherence:

- Does the patient have other behaviors (e.g., preventive health behaviors) that provide a link to CRC screening behavior?
- Does the patient believe that he or she can perform this behavior successfully? Maintain a positive attitude and praise the effort to consider screening or to perform it.
- Be optimistic that the patient will be having a positive impact on his or her health
- Does the patient need to talk with someone who has done any or all of the CRC screening tests? Be prepared to refer the patient to a peer who can provide the patient rather than the clinician’s perspective on these tests.
- Are there any patient education materials (videos, brochures) that will be of benefit to this patient?

Slide 41 Tip #5: Let the Patient Decide

Inform patients of the risks, benefits, and supporting evidence of each type of CRC screening technique (FOBT, flexible sigmoidoscopy, colonoscopy, barium enema) and let him or her decide which procedure is best.

A 2001 study showed that patients regard test features (e.g., accuracy, discomfort, frequency, complications) of colorectal cancer tests differently than healthcare professionals. The survey pointed out that, in general, physicians misperceive test features that are most valued by the patient.

Source: Ling BS et al. Attitudes toward colorectal cancer screening tests. A survey of patients and physicians. *J Gen Int Med*. 2001;16:822–830.

Shared decision making is the process and the dialogue that occurs within the context of a supportive clinician–patient relationship. While the shared decision making model has been widely accepted as necessary in treatment decisions concerning serious illness, the applicability to cancer screening is relatively new. As the preventive guidelines for CRC and prostate cancer screening allow for several equally effective testing options, shared decision making becomes an

	<p>important tool for negotiating the individual's screening strategy.</p> <ul style="list-style-type: none"> • What options does the patient have in regard to CRC screening? • What guidelines (e.g., ACS, USPSTF) are you (the physician) using to make the recommendation for this individual? • Patients want to hear the physician's (your) recommendation. This should immediately be followed with open-ended questions to elicit the patient's values and preferences that may influence whether or not he follows your recommendation. For example, does the patient have an aversion to sampling his or her own stool for the FOBT? <p>Summarize the negotiated plan so that the patient may accept or reject it.</p>
<p>Slide 42</p>	<p>Strategies That Increase Adherence to CRC Screening Recommendations</p> <p><u>A sixth tip: Take advantage of all opportunities:</u></p> <p>Berg AO. The aftermath of efficacy. <i>Annals of Family Medicine</i> 2009;7:3-4.</p> <p>Potter and colleagues show that offering fecal occult blood kits to patients during flu shot clinics increased screening from 57% to 84%.</p> <p>Quoting: Potter MB, Phengrasamy L, Hudes ES, McPhee SJ, Walsh JME. Offering annual fecal occult blood tests during flu shot clinics increases colorectal cancer screening rates. <i>Ann Fam Med.</i> 2009;7(1):17–23.</p>
<p>Slide 48</p>	<p>Which group has the highest CRC incidence rate?</p> <p><u>CRC for African Americans:</u></p> <ul style="list-style-type: none"> • Incidence rates for 2000–2003 were approximately 22% higher than for Whites—19% higher for men, 26% higher for women (source: NCI SEER Program data). • Diagnosed earlier than Whites—age 66.4 vs. age 69.7 • A higher proportion diagnosed under age 50 than any other racial/ethnic group • More proximal or right-sided adenomas and colon cancers • More initial presentation at stage IV disease than any other racial/ethnic group
<p>Slide 51</p>	<p>Racial Gap Widens as Colorectal Cancer Death Rate Drops</p> <p><u>Higher colorectal cancer death rates:</u></p> <p>Possible reasons for higher death rates for African Americans with colon cancer:</p> <ul style="list-style-type: none"> • Lower screening rates

- Less access to care (lack of insurance, underinsured, Medicaid as insurance)

Source: ACS, December 15, 2008.

African Americans with colorectal cancer have decreased survival compared with Whites. From 1992–1999, the five-year survival rate in African Americans was 53 percent, and 63 percent in Whites. Part of the explanation for the decreased survival of African Americans with colorectal cancer is that a great proportion present with Stage IV diseases. This effect has been ascribed to lower screening rates, less use of diagnostic tests, and less access to health care.

For African Americans and Whites with the same stage disease (Stage II or III), survival is lower for African Americans, except in the Veterans Administration system, where access to care is equal.

Source: New Recommendations by the American College of Gastroenterology Call for Changes in Colorectal Cancer Screening of African Americans. March 21, 2005.

Colorectal cancer incidence rates for African Americans and Whites/Caucasians:

From 1996 to 2000, incidence rates in African Americans as a group were 12.3 percent higher than those in Caucasians, 9.5 percent higher in African American men compared with Caucasian men, and 17.5 percent higher in African American women compared with Caucasian women.

African Americans with colorectal cancer have decreased survival compared with Whites. From 1992–1999, the five-year survival rate in African Americans was 53 percent, and 63 percent in Whites. Part of the explanation for the decreased survival of African Americans with colorectal cancer is that a great proportion present with Stage IV diseases. This effect has been ascribed to lower screening rates, less use of diagnostic tests, and less access to health care.

For African Americans and Whites with the same stage disease (Stage II or III), survival is lower for African Americans, except in the Veterans Administration system, where access to care is equal.

Source: New Recommendations by the American College of Gastroenterology Call for Changes in Colorectal Cancer Screening of African Americans. March 21, 2005.

Issues underlying colorectal cancer screening rates among African Americans:

The researchers' analyses revealed that for African Americans, regardless of family history, a healthcare provider's recommendation for colorectal cancer

screening was strongly correlated with a higher likelihood of screening. Furthermore, individuals who were more physically active were also more likely to have been screened for colorectal cancer. Surprisingly, though, having a family history of colorectal cancer did not predict a higher likelihood of screening. In fact, the researchers found that African Americans with a family history were less likely to have received risk-appropriate screening than those without a family history. Family history of colorectal cancer is often associated with increased rates of screening in Whites.

The authors say it is difficult to explain why a perception of increased risk, which is significantly higher in African Americans with a family history of CRC than in those without, did not translate into screening. Their findings suggest that other unknown or unmeasured factors may play a role in screening decisions. Additional studies to determine what those factors might be could lead to culturally tailored interventions designed to increase screening rates, which in turn could ultimately improve early detection and reduce colorectal cancer deaths in African Americans.

Source: Griffith KA, McGuire DB, Royak-Schaler R, et al. Influence of family history and preventive health behaviors on colorectal cancer screening in African Americans. 2008. *Cancer*, 2008;113(2):276–85.

A study of Medicare recipients found that Black men had 25% lower use of colonoscopy compared with White men and a 50% lower use of flexible sigmoidoscopy. A recent study of racial differences in CRC screening practices found that African American women were half as likely to have undergone colonoscopy for CRC screening as White women, by self-report. Similarly, Cooper examined Medicare data for colorectal procedures and found that African Americans were less likely to have screening indications recorded for FOBT, flexible sigmoidoscopy, and colonoscopy compared with Whites. Furthermore, current research suggests that the lower rate of endoscopic procedures in African Americans is attributable entirely to lower use of colonoscopy (OR=0.89 and 0.70 for African American men and women, respectively, as compared with White men and women).

Sources: Richards RJ, Reker DM. Racial differences in use of colonoscopy, sigmoidoscopy, and barium enema in Medicare beneficiaries. *Dig Dis Sci*. 2002;47:2715–2719.

McAlearney AS, Reeves KW, Dickinson SL, et al. Racial differences in colorectal cancer screening practices and knowledge within a low income population. *Cancer*. 2008;112(2):391–398.

Cooper GS, Koroukian SM. Racial disparities in the use of and indications for colorectal procedures in Medicare beneficiaries. *Cancer*. 2004;100:418–424.

<p>Slide 52</p>	<p>Patient Education for African Americans</p> <p>Source: Katz ML et al. Colorectal cancer screening among African American church members: A qualitative and quantitative study of patient–provider communication. <i>BMC Public Health</i> 2004;4:62doi.</p>
<p>Slide 53</p>	<p>Patient Education</p> <p>Factors contributing to impact of healthcare provider recommendation on screening test completion</p> <p>Rates of test completion based on self-reported interactions with PCPs:</p> <ul style="list-style-type: none"> • 42% for good communication/adequate knowledge • 27% for good communication/inadequate knowledge • 29% for poor communication/adequate knowledge • 5% for poor communication/inadequate knowledge <p>Source: Katz ML, James AS, Pignone MP, Hudson MA, Jackson E, Oates V, Campbell MK. Colorectal cancer screening among African American church members: A qualitative and quantitative study of patient–provider communication. <i>BMC Public Health</i> 2004;4:62.</p>
<p>Slide 58</p>	<p>Impact of Treatment Disparities</p> <p>Source: Ward SH et al. Increasing colorectal cancer screening among African Americans: linking risk perception to interventions targeting patients, communities and clinicians. <i>J Natl Med Assoc.</i> 2008;100(6):748–758.</p>
<p>Slide 60</p>	<p>High-Sensitivity FOBT Options</p> <p>Conclusions: The number-to-scope to find 1 cancer was comparable between the tests. However, participation and detection rates for advanced adenomas and cancer were significantly higher for I-FOBT. G-FOBT significantly underestimates the prevalence of advanced adenomas and cancer in the screening population compared with I-FOBT.</p> <p>Study: Despite poor performance, guaiac-based fecal occult blood tests (G-FOBT) are most frequently implemented for colorectal cancer screening. Immunochemical fecal occult blood tests (I-FOBT) are claimed to perform better, without randomized comparison in screening populations. Our aim was to randomly compare G-FOBT with I-FOBT in a screening population.</p> <p>Methods: We conducted a population-based study on a random sample of 20,623 individuals 50–75 years of age, randomized to either G-FOBT (Hemoccult-II) or I-FOBT (OC-Sensor). Tests and invitations were sent together. For I-FOBT, the standard cutoff of 100 ng/ml was used. Positive FOBTs were</p>

verified with colonoscopy. Advanced adenomas were defined as ≥ 10 mm, high-grade dysplasia, or $\geq 20\%$ villous component.

Results: There were 10,993 tests returned: 4836 (46.9%) G-FOBTs and 6157 (59.6%) I-FOBTs. The participation rate difference was 12.7% ($P < .01$). Of G-FOBTs, 117 (2.4%) were positive versus 339 (5.5%) of I-FOBTs. The positivity rate difference was 3.1% ($P < .01$). Cancer and advanced adenomas were found, respectively, in 11 and 48 of G-FOBTs and in 24 and 121 of I-FOBTs. Differences in positive predictive value for cancer and advanced adenomas and cancer were, respectively, 2.1% ($P = .4$) and -3.6% ($P = .5$). Differences in specificities favor G-FOBT and were, respectively, 2.3% ($P < .01$) and -1.3% ($P < .01$). Differences in intention-to-screen detection rates favor I-FOBT and were, respectively, 0.1% ($P < .05$) and 0.9% ($P < .01$).

Source: Van Rossum LG, Rijn AN, Laheji RJ, et al. Random comparison of guaiac and immunochemical fecal occult blood tests for colorectal cancer in a screening population. *Gastroenterology*. 2008.35(1):82–90.

This material was developed through an Oregon Department of Human Services contract with Acumentra Health, Inc., funded by the Centers for Disease Control and Prevention Cooperative Agreement #5U58DP00789-02. June 2009

Colorectal Cancer Screening Provider Education—Pre/Post Test

1. The U.S. Preventive Services Task Force (USPSTF) and the American College of Gastroenterology recommend routine colorectal cancer screening for which following groups? (circle all that apply)
 - a. People at average risk from age 50 to 80
 - b. People at average risk from age 50 to 75
 - c. All people age 50 to 80
 - d. African American from age 45 to 75

2. The USPSTF CRC screening guidelines update recommends which of the following screening methods as saving approximately equal numbers of life-years for people at average risk? (circle all that apply)
 - a. Sigmoidoscopy every 5 years with FOBT at 3 years
 - b. Double-contrast barium enema every 5 years
 - c. Colonoscopy every 10 years
 - d. FOBT any type annually
 - e. CT colonography every 10 years
 - f. High-sensitivity FOBT annually

3. Which has the lowest cost of screening per year of life saved?
 - a. Breast cancer
 - b. Colorectal cancer
 - c. Cervical cancer

4. Which of the following are associated with low levels of colorectal cancer screening?
 - a. High copays
 - b. No health insurance
 - c. High educational level
 - d. Family history of colorectal cancer
 - e. Distrust of the healthcare system
 - f. Perception of low risk for colorectal cancer
 - g. Having a regular primary care provider

5. What proportion of Oregonians age 50 or older reported having received a sigmoidoscopy or colonoscopy during the prior 10 years (BRFSS 2006 data)?
 - a. 47%
 - b. 57%
 - c. 67%

6. Which group has the highest rate of colorectal cancer and highest mortality from colorectal cancer?
- a. Hispanics/Latinos
 - b. Asian/Pacific Islanders
 - c. African Americans
 - d. Non-Hispanic Whites
7. Which group has the lowest rate of colorectal cancer and lowest mortality from colorectal cancer?
- a. Hispanics/Latinos
 - b. Asian/Pacific Islanders
 - c. African Americans
 - d. Non-Hispanic Whites
8. Which of the following provider office activities are associated with meaningful increases in colorectal cancer screening rates? (circle all that apply)
- a. Use of dashboard or flowsheet to track screening
 - b. Scheduling screening appointments for patients
 - c. Public service messages by recognized public figures
 - d. Screening recommendation delivered by primary care provider
 - e. Providing FOBT kits at each annual visit
 - f. Team approach to patient education and reminders
9. What is the mean rate for Oregon managed care plan members receiving appropriate colorectal screening, as of December 2007 (HEDIS^{®*} 2008)?
- a. 47%
 - b. 57%
 - c. 67%
10. Which lifestyle habits are associated with increased risk of colorectal cancer? (indicate all that apply)
- a. Heavy smoking (more than 30 pack years) for men and women
 - b. Moderate smoking (less than 30 pack years) for men
 - c. Obesity
 - d. Diet low in fruits and vegetables
 - e. Abstention from alcohol

This material was developed through an Oregon Department of Human Services contract with Acentra Health, Inc., funded by the Centers for Disease Control and Prevention Cooperative Agreement #5U58DP00789-02. June 2009

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Colorectal Cancer Screening Provider Education—Pre/Post Test

Answer Key

Question and Correct Answers	Reference Slides and Notes	
	20-min set	60-min set
1. The U.S. Preventive Services Task Force (USPSTF) and the American College of Gastroenterology recommend routine colorectal cancer screening for which of the following groups? a. People at average risk from age 50 to 75 d. African American from age 45 to 75	#8 #10	#10 #13
2. The USPSTF CRC screening guidelines update recommends which of the following screening methods as saving approximately equal numbers of life-years? a. Sigmoidoscopy every 5 years with FOBT at 3 years c. Colonoscopy every 10 years f. High-sensitivity FOBT annually	#9	#11
3. Which has the lowest cost of screening per year of life saved? b. Colorectal cancer	#12	#16
4. Which of the following are associated with low levels of colorectal cancer screening? a. High copays b. No health insurance e. Distrust of the healthcare system	#20 #20 #21	#30 #30 #30, 55
5. What proportion of Oregonians age 50 or older reported having received a sigmoidoscopy or colonoscopy during the prior 10 years (BRFSS 2006 data)? b. 57%	NA	#19
6. Which group has the <u>highest</u> rate of colorectal cancer and <u>highest</u> mortality from colorectal cancer? c. African Americans	#5	#5, 6, 7
7. Which group has the <u>lowest</u> rate of colorectal cancer and <u>lowest</u> mortality from colorectal cancer? a. Hispanics/Latinos	#5	#7
8. Which of the following provider office activities are associated with meaningful increases in colorectal cancer screening rates? a. Use of dashboard or flowsheet to track screening b. Scheduling screening appointments for patients c. Public service messages by recognized public figures d. Screening recommendation delivered by primary care provider f. Team approach to patient education and reminders	#25, 26 #26 #26 #28 #26	#38, 39 #26 #39 #41 #39

Note that giving FOBTs (choice e.) doesn't work well without follow up; low return rate.

- | | | |
|--|------------|------------|
| <p>9. What is the mean rate for Oregon managed care plan members receiving appropriate colorectal screening, as of December 2007 (HEDIS[®]* 2008)?</p> <p>b. 57%</p> | <p>#15</p> | <p>#22</p> |
| <p>10. Which lifestyle habits are associated with increased risk of colorectal cancer?</p> <p>a. Heavy smoking (more than 30 pack years) for men and women</p> <p>c. Obesity</p> <p>d. Diet low in fruits and vegetables</p> | <p>NA</p> | <p>#37</p> |

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Colorectal Cancer Screening Provider Education—Evaluation

Learning Objectives

The presentation on colorectal cancer (CRC) screening prepared me to do the following:

	<i>Definitely don't agree</i>			<i>Definitely agree</i>	
1. Describe major <u>changes in the updated U.S. Preventive Services Task Force (USPSTF) guidelines</u> for CRC screening.	1	2	3	4	5
2. Describe one or more <u>provider barriers to screening</u> that I had not been aware of prior to the presentation.	1	2	3	4	5
3. Describe one or more <u>patient barriers to screening</u> that I had not been aware of prior to the presentation.	1	2	3	4	5
4. Identify one or more <u>practice changes</u> that increase CRC screening.	1	2	3	4	5
5. <i>PCPs and gastroenterologists</i> : select one change shown to increase colorectal cancer screening <u>for implementation in my practice</u> .	1	2	3	4	5

Quality of Presentation

	<i>Definitely don't agree</i>			<i>Definitely agree</i>	
1. The content of the slides was clear and informative.	1	2	3	4	5
2. The slides were easy to read and interpret.	1	2	3	4	5
3. The speaker presented the content effectively.	1	2	3	4	5

Suggestions for helping us better achieve the learning objectives:

