How to Increase Colorectal Cancer Screening Rates in Practice:
A Primary Care Clinician’s* Evidence-Based Toolbox and Guide

*Including Family Physicians, General Internists, Obstetrician-Gynecologists, Nurse Practitioners, Physician Assistants and their Office Managers

Mona Sarfaty, MD

EDITORS
Karen Peterson, PhD
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Avoid These Errors:

- Patients are screened for colorectal cancer (CRC) with only a digital rectal exam.¹
- Patients are screened for CRC in the office with one fecal occult blood test (FOBT).²
- Patients with a history of adenomatous polyps in a first degree relative are not identified as people at increased risk.³,⁴
- Providers have cultural assumptions that inhibit frank discussion that leads to a clear recommendation for screening.
- Patients with a positive FOBT never receive an order for a complete diagnostic exam.⁵
- There is no follow-up on patients referred for a complete diagnostic exam.⁶
- Practitioners recommend screening with colonoscopy for those at average risk more often than every 10 years or flexible sigmoidoscopy more often than every five years.
- Screening is started earlier than age 50 for average-risk asymptomatic individuals.
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January 2006

Dear Colleague,

Like you, we are primary care physicians who have experienced the many changes in primary care medicine over recent years. While the burdens on primary care practitioners are greater than ever before, the need for effective primary care practice is just as great. Screening for colorectal cancer, like other highly effective preventive measures, is one of the essential elements of primary care practice.

This publication is similar to other continuing medical education bulletins you receive, but the intended outcome is different. The outcome here is improved office practice. This is designed to help you and your office manager organize your practice so that every appropriate patient walks out of the door with the needed recommendation. While the overwhelming majority of primary care doctors screen for colorectal cancer and other cancers, few would say that every eligible patient leaves the practice with the needed recommendation. It is not enough to know what needs to be done. It is doing it that makes a difference. This guide contains evidence-based tools and strategies that can move your practice to a higher level of performance. We have assembled materials we wish we had available as we worked toward improving screening rates in our respective communities.

While screening may not be at the top of patients’ lists of concerns when they walk through the office door, recommendations from their doctors are the most effective way to ensure that every age-appropriate individual gets screened. There is abundant research that supports this statement. It is essential to get this simple truth to primary care doctors around the country.

There are many misconceptions about colorectal cancer screening. One of the most destructive is that patients do not want to be screened. There is hard evidence from several studies that this is untrue. Some physicians might not be aware of how much evidence has accumulated that screening procedures prevent cancers and save lives. Solid projections are that incidence will drop by 60% and mortality by 80% with widespread screening.

We hope that you, your practice, and your patients benefit from the materials in this guide. Continuing Medical Education credit is now available from the American Medical Association, the American Academy of Family Physicians, and other organizations for practice improvement activities like those described in this guide. There will soon be a Web-based version available that will be updated over time.

Sincerely,

Richard Wender, MD
Mona Sarfaty, MD
NATIONAL COLORECTAL CANCER ROUNDTABLE MEMBER ORGANIZATIONS

Founding Organizations:
American Cancer Society
Centers for Disease Control and Prevention

Agency for Healthcare Research and Quality
Alliance of Community Health Plans
America’s Health Insurance Plans
American Academy of Family Physicians
American College of Gastroenterology
American College of Obstetricians and Gynecologists
American College of Physicians
American College of Preventive Medicine
American College of Radiology
American Gastroenterological Association
American Medical Association
American Medical Women’s Association
American Public Health Association
American Society of Colon and Rectal Surgeons
American Society for Gastrointestinal Endoscopy
Association of State and Territorial Chronic Disease Program Directors
Association of State and Territorial Directors of Health Promotion and Public Health Education
Boston Medical Center
Cancer Research and Prevention Foundation
Centers for Medicare and Medicaid Services
Collaborative Group of the Americas on Inherited Colorectal Cancer
Colon Cancer Alliance
Colorectal Cancer Network
Crohn’s and Colitis Foundation of America, Inc.
C-3 Colorectal Cancer Coalition
Digestive Disease National Coalition
Eric Davis Foundation
EXACT Sciences, Inc.
Foundation for Digestive Health and Nutrition
Hadassah, Women’s Zionist Organization of America
Harvard Center for Cancer Prevention
Harvard Medical School
Hereditary Colon Cancer Association
Hoffman-LaRoche, Inc.
Intercultural Cancer Council
International Digestive Cancer Alliance
Lynn’s Bowel Cancer Campaign (UK)
Mayo Clinic
Minnesota Colon and Rectal Foundation
Minnesota Colorectal Cancer Initiative
Morehouse School of Medicine
Myriad Genetics, Inc.
National Cancer Institute
National Caucus and Center on Black Aged, Inc.
National Colorectal Cancer Research Alliance
National Committee for Quality Assurance
National Governors Association
Network for Cancer Control Research Among American Indian and Alaska Native Populations
Olympus America, Inc.
Quest Diagnostics
Sanofi-Aventis
Society for Gastroenterology Nurses and Associates, Inc.
Society of Gastrointestinal Radiologists
STOP Colon/Rectal Cancer Foundation
The Jay Monahan Center for Gastrointestinal Health at New York-Presbyterian Hospital/Weill Cornell
The Permanente Medical Group, Inc.
The Wellness Community
University of Minnesota Cancer Center
University of Texas - Houston School of Public Health
University of Texas M.D. Anderson Cancer Center
Executive Summary

Colorectal cancer (CRC) is both the nation’s second leading cause of cancer mortality and one of its most preventable cancers. If adenomatous polyps were removed before they transformed into cancers, starting at age 50 for those at average risk and earlier for those at increased risk, there would be a precipitous drop in the number of new colorectal cancers. If developing CRCs were detected at earlier stages and ages, mortality rates would fall dramatically. The increase in survival would be impressive. This accomplishment could be one of the great medical achievements of the 21st century. The evidence and tools in this guide will help physicians and their office managers increase screening rates to make this achievement a reality.

Even though highly effective methods of CRC screening are available across the country, the current rates of screening, and of complete diagnostic examination that should flow from screening, remain inadequate. Thus, the potential benefits of widespread CRC are unrealized. The American Cancer Society has established the goal of 75% of the eligible population screened for CRC by the year 2015. This guide will help reach that goal.

There are several proven screening methods that reduce mortality. These are presented as practice guidelines in Appendix A which offers a chart called “Common Sense Recommendations at a Glance”, as well as the guidelines of the American Cancer Society and the US Preventive Services Task Force. Practitioners must become aware that their recommendation is the single most influential factor in persuading individuals to be screened for cancer. This evidence has come from multiple studies in multiple locations over several decades, and it is increasingly recognized and understood. The evidence is presented in the section “Essential #1”. Since 75 to 90% of Americans visited a doctor for a routine check-up within the last two years, there are many opportunities for physicians to reach the target population with the screening message. (BRFSS, See reference #22.)

While nearly all physicians screen for CRC, few would claim that every eligible patient leaves the office with the screening recommendation. Only a systematic approach that is designed to identify and provide a recommendation to every eligible patient who visits the practice for any reason is likely to reach the American Cancer Society goal. There are a variety of effective tools to create a systematic approach. The first step is that every practice should have an office policy on CRC screening. This is discussed under “Essential #2”. The policy should incorporate an assessment of patient risk level, and the realities of local medical resources, insurance coverage plans, and patient preferences. Algorithms, flow sheets, and procedures are tools to implement the office policy. They help ensure that it remains consistent into the future. Instructions on how to create an office policy and tools to implement it are presented under “Essential #2”.
Reminder systems are another essential element of effective office practice. There are reminder systems that target physicians and those that target patients. There is strong evidence from meta-analyses that many reminder options are effective. They are presented under “Essential #3”. These options will assist physicians and their office managers in choosing their own strategy and tools to attain a high level of consistency and impact.

Skillful communications also improve the effectiveness of office practice. This is discussed in “Essential #4”. Theory-based communications are more effective than generic communications. Tools are available to help clinicians utilize a theory-based approach to identify and improve communication with patients who are at different decision stages with regard to screening. These are presented in “Essential #4”. Decision aids are also available, and new tools are under development that will soon facilitate shared decision-making between patient and clinician. Office staff can make a significant contribution to this process.

While there are barriers to increasing screening rates, these barriers are now clearly identified and many of them can be overcome. New evidence that first came to light during the 1990s has not penetrated into all practice settings. Some providers may not be aware that national guidelines have changed. Updated knowledge is needed. The digital rectal exam is no longer a recommended screening strategy for CRC. A single fecal occult blood test (FOBT) completed in the office is not sound practice. A single positive fecal occult blood test (FOBT) should never be repeated. It should be followed by colonoscopy. Other barriers that should be removed are presented in Appendix D.

The only way to raise national CRC screening rates is to institutionalize changes in your practice routines so that every eligible patient receives the screening message. It is not enough to know what needs to be done. It is doing it that makes the difference. The evidence based tools and strategies in this guide will help move your practice to a higher level of performance.
Checklist for Increased Screening

1. **Your Recommendation**
   - For CRC cancer screening
   - For complete diagnostic evaluation when screen is positive

2. **An Office Policy**
   - Policy characteristics:
     - Determine individual risk level
     - Identify local medical resources
     - Assess insurance coverage
     - Consider patient preference
     - Attend to office implementation
   - Algorithm posted
   - FOBT flow sheet posted, and excludes in-office FOBT
   - Steps to implement policy in office

3. **An Office Reminder System**
   - Options for physicians:
     - Chart prompts
     - Audits and feedback
     - Ticklers and logs
     - Staff assignment
   - Options for patients:
     - Education
     - Cues to action
     - Posters
     - Brochures
     - Reminder postcards
     - Reminder letters
     - Reminder calls

4. **An Effective Communication System**
   - Options for action:
     - Stage-based communication
     - Shared decisions, informed decisions, decision aids
     - Staff involvement
Goals of this Guide:

• To inform clinicians and their office managers who deliver primary care about their opportunity to prevent colorectal cancer with appropriate screening

• To encourage primary care providers to decrease the mortality and morbidity of colorectal cancer (CRC) and other cancers through appropriate screening

• To facilitate efforts of office-based clinicians to reduce disparities by applying screening guidelines on a universal basis to the age-appropriate population

• To improve preventive care in primary care practices through use of the strategies and tools presented in this guide
Introduction

Why screen for colorectal cancer?
- Screening both prevents colorectal cancer (CRC) and reduces mortality.
- New insurance reporting requirements include rates of screening for CRC.
- Malpractice suits involving colorectal cancer are costly.
- Continuing Medical Education (CME) credit is available for improving screening rates in a practice.

Why this guide?
- Every primary care practice can contribute to raising screening rates.
- This guide highlights the essential elements for improved screening rates.
- This guide will help clinicians overcome barriers to screening.
INTRODUCTION

Introduction

Why screen for colorectal cancer?

• Screening both prevents colorectal cancer and reduces mortality.
• New insurance reporting requirements include your practice’s screening rates.
• Malpractice cases involving colorectal cancer are costly.
• Continuing Medical Education (CME) credit is available for practice improvements delineated in this guide.

Screening both prevents colorectal cancer and reduces mortality.

Colorectal cancer (CRC) is both the nation’s second leading cause of cancer mortality and one of the most preventable cancers. It is second to lung cancer as a cause of cancer deaths and shares with lung cancer the unusual distinction of being a largely preventable disease. However, while a lung cancer begins as a tiny malignancy that grows into a larger tumor, a colorectal cancer begins as an adenomatous polyp that is not malignant and takes a period of five to 15 years to transform. This long period of transformation gives physicians an invaluable window of opportunity to help their patients prevent this cancer.

Two developments in medicine have provided doctors with this opportunity. The first was the elucidation of the natural history of colorectal cancer that was documented and published in the early 1990s. The second was the development of fiber-optic techniques that permitted the exploration of the body’s cavities. Together, these advances have created the potential for a giant leap forward in combating colorectal cancer.

The near elimination of new colorectal cancers and a precipitous fall in mortality could be one of the great medical successes of the early 21st century. If adenomatous polyps could be removed from the colon before they turn into cancers, the corresponding fall in new cases of colorectal cancer would be stunning. Mortality from colorectal cancer would be dramatically reduced and, eventually, nearly eliminated. The sizeable population that is at increased risk because of a family history of an adenomatous polyp or colorectal cancer would be protected from that risk. There are few opportunities in medicine at this time that are as promising as preventing colorectal cancer.

New insurance reporting requirements include your practice’s screening rates.

Many primary care physicians will soon be required to report their CRC screening rates. This information will be presented and available to the public. Many insurance companies that reimburse physicians for services will require this information of practitioners along with other data reports. All clinicians who accept reimbursement from private insurers that provide employee health coverage will be affected. In fact, the Health Plan Employer Data and Information Set (HEDIS) that is disseminated by the National Committee for Quality Assurance (NCQA) and is required for all employer health plans includes colorectal cancer screening rates on the standard list of quality measures. In 2006, HEDIS includes these screening rates in reports to the public along with all other measures.

* The Health Plan Employer Data and Information Set measures include breast, cervical, and colorectal cancer screening rates.
Malpractice cases involving colorectal cancer are costly.

The inescapable logic that supports timely and thorough screening is also producing a growing number of medical malpractice suits. Successful malpractice suits have ranked CRC among the five leading diseases in dollar value of awards garnered. There are a number of factors that combine to make this cancer an easy target for lawsuits and an important focus for risk management.†

The consequences of a missed opportunity to prevent CRC – or to diagnosis it early before it has spread – can be grave and life-threatening, and they can lead to substantial morbidity. Because public awareness of the consequences of this missed opportunity is growing, it can also lead to substantial legal jeopardy and financial loss. A delay in diagnosis and the mismanagement of diagnostic testing are currently the main complaints made in malpractice cases that involve CRC.

The stage of presentation at which CRC is identified and treated is the most important determinant of long-term survival. Early stage presentation and intervention dramatically increases the likelihood of long-term survival and cure. Late stage presentation reduces survival and leads to a poorer prognosis. The beneficial impact for early stage diagnosis and treatment has important implications for office practice and for the public’s reaction to a diagnosis of CRC.

Public awareness of the following facts is expanding. As a result, a delay in diagnosis and the mismanagement of diagnostic testing are the main complaints made in malpractice cases that involve CRC. Previously “failure to diagnose” had been the dominant malpractice complaint, especially where patients presented with symptoms. A newer version of this complaint, “failure to screen,” is rising in frequency as a principal accusation, especially for patients at increased risk.

1. The incidence of CRC is fairly high, with a lifetime risk of developing CRC of approximately 5 to 6%. People at increased risk may have a lifetime risk that is two to three times the baseline, or 12% to 18%.
2. CRCs develop from adenomatous polyps (adenomas) and are preventable if the adenomas are identified and removed before they turn into cancers.
3. The lead-time required for the identification of an adenoma is long. These dangerous polyps typically reside in the colon for 10 to 15 years until they metamorphose into cancers.
4. The technology and facilities that are needed to find the adenomas and remove them are widely dispersed, and clearly accessible for those who have health insurance.
5. There is a widespread consensus across medical professional organizations and panels of experts that screening for CRC is strongly recommended. In fact, since Medicare began reimbursing for it, CRC screening has essentially become national policy.
6. The consequences of a missed opportunity to prevent CRC – or to diagnosis it early before it has spread – are substantial. The impact can be large for patient and physician.

The logic of these realities has produced many costly lawsuits. The dollar value of malpractice awards for CRC is an indication of expanded awareness and the personal loss when individuals fail to get screening. Screening and appropriate follow-up could help prevent these suits.

† From presentation of Dr. Ernest Hawk, National Cancer Institute, 2002.
Continuing Medical Education credit is available for practice improvements described in this guide.
In 2004, the American Medical Association (AMA) established a policy of offering continuing medical education (CME) credits for physicians who undertake quality improvement projects in their practices. The American Academy of Family Practice (AAFP) and the American Board of Internal Medicine (ABIM) have done the same. Documentation of improved CRC screening rates in your practice could be the basis for CME credits from the AAFP, the ABIM, and toward the Physician’s Recognition Award approved by the AMA and other authorities.

Why this guide?
• Every primary care practice can contribute to raising cancer screening rates.
• This guide highlights the essential elements for improved screening rates.
• This guide will help clinicians overcome barriers to screening.

Every primary care practice can contribute to raising screening rates.
Every practicing primary care physician can contribute to increasing the national CRC screening rate to reach the goal of 75% by 2015 established by the American Cancer Society. A recommendation of a physician is arguably the most powerful influence available to attain this goal. A physician’s recommendation to participate in cancer screening is a high-impact health message that will result in a large reduction in the risk of dying from this disease. This fact is evidence-based and extensively documented in the literature. It is widely recognized and summarized in the next section of this guide. However, it remains under appreciated by many practicing physicians.

While nearly all primary care physicians do screen their patients for CRC, few practices have systems in place to ensure that this recommendation is delivered to each and every age-appropriate patient. In other words, it is highly likely that every clinician has seen patients in the past few months who should have received a recommendation for screening but did not receive it, and patients who should have been screened but were not screened. Most physicians realize this. In fact, in a national survey, only 20% of primary care physicians thought that as many as 75% of their age-eligible patients had been screened.15

This manual provides strategies and user-friendly tools so that every primary care clinician and practice can increase the percentage of patients who leave their visit with the screening message and are therefore more likely to follow through. It provides a road map and a tool kit that all primary care providers and their office managers can utilize to become part of the solution to the problem of colorectal cancer – and other preventable cancers and diseases. While there is work to be done everywhere, different work needs to be done in different communities, and different work needs to be done in different practices. With the approach described here, every practicing physician can expand his or her impact and contribute to the promising nationwide effort to dramatically reduce the scourge of cancer.
INTRODUCTION

The great potential for physicians to raise screening rates with their recommendation to screen is currently unrealized. Despite the tremendous promise of screening, and the attention to its benefits by national print and broadcast media, screening rates remain low across the country. According to the Behavior Risk Factor Surveillance System of the Centers for Disease Control and Prevention (CDC), in 2002, only 45% of the nation’s population age 50 and over had ever used a fecal occult blood test, and only 48% had ever had a sigmoidoscopy or colonoscopy.† This was both good news and bad news.

It was good news because those numbers were within striking distance of the Healthy People 2010 objectives for the nation.§ This was bad news because the goal needs to be higher to achieve a dramatic reduction in mortality from CRC. We have to go even further to realize the American Cancer Society goal of 75% of the eligible population screened by 2015. While there are some indications that screening rates are rising, only a thoughtful strategy and a concerted effort to bring the numbers up will realize the more ambitious goal that has the greatest potential to save lives.

Efforts to reduce the incidence and mortality of colorectal cancer are also part of the national effort to eliminate healthcare disparities.¹⁷ African Americans have a disproportionately high incidence of and mortality from CRC.¹⁸ Variability in screening rates and lower use of diagnostic testing contribute to this discrepancy.¹⁹,²⁰ Inadequate awareness of the importance of CRC screening has been cited as an underlying cause, along with lower rates of health insurance, poor access to care, perceptions of bias, or even racism.²¹ Other under-served minority groups also have lower screening rates.²² Cultural barriers are a factor. A physician’s recommendation has been demonstrated to be strongly influential with all ethnic and racial groups. An important element of a solution to healthcare disparities is assuring that a practitioner’s recommendation is issued to every age- and risk-appropriate individual.

This guide highlights the essential elements for improved screening rates.
This guide presents essential elements for raising screening rates. There are four. Each will be reviewed in a separate section. Each section addresses one of the key elements and presents strategies and tools to assist in building that element. Some tools are of recent origin. Most are evidence-based. This guide is intended to facilitate success in establishing the four essential elements: 1) Your Recommendation, 2) An Office Policy, 3) An Office Reminder System, 4) An Effective Communication System.

1) Your Recommendation. The first essential for better screening rates is a recommendation from a physician to every patient who is at risk. A physician’s recommendation is the most influential factor. The strong evidence on the importance of a recommendation will be presented.

2) An Office Policy. The second essential element is an office policy on colorectal cancer screening. The policy assures consistency over time by clearly articulating the intentions of the practitioner and the practice. The policy must incorporate assessment of individual risk levels and be based on local medical resources and local insurance coverage. All staff of the practice should be familiar with the policy and know how to implement it.

† Over 90% of those had their procedure within five years prior.
§ The current objectives for the population age 50 and over are: 1) 50% should have an FOBT within the preceding two years and 2) 50% should have ever had a sigmoidoscopy.
3) **An Office Reminder System.** The third element is an office reminder system. There are reminder systems for patients and for providers. Both types can contribute to better screening rates.

4) **An Effective Communication System.** Though communication is a central part of the relationship between the physician and the patient, it typically occurs according to individual habit and inclination or early professional training without attention to techniques that are based on evidence and have actually been demonstrated to improve effectiveness.

The practice that puts the four essentials in place can maximize its impact on the incidence and mortality of colorectal cancer. This guide offers a “how to” for building these four key elements into the practice. The Appendix contains the most recent guidelines on colorectal cancer screening, a summary of the screening practices of primary care physicians, and a more detailed discussion to help overcome barriers to screening. There is a knowledge test in the appendix so that you can test your knowledge before and after reading the guide.

**This guide will help you overcome barriers to screening.** Barriers and countervailing forces have made it difficult to achieve improved screening rates. This guide provides solutions. Confusion exists about national guidelines. Out-of-date knowledge and outmoded practices persist. Up-to-date knowledge is often derailed by patient demands, or the absence of defined policies. There is a lack of confidence in the efficacy and acceptability of screening tests. Nonexistent or inadequate health insurance coverage is also a barrier. This guide will help physicians and their office managers develop their own strategies so they can overcome barriers and contribute to the success that is within their collective grasp. A discussion of these barriers is introduced here and further explored in Appendix D.

- **Outdated Knowledge.** Some physicians may not be aware that a family history of adenomatous polyps places a patient at increased risk or that CRC in an older first-degree relative also increases an individual’s risk. Some physicians are still performing an in-office digital rectal exam or a single FOBT; these are not evidence-based and should not be used for colorectal cancer screening (see reference #170.) The recommended procedure is an at-home procedure of collecting two samples from each of three consecutive specimens. Accepted FOBT tests include guiac-based tests and immunochemical tests.

- **Inconsistent Guidelines.** Many primary care physicians are unclear about the current guidelines and, therefore, continue to utilize outdated approaches to screening that are no longer recommended by national professional organizations. Since guidelines have changed, this is not surprising. Though there appear to be inconsistencies among guidelines, in reality, all major guidelines strongly endorse regular screening.
INTRODUCTION

• Guideline Changes. As scientific evidence has accumulated, guidelines have changed, most recently in 2002 and 2003. Outdated guidelines may still be fixed in the minds of some practitioners. In 1989, the US Preventive Services Task Force (USPSTF) judged there was insufficient evidence to recommend for or against FOBT or flexible sigmoidoscopy (FS) screening.\textsuperscript{29} By 2002, the USPSTF found evidence that several screening methods were effective in reducing mortality. Specific guideline changes address:
  – The age to begin screening people at increased risk
  – The digital rectal exam, which is not evidence-based
  – Complete diagnostic exam with colonoscopy whenever there is a positive screen. Up-to-date guidelines are found in this guide in Appendix A.

• Confusion about Priorities and Goals.\textsuperscript{30} There are two goals of screening. One is to prevent CRC by removing adenomatous polyps that can turn into CRC. The other is to remove early cancers before they become later stage cancers that carry worse prognoses. The first of the two goals is the more common achievement. Only 1% of endoscopy screenings find a CRC.

• Lack of Confidence in Efficacy and Acceptability of Screening Tests. Despite strong new evidence that supports the efficacy of screening, physicians lack confidence in the efficacy of CRC screening tests. Though FOBT is the most popular recommendation, and despite strong evidence in its favor, only 24 to 35% of primary care physicians believe that FOBT is “very effective” in reducing mortality.\textsuperscript{31,32} Furthermore, only 43 to 59% believe that FS is “very effective” in reducing mortality, despite the fact that evidence has demonstrated that FOBT plus FS can detect significant neoplastic growths in the colon 76% of the time and, with appropriate intervention, can reduce mortality by over 40%\textsuperscript{33,34,35}. Some physicians may believe that flexible sigmoidoscopy or colonoscopy are distasteful or unacceptable choices for their patients, though there is little evidence to support this. One statewide survey has documented that less than 5% of respondents find the nature of the tests inhibiting.\textsuperscript{36} News coverage of emerging technologies may also undercut current efforts to increase screening. Some patients and providers may decide to wait until “better” screening methods are available – not realizing how long that wait will be and how unanimous are recommendations in favor of screening.

• Cost, Reimbursement, and Insurance. In one study of physician attitudes, cost was the most common explanation for not recommending colonoscopy (CS).\textsuperscript{37} However, reimbursement has declined and so has cost. Thus, cost could be less of an issue than it was previously. While some private insurers won’t pay for every recommended screening modality, all insurance pays for some recommended modality. For example, all insurance will support screening by FOBT, with diagnostic colonoscopy, if the result is positive. Medicare pays for all screening options.\textsuperscript{38} Absence of health insurance is a more serious problem. The number of individuals nationwide who lack health insurance has risen steadily in recent years. Lack of health insurance is a barrier to receipt of primary medical care and preventive screening services. While an FOBT is inexpensive and may not require health insurance, the visit to obtain the FOBT will be more expensive. Pharmacies provide FOBT’s in some areas of the country. The colonoscopy which follows if the screen is positive may be unaffordable. However public health authorities may be able to assist in these cases.

** Specific physicians’ concerns about the FOBT may be found in reference # 107.
• **Inadequate Resources and Reinforcement.** The options for screening in any given community depend on the medical resources in that community and the policies of the dominant health insurers. Several states have laws that require insurance reimbursement for colorectal cancer screening. The majority do not.‡‡ Some states have a high density of specialty physicians, especially gastroenterologists, who perform endoscopic screening. The majority do not. In some areas of the country, medical resources are adequate. In others, they are not.

However, the capacity of the nation to perform CRC screening is not a barrier. There is sufficient capacity to screen the entire unscreened population within one year using a combination of fecal occult blood testing and diagnostic colonoscopy for positive tests.³⁸

A larger concern is that office practices appear to make limited use of reminder systems. A Wisconsin survey revealed that only 5% of primary care physicians had a computer reminder system; 37% had a paper reminder system; 58% had no reminder system at all.³⁹

All barriers and obstacles must be identified, confronted, and removed in order to reap the potential benefits of screening. Achieving a higher standard of office practice by assuring that a screening recommendation goes to every age-appropriate or at-risk patient will start the ball rolling. This guide is specifically intended to help improve the effectiveness of office practice. The material presented here is relevant to all cancer screening and preventive services that have a strong evidence base. The key essential elements described in the guide will not require investment of additional monetary resources. These essentials, if implemented, will save time and save lives.

†† Medicare issued a new policy in 2001. It began paying for screening CS every 10 years. No longer are symptoms of CRC required in order for Medicare to reimburse for CRC screening with colonoscopy. It has paid for annual FOBT and flexible sigmoidoscopy (FS) every four years since 1998. In 2000, the annual Medicare FOBT rate was 9%. The FS rate was 2%.

‡‡ Forty-eight states require that insurers reimburse for mammography screening, but only 18 require reimbursement for guideline-based CRC screening.

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**Physician Reminder Systems**

- 37% Paper
- 58% No Reminder
- 5% Computer Reminder
Four Essentials for Improved Screening Rates

1. Your Recommendation

2. An Office Policy
   A. An Office Policy is Vital
   B. Fit the Policy to Your Practice
      • Determine Individual Risk Level
      • Identify Local Medical Resources
      • Assess Insurance Coverage
      • Consider Patient Preference
      • Attend to Office Implementation

3. An Office Reminder System
   A. Options for Patients: Education and Cues to Action
   B. Options for Physicians:
      • Chart Prompts
      • Audits and Feedback
      • Ticklers and Logs
      • Staff Assignments

4. An Effective Communication System
   A. Options for Action
      • Stage-based Communication
      • Shared Decisions, Informed Decisions, Decision Aids
      • Staff Involvement
1. The positive impact of advice from a doctor to get cancer screening is well documented.

2. The magnitude of a clinician’s impact is considerable: State surveys have shown that 90% of people who reported a physician recommendation for CRC testing were screened vs. 17% of those who reported no provider recommendation, and 72% of those whose physician recommended an FOBT completed it vs. 8% of those whose physician had not.

3. Every clinician has seen patients who should have received, but did not receive, cancer screening. A consistent and reliable recommendation will result if three other essential elements – an office policy, a reminder system, an effective communication system – are part of the practice.

4. The positive effect of a doctor’s advice is limited to those who have access to a doctor or a usual source of care. All patients need a usual source of care.

5. To prevent CRC and reduce mortality, the recommendation must include a referral for complete diagnostic exam where the FOBT or flexible sigmoidoscopy screening test is positive.
Essential #1: Your Recommendation

Patients do things their physicians recommend. They don’t do things their physicians do not recommend.⁴⁰

One fact that has remained consistent from community to community is the influence of a physician’s recommendation on the cancer screening decisions of their patients. This is an evidence-based finding that has been well established. Confirmations accumulated over two decades show that a recommendation from a doctor is the most powerful single factor in a patient’s decision about whether or not to obtain cancer screening. While other factors also have impact (including health beliefs, social influences, and access to care), for those who have a doctor, the doctor’s advice is the single most persuasive factor.

The positive impact of a doctor’s advice has been demonstrated in studies of cancer screening behavior for several cancers, specifically colorectal cancer, breast cancer, and cervical cancer. The impact of a physician recommendation was first demonstrated in research on breast and cervical cancer. A physician recommendation to a woman has been found to be the single most important motivator for mammography and for pap smear screening.⁴¹,⁴²,⁴³,⁴⁴,⁴⁵,⁴⁶ In fact, lack of a doctor’s recommendation is actually experienced as a barrier to screening.⁴⁷

Recent studies have also documented the impact of a doctor’s recommendation on screening for colorectal cancer. Having ever received a doctor’s recommendation for a flexible sigmoidoscopy makes it more likely that an individual will be screened for CRC.⁴⁸ Having seen a physician within the prior year is one of the strongest predictors of receipt of CRC screening.⁴⁹ FOBT cards from a doctor increases the likelihood that an individual will be screened for CRC.⁵⁰ More preventive health visits also increase the likelihood of screening.⁵¹

* All mention of FOBT in this guide refers to either guiac-based tests or immunochemical tests. (See reference #50.)
STATE SURVEY EVIDENCE
In one state telephone survey of people age 50 years and older, 90% of those who reported that their health provider recommended testing had been screened for CRC compared to only 17% of those who reported that they had not received this recommendation. And 71% of those whose provider recommended testing thought screening was important compared to only 48% of those who had not received a recommendation.

In another statewide survey in a second state, 72% percent of the population who reported that they received a recommendation from their physician for CRC screening had completed an FOBT in the prior year compared with 8% of those who reported they received no recommendation. Similarly, 85% of those who reported that they received a recommendation for CRC screening by endoscopy completed it, compared to 12% of those who reported they received no such recommendation.

When those who had not had a flexible sigmoidoscopy or a colonoscopy in the prior five years were asked why, the most frequent explanation chosen (37%) was that the “doctor didn’t order it or didn’t say they needed it.” Other reasons included that they had “never thought about it or didn’t know they needed it” or that they didn’t have any problems. Only 5% of the population selected that the endoscopy was “too painful, unpleasant, or embarrassing.” Only 1% selected that they didn’t have a doctor. Of those who chose “the doctor didn’t order it,” or “didn’t say they needed it,” 90% had been to a doctor during the year prior!

When those who had not had an FOBT in the prior year were asked why, the most frequent explanation chosen (29%) was that the “doctor didn’t order it or didn’t say they needed it.” Other frequent explanations included that they had “never thought about it or didn’t know they needed it” (16%), or that “they didn’t have any problems” (10%).

ALL ELIGIBLE PATIENTS NEED A RECOMMENDATION
While most primary physicians recommend CRC screening to their age- and risk-appropriate patients, few practitioners have a system in place to make sure they recommend it to all of their patients who are eligible. Only a system with reproducible procedures will do this effectively. There are many options. The next sections of this guide provide a roadmap and the tools with which you can create such a system for your practice. It should be kept in mind that, without a functional system in place, even physicians who have been extraordinarily effective in getting their patients screened will find it difficult to sustain, demonstrate, or prove their achievement.

AN OPPORTUNISTIC APPROACH
While many physicians prefer to give recommendations for cancer screening at the time of the annual check-up, this approach will not reach all the patients in the practice who need screening. An alternate approach is to recommend screening at all types of visits. This is generally referred to as an “opportunistic approach.” The opportunistic approach means recommending screening far more frequently. Given the many demands on a practitioner’s time, this approach will only work when office systems function automatically to get a recommendation to every appropriate patient – even if the clinician is not immediately involved. One caveat is that the opportunistic approach does not justify an FOBT in the office as a screening test. This practice of FOBT in the office is not effective.
USUAL SOURCE OF CARE AND HEALTHCARE DISPARITIES

The positive effect of a doctor’s advice is limited to those who have regular access to a doctor.\textsuperscript{54} Having a regular source of care has traditionally been used as an indicator of access to care.\textsuperscript{55,56,57,58,59} It has been specifically linked to access to comprehensive preventive services.\textsuperscript{60} Having a regular place of care is even more important than health insurance for the receipt of preventive services.\textsuperscript{61,62} This was recently underscored by findings from the 2001 California Health Interview Survey. Among interviewees with private health insurance coverage, 53% with a regular source of care had had CRC testing compared with 23% of similarly insured individuals with no regular place of care.\textsuperscript{63} However, health insurance is also predictive of CRC screening status, as is income.\textsuperscript{64}

Using data from the nationally representative 1996 Medical Expenditure Panel Survey (MEPS), analysts from the Agency for Healthcare Research and Quality reported the racial breakdown of those with no usual source of care as follows: 29.6% of Hispanics, 20.2% of Blacks, 20.7% of Asians, and 15.2% of Whites.\textsuperscript{65} Consistent with this finding, Hispanic and non-white minorities are the most likely not to receive preventive services.\textsuperscript{66}

ADDRESSING DISPARITIES

The problem of healthcare disparities extends beyond the absence of a usual source of care or health insurance. Black and Hispanic women have been less likely to report having received a recommendation by their physician to get a mammogram.\textsuperscript{67,68} Certain people are also less likely to get a doctor’s recommendation for screening, especially those people with less education and income – or older age.\textsuperscript{69} It comes as no surprise that minority race, limited education, and low family income are related to poor indices of health.\textsuperscript{70}

Disparities in the incidence and mortality from CRC are evident. But when recommendations are offered and access barriers removed, screening rates for those with less education and income rise substantially.\textsuperscript{71,72} Even though cost should not be a major barrier to FOBT screening because an FOBT costs little and is not difficult to perform, only testing that is backed up by diagnostic colonoscopy will prevent CRC and reduce mortality.\textsuperscript{73} Access to colonoscopy may be difficult and requires a source of medical specialty services and medical insurance.

FOBT testing on an annual basis, backed up by diagnostic colonoscopy, has sufficient sensitivity to reduce CRC mortality by one-third over 13 years.\textsuperscript{74} More efforts are needed to expand access, raise insurance rates, and secure the full range of screening options for the entire eligible population.
COMPLETE DIAGNOSTIC EVALUATION

Many patients who have been tested and have screened positive fail to get a recommendation for the complete diagnostic examination (CDE) with colonoscopy that should be performed subsequently.\textsuperscript{75,76} Even those who get the recommendation may not complete the evaluation. In 1993, only 38% of those who contacted their physician after a positive FOBT received a recommendation for a CDE in a health maintenance organization.\textsuperscript{77} While recent studies in a similar setting demonstrate that a larger percent (as many as 60%) are now likely to get the recommendation for a work-up, the majority may fail to complete the work-up.\textsuperscript{78} When patients lack health insurance, this problem is undoubtedly worse.

One positive FOBT should always be enough reason to refer for a complete diagnostic examination with colonoscopy. A **positive FOBT should not be repeated**. The lack of dietary compliance is no exception to this rule. Similarly, one adenomatous polyp or polyp that was not biopsied on flexible sigmoidoscopy (FS) should always be enough reason to refer for a complete diagnostic evaluation. Follow-up of a positive screen with a complete examination is a risk management issue and is also an important measure of quality of care.

A systematic approach that ensures a CDE for patients who screen positive for CRC with FOBT or flexible sigmoidoscopy (FS) testing is imperative. Tools have been developed and tested for the purpose of ensuring follow-through on a complete diagnostic exam. One tool is presented on the next page. It is a template for a systematic approach to the CDE. The checklist approach has been found useful in improving the quality of practice.\textsuperscript{79}

Follow through rates can be calculated easily by summing the results from the individual sheets. The sheets may be placed on the individual charts or stored in a pending file for CRC screening. The calculation of rates may be utilized as the basis for providing feedback and tracking improvement.
### Checklist for Follow Through: From Screening to Complete Diagnostic Evaluation

<table>
<thead>
<tr>
<th>FOBT Screening****</th>
<th>FS or CS Screening (circle one)</th>
</tr>
</thead>
<tbody>
<tr>
<td>date</td>
<td>date</td>
</tr>
<tr>
<td>1. FOBT Given</td>
<td>1. FS/CS Ordered (circle)</td>
</tr>
<tr>
<td>_______</td>
<td>_______</td>
</tr>
<tr>
<td>2. Provider Notified re: FOBT Result</td>
<td>2. FS or CS Scheduled</td>
</tr>
<tr>
<td>_______</td>
<td>_______</td>
</tr>
<tr>
<td>3. Non-responder- Contacted (Back to 2)</td>
<td>3. No Show Identified</td>
</tr>
<tr>
<td>_______</td>
<td>_______</td>
</tr>
<tr>
<td>4. If FOBT +, Referral Given</td>
<td>4. Rescheduled</td>
</tr>
<tr>
<td>_______</td>
<td>_______</td>
</tr>
<tr>
<td>5. Colonoscopy Scheduled</td>
<td>5. Results Reviewed</td>
</tr>
<tr>
<td>_______</td>
<td>_______</td>
</tr>
<tr>
<td>6. Show/No-show</td>
<td>6. Results on Chart for Endoscopy/Pathology</td>
</tr>
<tr>
<td>_______</td>
<td>_______</td>
</tr>
<tr>
<td>7. No-show Rescheduled</td>
<td>7. If FS +, Referral for Colonoscopy</td>
</tr>
<tr>
<td>_______</td>
<td>_______</td>
</tr>
<tr>
<td>8. Results Reviewed</td>
<td>8. Show/No-Show</td>
</tr>
<tr>
<td>_______</td>
<td>_______</td>
</tr>
<tr>
<td>9. Results on Chart</td>
<td>9. No-Show Rescheduled</td>
</tr>
<tr>
<td>_______</td>
<td>_______</td>
</tr>
<tr>
<td>10. Results Reviewed for Endoscopy/Pathology</td>
<td>10. Results on Chart</td>
</tr>
<tr>
<td>11. Results on Chart</td>
<td>_______</td>
</tr>
</tbody>
</table>

Source: RE Myers

**** Abbreviations used in this checklist include FOBT for fecal occult blood test, FS for flexible sigmoidoscopy, and CS for colonoscopy.

***** FOBT screening should be done at home with two samples taken from each of three consecutive stools. All discussion of FOBT in this guide refers to either guiac-based tests or immunochemical tests. (See reference #50.)
ESSENTIAL #2: An Office Policy

A. An Office Policy is Vital

B. Fit the Policy to Your Practice
   • Determine Individual Risk Level
   • Identify Local Medical Resources
   • Assess Insurance Coverage
   • Consider Patient Preference
   • Attend to Office Implementation
Essential #2: An Office Policy

“Almost all primary care physicians recommend screening for CRC. Few have systems in place to assure that all eligible patients get the recommendation.”†††

– Richard Wender, MD, 2003

A. An Office Policy is Vital
A physician’s recommendation is the single most important determinant of a patient’s decision to be screened for colorectal cancer. Clinicians should feel confident about this consequential and comforting reality. But it will require more than confidence to ensure that all eligible patients leave their visit with the vital recommendation for screening. Only a systematic approach will achieve this goal.

Office policies are the foundation of a systematic approach. They are the pre-condition for a reliable and predictable office practice. Effective clinical practices are built on clear policies, well-designed systems, effective communications, and quality reviews. These pillars of effectual practice do not have to be identically constructed in every practice, but they should be present in some form.

B. Fit the Policy to Your Practice
Your office policy on screening for colorectal cancer must be constructed to address differing risk levels. It must also incorporate the realities of local medical practice, insurance coverage, and patient preference. It must be understood and implemented by the office staff.

Since national screening guidelines offer a menu of options, there is room for every physician to design a practice policy that fits the practice. The following should be considered in constructing the policy:

- Individual risk level
- Local medical resources
- Insurance coverage
- Patient preference

While office policy should adhere to national guidelines, it must be appropriate to a specific setting. Every practice exists in a local milieu where there are definable medical resources and standards of care. Preferences and trends also vary from community to community. The screening policy must reflect local resources, standards, and trends. No single policy will fit all practices.

††† Communication from Richard Wender, MD, Best Practices Task Group, National Colorectal Cancer Roundtable.
All national guidelines offer more than one screening option, and nearly all areas of the United States have more than one modality available. This surfeit of options creates a complexity that may actually be a barrier to screening. Some may feel that the existence of options reflects a lack of hard evidence on screening. This is not the case. Thus, a policy on CRC screening is even more important.

While many providers are somewhat confused by the options, patients are likely to be more confused. The practice should reduce this confusion with a screening policy to strengthen resolve and create the basis for rational office management. A policy should also help address unrecognized and unintended disparities in office practice. Only “not screening is not an option.”

### Individual Risk Based on Family History of CRC

<table>
<thead>
<tr>
<th>Familial Setting</th>
<th>Approximate lifetime risk of colon cancer</th>
</tr>
</thead>
<tbody>
<tr>
<td>No history of colorectal cancer or adenoma (General population in the U.S.)</td>
<td>6%</td>
</tr>
<tr>
<td>One second or third-degree relative with CRC</td>
<td>About a 1.5 fold increase</td>
</tr>
<tr>
<td>One first-degree relative with an adenomatous polyp</td>
<td>About a 2 fold increase</td>
</tr>
<tr>
<td>One first-degree relative with colon cancer*</td>
<td>2-3 fold increase</td>
</tr>
<tr>
<td>Two second-degree relatives with colon cancer</td>
<td>About a 2-3 fold increase</td>
</tr>
<tr>
<td>Two first-degree relatives with colon cancer*</td>
<td>3-4 fold increase</td>
</tr>
<tr>
<td>First-degree relative with CRC diagnosed at &lt; 50 years</td>
<td>3-4 fold increase</td>
</tr>
</tbody>
</table>

* First-degree relatives include parents, siblings, and children. Second-degree relatives include grandparents, aunts, and uncles. Third-degree relatives include great-grandparents and cousins.

### Adapted from Winawer SJ, et.al., 2003.
**Determine Individual Risk Level**

An office policy must provide guidance on handling patients at differing levels of risk. In fact, risk stratification is the first step when a clinician considers the screening options for any specific patient in guiding a patient to the most appropriate screening choice. (See Appendix A.) Risk stratification is addressed in all the national screening guidelines and is the essential core of the clinician’s assessment leading to sound advice. Refer to the table of individual risk based on family history of CRC to obtain the lifetime odds of developing colorectal cancer.

The generally acknowledged risk levels are “average,” “increased,” or “high,” and a specific designation for each individual rests on personal history and family history. Your office policy should specify your recommendation for individuals at average risk and increased risk. Those who are at “high” risk, which is a very restricted category but frequently missed, need frequent surveillance starting with early referral for specialized care.

It is preferable for the risk assessment to occur at the time of initial entry to the practice and become part of the chart. The sooner risk status is recorded in the chart, the sooner it is accessible to the practice. It should be remembered that, since risk changes over time, an assessment should be repeated with regularity. Annual risk assessment is a workable approach.

**AVERAGE RISK**

An average-risk individual has no first-degree relatives with a history of either colorectal cancer or adenomatous polyps and has not experienced these problems personally. The average-risk adult age 50 and over has several recommended options for screening. He or she may be encouraged to utilize any of the options available in the community. The five options presented by the American Cancer Society, and other national authorities, include:

- FOBT annually
- Flexible sigmoidoscopy every five years
- FOBT annually combined with flexible sigmoidoscopy every five years (preferred over either strategy alone)
- Colonoscopy every ten years
- Double-contrast barium enema every five years

Informed decision-making should characterize the choice of screening option. Of course, patients cannot make informed decisions unless they have been informed. Shared decision-making, carried out by patient and clinician together, is especially worthwhile and is preferred by many patients. In general, patients are guided by the option their doctors recommend. But, in reality, patient preference is the final arbiter of the available options. Information can help the patient pick the option that confers the best odds of prevention.

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* See Appendix A for current screening guidelines.
** FOBT screening should be done at home with two samples taken from each of three consecutive stools, not with one test performed in the office. FOBT refers to either guiac-based tests or the immunochemical tests. (See reference #50.)
**INCREASED RISK**

An individual at increased risk has a personal or family history of colorectal cancer or adenomatous polyps but does not have one of the high risk familial syndromes. The individual who is at increased risk doesn’t need, and is generally not given, options. This individual should be encouraged to have a colonoscopy. This situation is not rare. A significant percentage of the general population (18 to 20%) is at increased risk. Increased risk is common because age is a defining risk factor for CRC and the prevalence of adenomatous polyps rises as people get older. It is 20 to 25% by age 50, and 50% by age 75 to 80. While only a limited percentage of adenomatous polyps turn into cancers, these polyps are the precursors of colorectal cancers.

Increased risk may be caused by a personal history of adenomatous polyps or colorectal cancer, or a family history of adenomatous polyps or colorectal cancer. A family history of adenomas or CRC under age 50 should lead to suspicion of a high risk situation and further evaluation. The individual with a personal history of CRC or adenomatous polyps requires regular surveillance, not screening.

The risk factor of a family history of adenoma is frequently overlooked. More attention needs to be given to this risk factor. A family history of an adenomatous polyp in a first degree relative under age 60 should lead to screening starting at age 40 or earlier. (See the chart “Common Sense Recommendations at a Glance” in Appendix A.) A family history of a polyp of unknown type should be managed as if it were an adenoma. Another factor of personal history that can raise the risk level is a personal history of chronic inflammatory bowel disease (ulcerative colitis or Crohn’s disease). Risk is regarded as increased when there is a personal history of these diseases for more than eight years.

Individuals at increased risk should begin screening earlier (age 40 or younger), be screened more frequently, and use the most sensitive screening modality available. At this time, colonoscopy is both the most sensitive and the most specific screening modality available. It is worth remembering that only the absence of risk factors confers a state of average risk. New evidence regarding the most common location for adenomatous polyps has raised questions about an imperative for colonoscopy in populations that have a tendency to exhibit polyps in the proximal colon. (See references #171 to 173.)

**www.genetichealth.com/**
HIGH-RISK
High-risk patients are those with hereditary colorectal cancer syndromes. These individuals need specialty attention, and they need it early in life. CRC can be prevented in most cases with proper syndrome recognition. The three hereditary syndromes are hereditary nonpolyposis colorectal cancer (HNPCC), familial adenomatous polyposis (FAP), and attenuated FAP (AFAP).†

Hereditary colorectal cancer syndromes are under-diagnosed. Identifying individuals at risk for these syndromes is important because their cancer risk far exceeds that of the general population. Identification of those at high risk can be challenging. A family history of an adenomatous polyp or a colorectal cancer in a relative under age 50 may be an indication of a high-risk hereditary syndrome. So might be a history of two relatives with CRC. Early identification of these syndromes is essential so that surveillance may begin in the early 20s, or even in childhood.

Patients with HNPCC have an 80% lifetime risk for developing CRC. Colonoscopy is recommended to begin between the ages of 20 and 25 with an interval of one to two years. Patients with FAP often present in childhood with hundreds to thousands of colonic adenomatous polyps. The risk for CRC in these patients is nearly 100% if the colon is not removed. Gastric, duodenal, and small bowel polyps also occur, but the risk of cancer in these areas is lower than that in the colon. Annual surveillance is recommended for patients at-risk for FAP, beginning at age 10 to 12 years.

Another form of FAP, called Attenuated FAP (AFAP), is a milder version of the disease. The number of cumulative colon adenomas most often varies between 10 and 100, and the onset of polyps and cancer is later than in FAP. Annual colonoscopy is recommended for patients at-risk for AFAP, beginning in the late teens to early 20s.85

A personal or family history suggestive of one of these syndromes can be evaluated further by genetic testing. The results of this testing can serve to guide management of both patients and their family members. If a disease-causing mutation is identified in a family, mutation-positive individuals can be offered intensive cancer surveillance or prophylactic surgery. Alternatively, those individuals who do not carry the disease-causing mutation are not at increased risk for cancer and can follow general population screening guidelines.

If you suspect a hereditary colorectal cancer syndrome, you may choose to refer your patient to a center that specializes in cancer genetics. You can locate a cancer genetic counselor in your local area by visiting www.nsgc.org. The most common hereditary colorectal cancer syndromes are HNPCC, FAP, and AFAP. Hallmarks of these syndromes include a personal or family history of:

- CRC or adenomas diagnosed prior to age 50
- Endometrial cancer diagnosed prior to age 50
- Two or more HNPCC-related tumors in a family or in an individual†
- Multiple colorectal adenomas (usually 10 or more) diagnosed over one or more exams.

† HNPCC-related tumors include colorectal, endometrial, stomach, ovarian, pancreas, ureter and renal pelvis, biliary tract, brain (most often glioblastoma), small bowel, pancreatic, sebaceous gland adenomas and keratoacanthomas (Umar).
RISK AWARENESS

A patient’s awareness of their personal risk level is very important. Establishing this awareness is paramount. Since family history is so relevant, awareness of the health status of family members is needed and should be encouraged. The first-degree family members of patients who are discovered to be at increased risk are faced with the reality of a change in their risk status. It is advisable to give impetus to a chain of communication so that related family members will learn that their risk level has been altered.

The clinician or staff should instruct the patient to notify their first-degree relatives, and this instruction should be documented in the chart. A model letter can be provided to the patient by the practice to facilitate the notification process.

Standardized questions that assist in that determination are found below. When risk level is assessed, the patient should be informed, and notation should be made in the chart. A standard mechanism for determining risk level and making the patient aware of it should be part of the office policy and operating procedure.

Questions to Determine Risk

- Have you or any members of your family had colorectal cancer?
- Have you or any members of your family had an adenomatous polyp?
- Has any member of your family had a CRC or adenomatous polyp when they were under the age of 50? (If yes, consider a hereditary syndrome.)
- Do you have a history of Crohn’s disease or ulcerative colitis (more than eight years)?
- Do you or any members of your family have a history of cancer of the endometrium, small bowel, ureter, or renal pelvis? (If yes, consider hereditary non-polyposis colorectal cancer (HNPCC). Check the criteria.)
**ESSENTIAL #2: An Office Policy**

**UTILIZE AN ALGORITHM**

A policy that incorporates the considerations of risk level, insurance coverage, local medical resources, and patient preference will lead to the best screening choice for each patient. An algorithm that incorporates these considerations will be the easiest way to conceptualize and remember the office policy. It may also be the easiest way to communicate the policy to the office staff who will help implement the policy. Refer to the sample algorithm that accompanies this description.

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### Sample Screening Algorithm

**Assess Risk: Person & Family**

- **Average Risk** = no family hx of CRC or adenomatous polyp
- **Increased or High Risk** = + family or personal hx of CRC or adenomatous polyp, IBD or HNPCC related cancer

**Personal History**

- < 50 yrs
- ≥ 50 yrs

**Screening Options**

- FOBT at home qyr
- Flex sig q5yr
- FOBT + flex sig
- DCBE q5-10 yrs
- Colonoscopy q10 yrs

**Family History**

- Germline Syndrome
- Adenoma or Cancer

**If +**

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* * Options
  - FOBT at home qyr
  - Flex sig q5yr
  - FOBT + flex sig
  - DCBE q5-10 yrs
  - Colonoscopy q10 yrs

**IBD** refers to inflammatory bowel disease for eight years

Source: Adapted from Winawer SJ, et.al., 2003.
The algorithm shown includes all the recommended options for the average-risk patient and could be a starter policy for your practice. Average-risk patients will generally have at least two options available. In many locations, they will have all options available. Because there are multiple options for the average-risk individual, provider and patient preferences will interact to produce the chosen modality, unless the office policy limits the recommendations for specific reasons. Patients at increased risk should generally be given a single recommendation only, for colonoscopy.

**Identify Local Medical Resources**

Local medical resources will determine what options are available to the patients in your community. Every physician should be aware of the medical resources in their community. A suburban area with a physician surplus will call for a different policy than a rural area or inner city area with a shortage of health personnel. Recommendations lacking realism will guarantee failure.

An fecal occult blood test (FOBT) performed at home requires no facilities and no personnel beyond the patient and staff of the office practice. FOBT cards can be dispensed in the office and returned by mail. The choice of screening by endoscopy, either colonoscopy (CS) or flexible sigmoidoscopy (FS), requires specialized training, facilities, and equipment.

Of course, a positive screen requires a complete diagnostic exam by colonoscopy. A recent analysis of the national capacity for screening conducted by the CDC concluded that there is sufficient capacity to screen the entire eligible population within one year, using FOBT, backed up by colonoscopy for complete diagnostic examination for those who screen positive.
LOCAL CAPACITY FOR COLONOSCOPY AND FLEXIBLE SIGMOIDOSCOPY

Access to colonoscopy (CS) varies by region of the country. The capacity for CS will depend on the supply of physicians and nurses, the number of facilities, insurance coverage, regulatory requirements, and other factors. The distribution of gastroenterology (GE) practices, the facilities where they do procedures (free-standing vs. hospital-based), and the capacities of both, are variable. A surplus of practices and facilities characterizes some regions; shortage is typical of others.

Hospital-based CS is typically more costly than CS performed in outpatient settings like endoscopy suites or ambulatory surgery centers. With an ample supply of endoscopists and low-cost endoscopy suites, CSs are done efficiently at limited cost and high volume. With a shortage of endoscopists and low-cost facilities, the wait for CS may be long, the inconvenience large, and the cost high.

CS is not the only procedure with variable access. Access to flexible sigmoidoscopy (FS) also varies. FS is performed by primary care physicians, gastroenterologists (GEs), general surgeons, and, in some settings, by nurse-endoscopists, nurse practitioners, and physicians’ assistants. FS is done easily in the procedure room of a typical practice with no assistance from an anesthesiologist. Yet, paradoxically, it is more difficult to get a FS than a CS in many localities. Due to a marked drop in reimbursement rates for FS, the incentive to provide this procedure has dropped, and it is offered less frequently in fewer locations. To complicate matters, patients referred to a GE for a flexible sigmoidoscopy may be advised by the GE to have a colonoscopy because it is the most sensitive procedure. The conflicting recommendations cause confusion and precipitate lack of confidence.

A double-contrast barium enema (DCBE) is another accepted screening test for CRC. In the past few years, the number of DCBE examinations done for screening has dropped so much that high-quality screening DCBE may now be hard to access in many communities. The crafting of each office policy must be based on a realistic assessment of the quality and ease of access of the options available in the community.
Assess Insurance Coverage

Health insurance coverage for CRC screening is not uniform across all plans, nor are the options affirmed by the guidelines covered by all plans. Even when all the recommended options are covered, deductibles and co-pays are typical. The deductibles in particular are large enough to be prohibitive for some patients.

As of 2006, only 19 states plus the District of Columbia required insurance coverage for all CRC screening options. The majority of states still have no laws that mandate coverage. Furthermore, some health insurance plans called “self-insured” or “self-funded” plans are regulated only by the federal government, not state governments. Thus, even when states have passed these laws, there are many individuals who will not be covered by these consumer protections. Physicians should be aware of the legal milieu for health insurance in their states and the impact on their patients. Doctors who practice in states without mandates on health insurers will have insured patients who are forced to pay out-of-pocket the entire cost for some procedures or will have patients who do not benefit from the state law.

Every physician knows these factors can be a serious impediment to a patient’s care. Insurance coverage has been demonstrated to be a predictor of compliance with cancer screening guidelines. The largest source of coverage for seniors, the Medicare program, began reimbursing for colonoscopy performed as a screening procedure in 2001. Before 2001, only diagnostic colonoscopy was covered by Medicare; screening colonoscopy was not. Today, all options are covered. Some providers may remain unaware of this change in Medicare policy.

While Medicare policy improved, reimbursement obstacles confront Medicaid patients. Low-income patients on Medicaid are limited in their options because colonoscopy requires specialty care that is hard to access or unavailable for Medicaid patients in many areas. Endoscopy suites may be unavailable with Medicaid coverage. Fortunately, FOBT cards can be accessed by many patients in many locations including pharmacies, at a limited and reasonable price.

| States with Legislation on Screening for Colorectal and Other Cancers, 2004* |
|---------------------------------|---------|---------|---------|
| Type of Cancer                  | Require Coverage | Must Offer Coverage | Not a Requirement |
| Colorectal                      | 19       | 3       | 28      |
| Breast                          | 47       | 3       | 1       |
| Prostate                        | 26       | 1       | 24      |
| Cervical                        | 23       | 1       | 27      |

* Nineteen states plus the District of Columbia have laws requiring coverage for CRC screening: Connecticut, Georgia, Illinois, Indiana, Maryland, Missouri, Nevada, New Jersey, North Carolina, Rhode Island, Virginia, California, Delaware, Texas, West Virginia, Oregon, Louisiana, Arkansas and Alaska. Oklahoma, Tennessee, and Alabama recommend that insurers offer coverage, but don’t require it.
Patients with no insurance coverage are also limited in their options. While FOBT testing should be available at a modest price, the other more expensive options – the flexible sigmoidoscopy, the colonoscopy, and the barium enema – must also be paid out of pocket. While some individuals will be able to afford this testing, most probably will not. Some areas have public programs that are making CRC screening available through widespread distribution of FOBTs and attendant diagnostic work-up where indicated. Opportunities for such free testing, or testing at nominal cost, are generally announced by the local health department. Some states, such as New York and Maryland, have very strong screening programs in place. Other states have started pilot programs some with help from CDC funding.

Consider Patient Preference

“All of us need to embrace and celebrate every successful screen ... The best screen is the one you do.”
– Sidney Winawer, MD

The written policy should spell out how the patient will be involved in the decision-making process. It should allow for patient preference within the confines of the realistic options for your locale and the realities of insurance coverage. The simplicity, convenience, privacy, and low cost of a home stool test for occult blood (FOBT) is preferred by some patients, even though it needs to be done annually to reap the benefits. The less frequent, five-year interval and direct visualization offered by a flexible sigmoidoscopy (FS) is more appealing to some, but may be difficult to obtain in some regions of the country. Alternatively, the infrequent ten-year interval, and maximal sensitivity and specificity of a screening colonoscopy (CS), has the most appeal to others, but may be difficult to schedule or less available in some areas of the country; it also requires a day off from work. The combination of FOBT and FS has a higher sensitivity than either test alone and is easily available in some locales. Another accepted screening option is a double-contrast barium enema every five years, though it is offered infrequently in most settings.

After the pros and cons are presented, a process of shared decision-making involving clinician and patient should revolve around provider advice, local medical resources, and patient health insurance coverage. The provider’s guidance on the best choice for each patient should be offered after ascertaining the patient’s preferences and/or constraints. The best option is the one that will be completed in each setting for each patient.
ESSENTIAL #2: An Office Policy

Sample FOBT Policy in Flow Chart Form

Give FOBT kit to patient.
Have patient self-address a reminder letter or fold-over postcard.
File the postcard in a tickler box, sorted by month.
Put patient’s name in FOBT follow-up log (sample in Appendix E).

Patient returns FOBT kit in one month

No

Send patient the self-addressed reminder letter or postcard.
Record that the postcard was sent.

Yes

Place patient’s letter or postcard in next year’s tickler box.

Patient returns FOBT kit within a month.

No

Direct Contact

Yes

Record test result in patient chart.
Notify patient of test result.

Negative

Repeat in one year or offer FS or CS.

Positive

Schedule appointment for CS.

Patient Complies.

No

Action

Yes

Colonoscopy

ESSENTIAL #2: An Office Policy

Attend to Office Implementation
To actualize an office policy, you must commit to delivering it and engage your staff in the endeavor. Once the policy has been defined, it needs to be depicted, presented, and posted. The office staff must be formally introduced to the policy and have an opportunity to ask questions about its implementation. The presentation of the policy is central to its implementation.

Every practice should have its own screening policy. Though five effective screening options are recommended, the capacity to deliver each varies with the local environment for practice, individual coverage, and state insurance regulations. Given the limitations in personnel and facilities that exist in some communities, you may recommend a scaled-down menu of options or only a single option. FOBT may be the only realistic option, or FOBT and colonoscopy may be the only options available. Your practice policy does not need to include the entire menu of options. Even policies that do incorporate all options are often presented with a bias toward a particular option.

Whatever the policy, it must be disseminated within the office. The policy on screening should be conveyed in a manner that makes it clear to staff members, old and new. Clarity alone, however, is only half the battle. Staff must know how to implement the policy. Some of the best tools for this purpose are the algorithm and accompanying procedures. An algorithm is one of the sharpest ways to delineate, visualize, and communicate a policy. Step-by-step procedures inform the staff, facilitating its implementation. An algorithm and step-by-step procedures will codify expectations for the provider and office staff. These belong in the manual that holds the policies and procedures for the practice.

Easily accessible reminders can be posted on bulletin boards. They provide a reference point to be revisited when shortcuts threaten to derail the original intentions. Refer to the sample FOBT policy in the form of a flow chart or algorithm. This could be posted in your practice.

A sample script can also be helpful to staff.

Sample Script

“I would like you to be screened for CRC. You have two choices:”

1) You may choose the easy, take-home method called a fecal occult blood test or FOBT. With an FOBT, it is better to also do a flexible sigmoidoscopy, and if any problem is found, you might need to have a colonoscopy.

2) You may go directly to colonoscopy. You should always have colonoscopy if you are likely to have an abnormality.”
Essential #3: An Office Reminder System

A. Options For Patients:
   Education and Cues to Action

B. Options For Physicians:
   • Chart Prompts
   • Audits and Feedback
   • Ticklers and Logs
   • Staff Assignments
Essential #3: An Office Reminder System

Office practice will be more effective with the use of reminder systems that have been demonstrated to be effective. Unfortunately, fewer practices have reminder systems than one might assume. Reminder systems can be directed at providers or patients or both. Both provider-directed and patient-directed reminder systems have been studied extensively to assess their impact on breast cancer screening rates. All reminder systems and all other systematic strategies directed at providers have demonstrated beneficial effect. Many strategies directed at patients were also demonstrated to be beneficial. The conclusions of this research are highly relevant. The Tools section of the Appendix has examples of physician reminders in the form of preventive services schedules, and patient reminders in the form of letters, postcards, and telephone scripts.

A. Options for Patients: Education and Cues to Action

Patient education strategies and patient reminder systems have been studied for their effect in stimulating mammography screening. Meta-analyses have summarized findings from large numbers of studies. Mandelblatt and Yarbroff (1999) tallied controlled experimental studies to assess their impact on screening rates. Different strategies produced different results. These results are instructive and may predict the outcome of similar strategies applied to CRC screening.

While education interventions were numerous in the literature, they tallied only those with evidence from studies with controlled experimental designs. The interventions divided into two different types: one type utilized generic education while the other utilized theory-based education approaches. (See reference #89.) In other words, they utilized general information about the risks of breast cancer and the benefits of screening, or they were based on a specific communication model or theory. The results of the two approaches, generic versus theory-based, were not the same. Theory-based education was superior (see page 41 for more explanation). Evidence of this can be found on the chart on page 34. The results of the interventions also varied depending on whether the education was a passive process, involving only paper communication like letters, pamphlets, etc. or whether it was an active process that involved conversation with another person, over the phone or in person. Active was clearly more effective.

Reminder systems, also called “cues to action” were another type of intervention that the authors explored through meta-analysis. The reminders, or cues, focus on action, not information. They are intended not to educate but rather to instigate action. These were also delivered in two forms, passively in the form of postcards, prescriptions, etc., and actively in the form of phone calls or messages communicated in person.

§§§§ Active controls receive an alternate and often simpler intervention. Passive controls receive usual care only. Examples of theory-based models of education include the Health Belief Model, Social Cognitive Theory, and Stages of Intention.
Not surprisingly, the authors found that interventions of different types with different characteristics produced different results. Clear patterns were evident. Theory-based education was superior to generic education. Actively delivered education based on a communication theory was more effective than passively delivered education based on a theory. Multiple cues were more effective than single cues.

The extent of the effect that these interventions produced was greater or lesser depending on whether they were studied by comparison to usual care controls or by comparison to active controls. Where control subjects were active and received another intervention, the size of the effect of the intervention was generally less. Where control subjects were given usual care, the intervention generally showed larger effect.

Effect sizes appear in the accompanying chart. The result of the meta-analysis that assesses the approaches described above and listed in the accompanying chart provides clear direction to clinicians who are seeking to have significant positive impact on their patients and practices. (Note that the Appendix E of this guide offers model reminder letters and postcards that may be utilized to communicate with your patients.)

### What Strategies Directed at Patients Can Achieve

<table>
<thead>
<tr>
<th>Office Strategies</th>
<th>Screening Rate Improvement</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient education based on a communication theory (i.e. health belief model, stages of change model).</td>
<td>24%</td>
<td>Compared to usual care control group.</td>
</tr>
<tr>
<td>Cues or office stimuli, like prescriptions, telephone reminders, and letters from clinicians.</td>
<td>13%⁹⁻¹⁻¹⁷.⁶%⁹⁹.</td>
<td></td>
</tr>
<tr>
<td>Patient education based on a theory and delivered actively, by telephone or in-person.</td>
<td>8%</td>
<td>Two options work better than one.</td>
</tr>
<tr>
<td>Patient education based on a communication theory but not delivered actively.</td>
<td>.4%</td>
<td>Compared to active controls.****</td>
</tr>
<tr>
<td>Generic education not based on a communication theory.</td>
<td>0%</td>
<td>Compared to active controls.</td>
</tr>
</tbody>
</table>

Source: Yabroff KR, Mandelblatt JS (1999) (See reference #89) and Legler J, Meissner HI, Coyne C, et. al. (2002) (See reference #90)

**** Active controls receive an alternate and often simpler intervention. Passive controls receive usual care only.
**B. Options for Physicians**

| Strategies                                                                 | Screening Rate Improvement%
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Use of “behavioral” innovations like reminders or office system prompts.</td>
<td>13.2%</td>
</tr>
<tr>
<td>Use of “cognitive” approaches to produce feedback to physicians, such as audits, or providing focused education after assessing knowledge.</td>
<td>18.6%</td>
</tr>
<tr>
<td>Use of “sociologic” strategies to better use nurses or change staff roles.</td>
<td>13.1%</td>
</tr>
<tr>
<td>Use of a combination of both cognitive and behavioral approaches</td>
<td>21</td>
</tr>
</tbody>
</table>


All provider-focused intervention strategies have been documented to be effective in raising screening rates. Intervention strategies of several types have been studied and are listed in the accompanying chart. There were interventions of behavioral, cognitive, and sociologic types. All types of interventions were effective. All types of interventions produced improvements in screening rates. However, the narrower and better focused the efforts, the higher the degree of impact. Interestingly, interventions focused on both patients and providers were not more effective than interventions that focused on providers alone. In addition, when combined efforts were used at the community level rather than the practice level, the improvement was minimally successful – only 1%.

The evidence is strong that the results of efforts to improve screening rates by focusing efforts on physicians will be worth the effort. Strategies that target the provider all have an excellent chance of succeeding. Decisions on approach should depend on resources, feasibility, and cost. This section will present tools to facilitate implementation of these options.

***** All effect sizes are as compared to usual care controls.
Chart Prompts

Problem lists, screening schedules, integrated summaries, and electronic reminders serve as visual reminders or “cues to action.” All clinicians can have their office charts prepared with these elements. Interventions that feature these cues to action have been studied and are found to be effective.

- It is helpful to have a problem list on each chart that includes “preventive services” or an equivalent phrase as a separate item. Patients who are at increased risk for colorectal cancer should have this fact listed as an item on the problem list.96,97,98

- Age-appropriate screening schedules should be easy to find on the chart. These are available from professional, governmental, and insurance-based organizations. They can be downloaded electronically. Several are in Appendix E of this guide.

- Some clinicians tout the usefulness of an integrated summary on the front of the chart to provide a complete overview for each patient that includes cancer screening and preventive services. An integrated summary is available online in a version that can be downloaded.99

- Electronic medical records can provide integrated summaries and automatic reminders.

Office staff can pull charts ahead of patient visits to identify patients who should be screened. Where screening is indicated or overdue, or the patient is at increased risk, they can use a paper reminder or sticker to flag attention. This adds to efficiency and effectiveness for the provider and has been shown in many studies to improve screening rates.100,101

The same procedures can ensure follow-through for patients who require a complete diagnostic exam with colonoscopy because of a positive screen. Identify the charts of patients who haven’t followed through and flag them for action. While chart review in advance of patient visits can increase effectiveness, regular chart audits are a part of quality assurance. Charts that lack documentation of a recommendation for screening, the results of screening, or a complete diagnostic exam (where screening was positive) can be held aside for follow-up. The chart review process should generate reminders that can be pursued immediately.

Clearly, it is also important to increase the knowledge base of the clinicians and staff. All staff should understand the importance of screening and be comfortable with the expected office routine and procedures. However, in the final analysis, there is no substitute for a visual prompt – a paper reminder – in the front of the chart to focus provider attention at the right moment.102
ELECTRONIC REMINDER SYSTEMS

Information technology systems that are best suited to office practice are still in a period of rapid development. Electronic medical records (EMRs) offer a faster automated version of reminder and follow-up systems and are in active use by clinicians where they are available. Currently, the uptake of EMRs varies greatly around the country – by specialty, region, and practice size. Many office-based practitioners utilize electronic billing and scheduling systems; fewer have electronic medical records (EMR). In the short run, there are electronic tools available for practices that do not yet have full scale EMRs. One is described in the next section.

Full scale EMRs will be more and more prevalent over the next decade. The federal government, Medicare quality organizations, and major professional societies have embarked on programs to help practitioners develop electronic record keeping and management systems. The Veterans Health Administration is making available at low cost its medical record system that is being updated for ambulatory care. It is called the Vista-Office Electronic Health Record (VOE) project. VOE is targeted for use in clinics and small physicians offices. The Center for Health Information Technology (CHIT), established by the American Academy of Family Physicians, is currently working with 10 major technology companies to promote and facilitate the use of health information technology by family physicians. In the years to come, there should be more EMR systems that meet the needs of primary care practice and facilitate preventive screening. Their efforts must conform to four principles: affordability, compatibility with prior and other newer systems, interoperability so that data can be shared between systems, and data stewardship to guarantee privacy and proper use of data. Due to the efforts of the CHIT partnership, the price of such systems should be reduced by 15 to 50%.

Ratings of existing EMRs that can help guide physicians who are looking for the best version for their practice have appeared in the literature.

A listing of EMR features is available in the journal Family Practice Management. There are also two evaluations of EMRs, one available for free online, the other proprietary. The AC Group report established a rating system that included the Institute of Medicine’s requirements for a computerized patient record; it is available online. The KLAS report is a proprietary compilation of data gathered from websites, healthcare industry reports, interviews with healthcare provider executives and managers, and vendor and consultant organizations. The existence of reminder system for preventive services should be a criterion for choosing the EMR. Pre-existing EMR systems may have upgrades available to add preventive services and reminders.

§§§§§ 2004 EMR Survey is a white paper done by the AC Group. www.acgroup.org/pages/396843/index.htm. This is the third annual report on electronic medical records and electronic health record applications.
ESSENTIAL #3: An Office Reminder System

ELECTRONIC TRACKING FOR PREVENTIVE SERVICES

There is also easy-to-install, user-friendly software available at a low cost that can be utilized to track preventive screening services. The Patient Electronic Care System (PECSYS) makes it easy to store and retrieve information and to produce lists of age-eligible patients or patients with specific conditions and patients who have had – or have not had – specific screening tests. The system incorporates automatic reminders. This software is relatively inexpensive. It was developed in conjunction with the community health center program under contract to the Bureau of Primary Care Services in the Health Resources Services Administration of the federal Health and Human Service Department. It may also be used to improve the ease and quality of medical practice. It is especially useful for chronic disease management. It does not currently provide either billing or scheduling capabilities, however.

PECSYS is an improved version of a system that has been in use for several years. It prints out a unique, age-appropriate encounter form for each patient. The encounter can be attached to the chart as the patient comes in. This encounter contains specific information about the patient from prior visits, including summary graphs of key data. It includes reminders in red ink for those preventive tests that are missing. Depending on age, gender, and what diagnoses or conditions have been previously entered for that patient, the appropriate reminders, diagnostic tests, and patient education needs will appear automatically, based on established pre-programmed treatment guidelines. See the sample encounter sheet on the next page.

The patient-specific encounter form already has on it data from prior visits including vital signs, diagnoses, medications, lab tests, diagnostic studies, preventive services, immunizations, and referrals for consults and education. It automatically incorporates the last results on one page, so it presents a quick, comprehensive overview. The encounter sheet becomes a flow sheet of high-priority information that would otherwise be time consuming to dig out of the chart. If the office staff prints an encounter for each scheduled patient, this information is available before the encounter begins. For example, the encounter sheet for a man age 50 who has not had CRC screening and who carries the diagnosis of diabetes will have CRC screening appear in red on his encounter sheet. Diabetes-specific lab results like HgbA1c and microalbuminuria will appear on the encounter form in red if they are missing, or they’ll appear with the results of the last several tests.

Physicians may type data directly into the system during the patient encounter or write on the encounter form in a space provided for that purpose. The encounter sheet with the physician’s current progress note is placed in the chart like any other chart note. While data entries on each patient are necessary to start this system off, data can be entered over a period of time as patients come in – or it can be entered for all charts at once.

†††††† www.pecsys.org.
Once the initial patient data are entered, data entry is limited to new findings, labs, diagnostic tests, and consults as they are completed or as results come in. The time necessary to enter these into the electronic system is little more than the time that would be needed to place them in the chart. Each new patient visit may then be accompanied by a print-out of a fresh encounter form that includes the most recent data. A second page can also be printed out automatically with its graphs of the patient’s blood pressure measurements, weight, or key lab values as measured over time.

The PECSYS system can operate on a personal computer or a laptop and in a network. It installs a modified version of Sequel for data storage. While the PECSYS software does not currently interface with scheduling or billing, there are new modules under development that should provide this capability.
Encounter Form from the PECSYS Patient Electronic Care System
ADVANCE PREPARATION WITH THEORY-BASED QUERIES

With or without electronic reminders, considerable time can be saved if office staff anticipate visits by reviewing the charts before the patient arrives or by querying the patients before the clinician encounter. A brief questionnaire can be provided by the front desk staff, or questions may be added to the office’s current list of questions asked by the nurse or medical assistant in the exam room. The questions should determine the patient’s risk level and prior screening history.

This information provides an excellent opportunity to define the CRC decision stage of that patient, as described below, so that a theory-based education effort can ensue. As described under the section on patient reminders, theory-based education has been convincingly shown to be effective, whereas generic education has not. This type of approach has been specifically investigated for relevance to CRC screening. This will be explained further under “Essential #4: An Effective Communication System.”

Decision stages:

- Never heard of CRC screening
- Heard of but not considering CRC screening
- Heard of and considering CRC screening
- Decided against CRC screening
- Heard of and decided to do CRC screening.

Once a patient’s decision stage is defined, a patient can be encouraged to make a transition from one stage to the next with a focused pitch. The stage of decision guides the clinician or staff to make the best use of face time with the patient by speaking directly to the central issues of that stage.

The patient who has “never heard of” colorectal cancer screening needs information about the risk of CRC, the available screening methods, and what screening will accomplish. The patient who has “decided against” screening can be approached with an inquiry about the reasons for the decision. These might then be addressed. The patient who is “not considering” it also needs probing so that their lack of inclination to get screened can be understood. The patient who is “considering” screening needs to be questioned for perceived barriers and provided help on following through. The patient who has already “decided to do” screening may need only logistic instruction and/or assistance.
ESSENTIAL #3: An Office Reminder System

Audits and Feedback
Evidence from meta-analysis indicates that a practice can achieve an 18.6% improvement in screening rates by using cognitive approaches, such as doing audits that produce feedback for providers. The simplest chart audit involves pulling a certain number of charts of the target population and reviewing each chart to document whether certain elements are found on the chart. Chart audits can produce feedback for a specific clinician or an entire practice. However, there is evidence that feedback is more effective if it is specific. After the requisite number of charts have been reviewed, the results in each category are tallied.

There is a sample chart audit templates in the tools section in Appendix E.

While chart reviews are time consuming, collecting this information is not complicated and is essential for maintaining the quality of practice. When feedback is provided, it is helpful to cite national or local benchmarks for preventive services. This helps the providers understand the practice’s results in the context of national trends and goals. Such information is available online from the National Committee for Quality Assurance (NCQA).

Goals and measures with which to track them have been set by national collaboratives of primary care clinics. The Bureau of Primary Care in the federal Health Resources Services Administration has worked with selected clinic practices to create registries of patients who can be tracked for cancer screening and chronic disease management. The registries facilitate tracking and documentation of practice improvements. The chart that follows lists some of the measures these practices have used for CRC screening.

The time interval for repeat audits depends on the size of the practice, the patient population, the staffing level, and the reminder system that has been created. A baseline audit, a follow-up audit, and an additional audit after a year has gone by will provide insight about the effectiveness and endurance of change(s) in the practice. The baseline and follow-up will measure whether there have been changes. Audits will now generate Continuing Medical Education (CME) credit toward the Physician’s Recognition Award as part of an American Medical Association (AMA) initiative to provide credits for performance improvement activities. The American Academy of Family Physicians has established a new practice performance program called “Metric.” It offers CME credit for completing practice-based performance measurement projects. Each Metric module will be reviewed for 20 CME credits and may be found at www.aafp.org. The modules will include Web-based data abstraction tools, feedback reports, access to guidelines, and individualized action plans with alternative interventions that may be chosen by the physician. The American Board of Internal Medicine has similar modules that are part of the recertification process.

A chart audit will pull information from each chart: age, gender, race/ethnicity, and risk status of each patient. It is most useful if it records multiple dates, including when the test or procedure (FOBT, colonoscopy [(CS)], flexible sigmoidoscopy [(FS)], DCBE) was recommended, when the FOBT or referral for procedure was issued, when the results returned, and when the patient was notified. Finally, it may include findings about whether hyperplastic polyps, adenomatous polyps, CRC, or other diagnoses were found. Each category of data is tallied, and results are computed over the appropriate denominator. Physicians who wish to determine the parameters of their own chart review, will find a sample size calculator online at the Web site of a Medicare quality of care contractor, www.cmri-ca.org. This automatically calculates appropriate sample sizes for quality improvement projects.
## Measures Used by Collaboratives for Colorectal Cancer

<table>
<thead>
<tr>
<th>Sample Measures</th>
<th>Definition</th>
<th>Data Gathering Plan</th>
<th>Goal</th>
<th>Notes/Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Percent of adults age ≥ 50 who have been screened for colon cancer.</td>
<td>1. Number of adults age ≥ 50 who have been screened with at least one of the following: – FOBT w/in 1 yr – FS w/in 5 yrs – CS w/in 10 yrs divided by the total number of adults ≥ 50. Multiply by 100 to get the percentage.</td>
<td>1. On (date) the registered patient database will be searched for all adults ≥ 50 who have been screened with at least one of the following: – FOBT w/in 1 yr – FS w/in 5 yrs – CS w/in 10 yrs At the same time, count the total number of adults ≥ 50 yrs in the registry or practice.</td>
<td>&gt; 75%</td>
<td></td>
</tr>
<tr>
<td>2. Percent of patients with documented notification of colon cancer screening results on their chart within 30 days.</td>
<td>2. The # of adults age ≥ 50 having documented notification of colon cancer screening results on chart within 30 days of test, divided by the total number of adults ≥ 50 having documented colon cancer screening within the last 12 months. Multiply by 100 to get percentage.</td>
<td>2. On (date), the registered patient database will be searched for all adults ≥ 50 having colon cancer screening results on chart.</td>
<td>&gt; 90%</td>
<td></td>
</tr>
<tr>
<td>3. Percent of patients requiring complete diagnostic evaluation (CDE) completing that evaluation within 60 days the appropriate time frame.</td>
<td>3. The number of adults ≥ 50 with + FOBT/ or a polyp on FS having complete diagnostic evaluation (CDE) documented within 60 days, divided by the total number of adults ≥ 50 with + FOBT/ or a polyp on FS. Multiply by 100 to get percentage.</td>
<td>3. On (date), the registry is searched for the number of adults age ≥ 50 with + FOBT having CDE within 60 days. At the same time, count the # of adults who had a + FOBT OR on (date) search for the # of adults ≥ 50 with a polyp who had CDE within 60 days of identification.</td>
<td>&gt; 95%</td>
<td></td>
</tr>
<tr>
<td>4. Percent of adults age ≥ 50 with adenomatous polyp or CRC having their initial treatment documented within 90 days of lab confirmation of the diagnosis.</td>
<td>4. The # of adults ≥ 50 with adenomatous polyp or CRC having initial treatment documented within 90 days of lab confirmation of the diagnosis, divided by the total number of adults ≥ 50 with adenomatous polyp or CRC. Multiply by 100.</td>
<td>4. On (date) search for the # of adults ≥ 50 with adenomatous polyp or CRC who have their initial treatment documented within 90 days of lab confirmation of the diagnosis. At the same time, count the number of adults ≥ 50 with adenomatous polyp or CRC.</td>
<td>&gt; 95%</td>
<td></td>
</tr>
</tbody>
</table>

Ticklers and Logs
Other traditional systems to ensure compliance include tickler systems and logs. A tickler system is created when a copy of a lab slip, referral, etc., is placed in a “tickler file.” The copy is then filed by date of the visit or by patient’s name. When results or specialty reports arrive, the copy is pulled from the tickler file, the patient notified by phone or mail, the results placed on the chart, and a visit scheduled if appropriate. On a specific day each month, all the copies in the tickler file are reviewed, and appropriate action is taken. Patients receive phone calls, fold-over postcards, or letters. Results may be sought from specialty consultants.

Postcard tickler systems are similar. The patient self-addresses a fold-over reminder postcard which is used for the tracking of FOBT tests. This is placed in the tickler file by the date of the office visit. If the FOBT is returned, the fold-over postcard is pulled and the test results sent to the patient and documented in the chart. At the end of the month, the remaining postcards from the preceding two months are pulled from the file. These patients receive their own postcards to remind them to return their FOBTs. A record can be kept of reminder postcards sent for the purpose of additional follow-up.

Another approach to improve patient adherence is to create a log/tracking sheet of all patients who take home an FOBT kit. Such a tracking sheet can be found in Appendix EIII on page 107. Many practices keep logs for strep cultures. An FOBT log is similar but not necessarily identical. The log can be used to record information and contact patients with the results of the tests and additional follow-up as necessary. It can be used for telephone calls or reminder letters for patients whose kits haven’t been returned. This log can also be used to follow up on flexible sigmoidoscopies and colonoscopies. Logs and tracking sheets are found in Appendix E.

Staff Assignments
Reminder systems that are not of the paper or telephone type include changes in the practice routines that involve staff and staff responsibilities (see reference #174.) Changes in staff routines and staff assignments can increase the ordering of preventive care services. Office procedures are built on human routines and systems that incorporate staff in the office. The effectiveness of your practice can be improved by including different staff in the process of cancer screening by using the same office staff but deploying them differently. The assignment of responsibilities and the flow of patients through the staffing pattern of the office will help or hinder the outcome. Changes in responsibility and flow can be made and evaluated.

Staff can help boost screening rates by encouraging screening or even initiating the process. You can empower them to do this. The changes you make will constitute a reminder system. This section presents two different models for making changes – Model A and Model B. Both have been developed by organizations that promote quality improvement and have provided assistance to federal programs. Both are accessible over the Internet. The first model, (on page 45) presented in a flow diagram, is offered by the Institute for Healthcare Improvement. The second is presented in text form by an organization known as Lumetra.
**Model A.** This model has two parts. The first part poses three questions that can be asked in any order. One question is in each of the square boxes in the diagram below. The second part is the “Plan-Do-Study-Act (PDSA)” cycle for testing and implementing change. The PDSA cycle helps you test the change to see if it is an improvement or not. A diagram of the model is depicted below.

Examples of system changes to increase CRC screening rates include:

- Informing patients ahead of time so they are ready to make a decision
- Having staff other than the provider present the options to the patient
- Assessing the patient’s decision stage before the provider encounter (see “Essential #4”)
- Sending brochures or education materials to the patient before the appointment
- Sending a letter that describes the doctor’s recommendation before the visit

Model B. This model is a step-by-step guide to help you establish a reminder system. An organized system is needed in every office to remind patients and providers of the need for CRC screening services. The reminder system can save time and effort, improve health outcomes, and help meet guidelines and regulatory requirements. It can also be the most cost-effective approach. It is important to plan, implement, and follow up on the changes.

1. Plan
   A. Evaluate the current system. (See sample chart audit pages in Appendix E.)
   B. Include office staff as part of the planning team.
   C. Establish shared goals for improving screening rates.
   D. Determine new procedures.
   E. Assign roles and responsibilities to team members.

2. Implement
   A. Implement the new roles and responsibilities.
   B. Meet regularly to identify and solve problems.

3. Follow-Up
   A. Track the changes.

††††††† See reference #118.
These are examples of possible changes to a visit:

1. **While in the waiting room:**
   - The patient may be asked to complete a questionnaire in the waiting room to provide information on risk status, screening history, and attitudes.
   - Place informative and attractive office posters or flyers in the waiting room or exam rooms as an expression of your own policy.
   - Customize the use of educational materials, instructional materials, and reminder tools to suit your practice needs.

2. **At patient check-in:**
   - Have staff ask about preventive care and highlight services that are needed or past due.
   - Use preventive care flow sheets and reminder chart stickers.

3. **During the visit:**
   - Ask patients about family history and previous screening.
   - Let your patients know that getting CRC screening can prevent cancer and save lives.
   - Schedule screening before the patient leaves the office.

4. **At check-out:**
   - Have patients fill out reminder cards. File reminder cards by the month and year of planned notification.

5. **Communication beyond the office:**
   - Contact patients in need of preventive services for the following month.

**Tracking patient compliance assures that the changes achieve what is intended. Here are suggestions for techniques:**

- On periodic basis, pull charts of patients in the “screening completed” file to see if results are on the chart.
- Track patient compliance by phone to verify screening or provide a reminder for those who were given a referral. If screening is already done, mark this on tracking sheet or place a copy of the results in a “screening completed” file.
- Perform ongoing preventive service assessments at the time of the visit and document them.
- Use patient personal health record booklets and encourage all patients to bring their records to every visit.
Essential #4: An Effective Communication System

A. Options for Action

- Stage-based Communication
- Shared Decisions, Informed Decisions, Decision Aids
- Staff Involvement
Essential #4: An Effective Communication System

There are many arguments in favor of effective and skillful communications. Skillful communication routines can save time. In many settings, a clinical encounter is shorter than it has ever been, and the pressure on the encounter is greater than it has ever been. Studies confirm what primary care physicians know well: There is less time to do more. This may not seem like the opportune moment for adding requirements. However, especially now, a communication tool that takes pressure off the clinician while achieving maximum effect will be a valuable asset.

Skillful communications will increase impact. There is substantial evidence that a physician’s recommendation is the most effective strategy for persuading individuals to complete cancer screening. If physicians and their staff wish to realize their full potential to promote screening, they will need to get a recommendation to every eligible patient in the most efficient way possible. Communication tools facilitate this process. Communication tools and systems can convey clear advice to screen without increasing the time pressure on the physician-patient encounter.

In general, effective communication is a cornerstone of good practice. Physicians’ communication skills are related to patient satisfaction. Patient satisfaction affects outcome. Studies and reviews in the literature document the benefit of enhanced communication between doctors and patients for the successful management and outcome of the care process.

An informal rating of the doctor’s “bedside manner” is probably the most common reference to a doctor’s communication skills. However, effective communication not only satisfies a patient’s need for skilled verbal interaction but also builds productive relationships that lead to desired outcomes. One of the outcomes is the completion of preventive services. New research has begun to guide the way to more effective and skillful communication with patients where decision-making is necessary. This research is building on top of evidence accumulated from two decades from research on improving screening rates for breast cancer.
A. Options for Action

Stage-based Communication

Stage-based communication methods may be the easiest strategy to understand and implement. Tools based on this model have been developed specifically for use in colorectal cancer screening and are ready for prime time. Based on the work of Prochaska and DiClemente, stage-based models have been discussed in the medical literature for more than two decades. These methods grew out of efforts to construct a model that would transcend all other communication theories and help patients move through processes of change to achieve desired outcomes.

This approach defines stages of a patient’s thinking to guide the provider with precision to the message that the patient needs to hear. The provider’s time is then used more wisely. There is no need to repeat what the patient already knows, understands, and is familiar with. According to a leading expert in communication, stage theory allows practitioners to treat individuals “as they are – in different stages of readiness to make health behavior changes.” The right information at the right time is the communication that will make a difference.

The stage theories of change include the Transtheoretical Model of Behavior Change, the first of its type, developed by Prochaska and DiClemente (1983), with four stages (precontemplation, contemplation, action, maintenance), the Precaution Adoption Process Model studied by Weinstein, et. al. (1990), with seven stages, and the model shown here with five stages, developed by RE Myers.

When a patient’s stage of readiness is known, the patient can be approached with a sales pitch appropriate to that stage. A patient who has never heard of the issue needs basic information to increase their awareness of colorectal cancer. A patient who has decided to act on screening may only need “how-to” instructions, while a person who is truly undecided about screening will need to be convinced of its value and its acceptability.

There are several models that utilize stages of readiness as a tool to guide information exchange and conversation. The names of the stages may vary in the different models, but the basic idea remains constant, and provides a framework to assist the clinician and staff in addressing the issue that is most relevant to the individual patient. Simple questions can define the stage of readiness of an individual and guide the clinician or staff to use the most relevant information or argument. Spoken and written communications can be based on this efficient framework. The version of stage-based communication presented here recognizes five “decision” stages. These decision stages are visualized in the figure. This model has been tested for effectiveness with colorectal cancer screening.

There are several approaches to determination of stage. One that has been tested is presented here. Consult the “Brief Questionnaire to Identify Decision Stage” on the following page. This simple line of questioning to define a decision stage helps short-circuit lengthy and unnecessary discussion. The provider can respond to the patient’s level of thinking and help with planning, focus on insurance issues, or address other barriers.
A Decision Stage Model for CRC Screening

Stage 1
Never Heard of CRC Screening

Stage 2
Heard of but Not Considering Screening at this Time

Stage 3
Heard of and Considering Screening

Stage 0
Decide Against CRC Screening

Stage 4
Heard of and Decided to Do

†††††††† This version of stage theory was adapted from the work of by RE Myers.
Brief Questionnaire to Identify Decision Stage*

Use this questionnaire when starting a conversation with a patient about screening. It will help you identify the readiness of the patient for screening.

Describe the specific screening test, e.g. stool blood test (FOBT), flexible sigmoidoscopy (FS), or colonoscopy (CS), etc.

1. Have you ever heard of (FOBT, FS, CS)?
   Yes – Go on
   No – Stop (Stage 1)

2. Are you thinking about doing a (FOBT, FS, CS)?
   Yes – Go on
   No – Stop (Stage 2)

3. Which of the following statements best describes your thoughts about doing a (FOBT, FS, CS) in the future?
   a. I have decided against doing a (FOBT, FS, CS). (Stage 0)
   b. I’m thinking about whether or not to do a (FOBT, FS, CS). (Stage 2 or 3)
   c. I have decided to do a (FOBT, FS, CS). (Stage 4)

Responses place the individual in a decision stage related to screening test use:

Stage 0: Decided Against
Stage 1: Never Heard Of
Stage 2: Heard of – Not Considering
Stage 3: Heard of – Considering
Stage 4: Heard of – Decided to Do

*Source: Adapted from RE Myers, 2003.
To reiterate, interactions based on a communication theory are more effective than generic education. In meta-analysis conducted on mammography screening, generic education has not been demonstrated to be an effective approach. Theory-based education strategies produced a 24% increase in screening rates, compared to 0% for generic education strategies.\textsuperscript{55}

In summary, due to the time pressures on contemporary practice, communications must be more efficient than ever before. Studies confirm what primary care physicians know well: There is less time to accomplish a larger number of objectives with each patient visit. Strategies and tools that improve efficiency are needed. Stage-based communications may be the most valuable tool currently available. Stage-based communications are logical, and easy-to-understand and remember. In short, they are efficient and facilitate flow of the right information.\textsuperscript{136}

**Shared Decisions, Informed Decisions, Decision Aids**

While most providers support the idea of shared decision-making, it has been shown that it is all too often neglected. Providers commonly fail to explore patient preferences and simply offer their own recommendations.\textsuperscript{127} Documentation exists that patients do have preferences. In fact, patients express clear preferences for screening options that rest on the value they place on particular test features.\textsuperscript{128,129} Patients who place a high value on accuracy value a colonoscopy, which is the most sensitive and specific test. Patients who place a high value on convenience, privacy, or reassurance from frequent testing benefit from a home FOBT kit. The existence of patient preference dictates that clinicians learn their patients’ preferences and aim for a shared decision about the screening modality. Failure to do so puts the clinician at risk of being ineffective. A decision that is based on a patient’s preference and guided by a physician is a shared decision.

A tool that helps clinician and patient identify patient preferences should be helpful in producing a shared decision. Unfortunately, recommendations for screening are undermined by the mismatch between physicians who haven’t explored patient preferences and patients who get recommendations that don’t fit their preferences. Tools that will help produce the best, most informed decision – the decision to go ahead with screening – are greatly needed.

Decision-making tools that identify patient preference are under development with the support of the National Cancer Institute. Some tools are already showing promise. Studies have demonstrated that these tools help patients who start out undecided to identify their preference.\textsuperscript{130,131,132} Within a few years, validated tools should be available. However, at this moment, few decision-making tools are ready for mass distribution.
Informed decisions are decisions in which patients are aware of their options and understand the risks and benefits. For those patients who are considering screening but would like additional information to help them make an informed decision, there are brochures, pamphlets, and Internet guides. The Internet also offers a great deal of useful information. Useful Web sites include www.healthfinder.gov and www.cancer.org. Communication systems with informational content can be upgraded in efficiency if they are delivered actively, and based on the “stages of intention” theory or another useful theory like the health belief model or social cognitive theory.\(^{133,134,135}\)

Some decision aids are also available online. They may not yet be validated as effective but they do provide information. As described, these help an individual weigh the risks and benefits of different procedures. These can be found on the Internet at www.mayoclinic.com or http://my.webmd.com. An informed patient who has used a decision aid may be in a better position to share in decision-making with their clinician. The American Cancer Society has developed for office use a video decision aid that reviews and demonstrates all screening options. Available in both English and Spanish, this tool can be found at www.cancer.org/colonmd.

**Staff Involvement**

The staff of your practice can contribute directly to expanded screening. The time that a patient spends with non-physician staff is under utilized. This time can be used for a better purpose. Staff can play several different roles.

Standing orders can empower nurses and intake/discharge staff to give patients an FOBT, a referral for endoscopy, or a complete diagnostic work-up after a positive screen based on patient needs, all without a doctor’s immediate order. While in the waiting room, patients can be asked to fill out brief surveys that guide staff to a course of action. Surveys can include questions about risk factors, prior screening, and stage of intention regarding CRC screening. Subsequently, staff members who place patients in the exam room can then give them a “tailored” information sheet, geared to their decision stage and/or risk level and talk about it with them.

The time when the patient is placed in a room and prepared for the clinician encounter may also be useful for clarifying CRC risk level and asking the simple questions that define decision stage about screening. With the risk level and decision stage pinpointed, a targeted discussion with the clinician is facilitated. Non-physician staff can also encourage patients to get the needed screening tests. The discharge staff can provide referrals for flexible sigmoidoscopy (FS) or colonoscopy (CS) testing – or dispense FOBT cards – as part of a chain of responsibility for the screening process.
Incorporating staff into this effort makes it easier to provide screening on an "opportunistic" basis, i.e., whenever patients come in. "Opportunistic" screening differs from screening that is arranged solely at the time of the annual check-up in that it can occur any time the patient visits the practice. Grouping visits for patients who share the same category of increased risk is another approach that is being used to advance practice goals, including referrals for screening. Letters, fold-over postcards, or phone calls may be used to invite those at increased risk for CRC to an individual or group visit – or to invite at-risk family members. In many cases, providers can bill insurers for each attendee for the preventive visit.

When staff are explicitly involved in making practice improvements, it becomes easier to achieve the desired goals. As described above under Office Reminder Systems: Staff Assignments, all staff can be included in regular meetings to examine and improve the process, receive education about the effort, and review the results.
TRACKING THE OFFICE PROGRESS

Progress can be tracked through repeat chart audits. New charts are chosen at random. This will allow for a comparison between subsequent audits and a baseline audit. Many practices choose 20 charts of age-appropriate patients for each clinician. The sample-size calculator mentioned above can also be used to choose an appropriate number. (This is available at the Web site of a Medicare quality of care contractor, www.cmri-ca.org.) Intervals of six months to a year may be appropriate depending on how many patients age 50 and over visit the practice. The results of these audits can be shared with all the members of the staff team and used as the basis for discussion and planning. There are audit templates in Appendix E.

Physicians can also evaluate their systems for providing CRC screening by having regular staff meetings or eliciting patient feedback. Regular staff meetings allow for regular reports from staff on the progress of new procedures. They also give staff the opportunity to rehearse new skills, get continuing education, and explore ways to support one another.

There will be areas of strength and areas of deficiency of the practice. Areas of excellence should receive positive reinforcement and acknowledgement. Input helps develop solutions for deficiencies. An informal questionnaire can also help identify strengths and weaknesses. Please refer to the example.

Patient feedback can be elicited through suggestion boxes, focus groups, customer satisfaction surveys, or calls. Tracking your success with individual patients – or patients at increased risk – is another important quality approach. A tracking template is found in Appendix E.
### Internal Practice Questionnaire

#### Goals
Are we functioning in alignment with our greater purpose? Our vision?

Do we need to reevaluate our goals?

What is working well? Why?

What is not working? Why?

What can be done differently?

Are we providing the services we said we wanted to provide?

Should we reevaluate the services we offer?

#### Materials
How do the cancer prevention materials fit our needs?

Should we modify any of the cancer prevention materials?

#### Documentation
Are we documenting the services we provide?

#### Staff Performance and Satisfaction
How are the staff performing their functions?

Are staff stepping in where needed?

Are staff working together as a team?

Are all staff contributing suggestions?

How do staff members feel about their work?

Do staff members feel supported and heard?

#### Patients
How are our patients responding to the change?

Source: Agency for Healthcare Research and Quality.
Conclusion

- Colorectal cancer is the second leading cause of cancer deaths in the US even though it is largely preventable.

- Physician recommendation is the most powerful influence on individual patient decisions to undergo cancer screening.

- Risk management concerns and new insurance reporting requirements dictate improved cancer screening rates.

- This guide will help you realize the potential for making a difference in colorectal cancer incidence and mortality.

- Office practice routines can be altered to attain a high level of consistency in getting screening recommendations to patients.

- Four elements are essential to improved screening.

- The evidence-based strategies and tools in this guide will help make your practice more effective.
Conclusion

Colorectal cancer (CRC) is the second leading cause of cancer deaths in the US, even though it is largely preventable. If CRC screening were universal – beginning at age 50 for those at average risk and earlier for those at increased risk – with timely removal of adenomas and early cancers, the mortality from CRC could be drastically reduced. Healthcare disparities in colorectal incidence and mortality would also be dramatically reduced.

Physician recommendation is one of the most powerful influences on individual patient decisions to undergo cancer screening. While 98% of primary physicians do recommend CRC screening to their patients, most physicians do not convey a recommendation to every patient who warrants it. Only a systematic approach that is specifically designed to identify and provide a recommendation to every eligible patient who visits the practice for any reason is likely to succeed.

Risk management concerns and new insurance reporting requirements are other strong reasons to pursue improvement in CRC screening rates. Dollar awards now place CRC in the top five malpractice targets nationwide. In 2006, CRC screening rates are being reported to the public under the Health Plan Employer Data and Information Set (HEDIS) reporting requirements of the National Committee on Quality Assurance. Continuing Medical Education (CME) credit is now available for practice improvement activities.

Where there are barriers to improvement in CRC screening, they need to be actively addressed. Outdated knowledge must be updated, and changes in the guidelines must be understood. Inconsistencies in the guidelines are exaggerated and misunderstood. Lack of confidence in the efficacy of screening is unwarranted, and there is little evidence that any of the recommended screening tests are not acceptable to patients.

While lack of health insurance and absence of a regular source of care are real barriers to screening, an fecal occult blood test (FOBT) is affordable to almost everyone. The provider of the FOBT may be harder to come by at low cost. FOBT’s are now available over-the-counter in some pharmacies during screening campaigns. Still, colonoscopy procedures are needed for those who have a positive FOBT and there is little remedy for those who lack access or payment for colonoscopy. Another barrier is confusion about priorities and goals. Colorectal cancers are found in about 1% of screenings, but adenomatous polyps are found in about 20% of all colonoscopies. Removal of the adenoma polyp prevents the development of the cancer.

This guide will help you make a difference in the incidence and mortality from colorectal cancer. The key to success is the screening recommendation. Office practice routines can be altered to create systems that attain a high level of consistency in getting screening recommendations to patients. This guide is intended to assist physicians and their office managers build a practice that has such consistency. While the overwhelming majority of primary care doctors screen for colorectal cancer, few would say that every eligible patient leaves the practice with the needed recommendation. It is not enough to know what needs to be done. It is doing it that makes a difference. The evidence based tools and strategies in this guide can move your practice to a higher level of performance.
There are four elements that are essential to improve the effectiveness of the practice.

1. **A Recommendation.** Doctors should recommend screening to every appropriate patient according to accepted guidelines and their own office policy. This is the single most important element in increasing screening rates.

2. **An Office Policy.** An office policy is necessary to assure that every appropriate patient receives a recommendation. The policy incorporates the considerations of risk level, local medical resources, patient health care insurance coverage, and local standards of care; it also provides ongoing guidance to the members of the practice and the staff about how to proceed. A high level of success in achieving follow-through on complete diagnostic work-ups for those who screen positive is another important objective. This has frequently been a weak point in the system. Without this step, the benefits of screening will not be realized.

3. **A Reminder System.** Reminder systems can be directed at patients, at providers, or at both. Evidence has demonstrated that all types of reminder systems directed at physicians can be effective. Some of those directed at patients are also effective.

4. **An Effective Communication System.** Effective communications are a key link in the chain that produces desired health outcomes. Stage-based models provide simple tools that can be used in practice so that the face time of the doctor is directed to the most pivotal issue. Patient buy-in is key. Many patients do have preferences where there is a reasonable choice to be made. Informed decisions and shared decisions are preferred to simple physician directives. Decision-making tools are under development. Patient education that is based on a theory (i.e. stage theory) is more effective than generic education. Theory-based models make it easier to reproduce an approach over and over again with tools that ensure consistency and thoroughness.

Tracking the improvements made by the practice is the only way to be sure that it has happened. CME credit is now available for such efforts.
Appendix A:

Current Screening Guidelines
## Current Screening Guidelines

- Common Sense Colorectal Cancer Screening Recommendations at a Glance
- Guidelines of the American Cancer Society
- Guidelines of the United States Preventive Services Task Force
- Guidelines for Surveillance after Polypectomy from the US Multi-Society Task Force and the American Cancer Society
- Guidelines for Surveillance after Cancer Resection from the American Cancer Society and the US Multi-Society Task Force
### Common Sense Colorectal Cancer Screening Recommendations at a Glance

<table>
<thead>
<tr>
<th>Risk Category</th>
<th>Age to Begin Screening</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Average Risk</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No risk factors</td>
<td>&lt; Age 50</td>
<td>No Screening Needed</td>
</tr>
<tr>
<td>No symptoms</td>
<td>&gt; Age 50</td>
<td>Screen with any one of the following options:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>FOBT q yr</td>
</tr>
<tr>
<td></td>
<td></td>
<td>FOBT q yr/FS q 5 yrs</td>
</tr>
<tr>
<td></td>
<td></td>
<td>FS q 5 yrs</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Colonoscopy q 10 yrs</td>
</tr>
<tr>
<td></td>
<td></td>
<td>DCBE q 5 yrs</td>
</tr>
<tr>
<td><strong>Increased Risk</strong></td>
<td>Age 40 or 10 years younger than the earliest diagnosis in the family, whichever comes first</td>
<td>Colonoscopy&lt;sup&gt;4&lt;/sup&gt;</td>
</tr>
<tr>
<td>CRC or adenomatous polyp in a first degree relative&lt;sup&gt;3&lt;/sup&gt;</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Highest Risk</strong></td>
<td>Any age</td>
<td>Needs specialty evaluation and colonoscopy</td>
</tr>
<tr>
<td>Personal history for &gt; 8 years of Crohn’s Disease or Ulcerative Colitis or a hereditary syndrome (HNPCC or, FAP, AFAP)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Adapted by the author from the guidelines of the Maryland State Cancer Programs (2005) and national guidelines.

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1. Patients with a personal history of CRC or adenomatous polyp require a surveillance plan not screening.
2. Patients with symptoms merit an evaluation of their condition to precede screening.
3. The American Cancer Society and the US Multi-Society Task Force on Colorectal Cancer view a patient as being at average risk for the purpose of screening if only one First Degree Relative (FDR) > age 60 is affected. If the FDR is <50, or two generations are affected, also check for a history consistent with Hereditary Non-Polyposis Colorectal Cancer. The criteria (Revised Amsterdam) for HNPCC are that there should be at least three relatives with HNPCC associated cancers (colorectal, endometrium, small bowel, ureter, renal pelvis) and all of the following criteria must be met: 1) One should be a first-degree relative of the other two. 2) At least two successive generations should be affected. 3) At least one cancer should be diagnosed before age 50. 4) Familial Adenomatous Polyposis should be excluded in the CRC case. 5) Tumors should be verified by pathological examination.
4. Colonoscopy for persons at increased risk is the recommendation of the American Cancer Society and the US Multi-Society Task Force on Colorectal Cancer. The US Multi-Society Task Force on Colorectal Cancer recommends repeat every five years, the American Cancer Society every five to 10 years. The US Preventive Services Task Force (USPSTF) does not specifically recommend colonoscopy, but notes that colonoscopy is the most sensitive and specific modality.
# American Cancer Society Colorectal Cancer Screening Guidelines for Average-Risk Women and Men Ages 50 and Older

<table>
<thead>
<tr>
<th>Test</th>
<th>Interval (Beginning at age 50)</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fecal Occult Blood Test (FOBT)*** and Flexible Sigmoidoscopy</td>
<td>FOBT every year and flexible sigmoidoscopy every 5 years</td>
<td>Flexible sigmoidoscopy together with FOBT is preferred compared with FOBT or flexible sigmoidoscopy alone. All positive tests should be followed up with colonoscopy. * **</td>
</tr>
<tr>
<td>Flexible Sigmoidoscopy</td>
<td>Every 5 years</td>
<td>Sigmoidoscopy provides an opportunity to visualize, sample, and/or remove significant lesions in the portion of the colon that is within reach of the sigmoidoscope. All positive tests should be followed up with colonoscopy. *</td>
</tr>
<tr>
<td>Fecal Occult Blood Test (FOBT)***</td>
<td>Every year</td>
<td>The recommended take-home multiple sample method should be used. All positive tests should be followed up with colonoscopy. * **</td>
</tr>
<tr>
<td>Colonoscopy</td>
<td>Every 10 years</td>
<td>Colonoscopy provides an opportunity to visualize, sample, and/or remove significant lesions.</td>
</tr>
<tr>
<td>Double-Contrast Barium Enema (DCBE)</td>
<td>Every 5 years</td>
<td>All positive tests should be followed up with colonoscopy.</td>
</tr>
</tbody>
</table>

**SOURCE:** Smith et al., 2003. (See reference #175.)

* If colonoscopy is unavailable, not feasible, or not desired by the patient, double-contrast barium enema (DCBE) alone, or the combination of flexible sigmoidoscopy and DCBE are acceptable alternatives. Adding flexible sigmoidoscopy to DCBE may provide a more comprehensive diagnostic evaluation than DCBE alone in finding significant lesions. A supplementary DCBE may be needed if a colonoscopic exam fails to reach the cecum, and a supplementary colonoscopy may be needed if a DCBE identifies a possible lesion or does not adequately visualize the entire colorectum.

** There is no justification for repeating FOBT in response to an initial positive finding.

*** FOBT, as it is sometimes done in physicians’ offices, with the single stool sample collected on the fingertip during a digital rectal examination, is not an adequate substitute for the recommended at-home procedure of collecting two samples from each of three consecutive specimens. Toilet bowl FOBT tests also are not recommended. In comparison with guaiac-based tests for the detection of occult blood, immunochemical tests are more patient-friendly and are likely to be equal or better in sensitivity and specificity.
## American Cancer Society Colorectal Cancer Screening Guidelines for Women and Men at Increased Risk

<table>
<thead>
<tr>
<th>Increased Risk</th>
<th>Recommendation</th>
<th>Age to Begin</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>People with a single, small (&lt; 1 cm) adenoma</td>
<td>Colonoscopy*</td>
<td>3-6 years after the initial polypectomy</td>
<td>If the exam is normal, the patient can thereafter be screened as per average-risk guidelines.</td>
</tr>
<tr>
<td>People with a large (1 cm +) adenoma, multiple adenomas, or adenomas with high-grade dysplasia or villous change.</td>
<td>Colonoscopy*</td>
<td>Within 3 years after the initial polypectomy</td>
<td>If normal, repeat examination in 3 years; If normal then, the patient can thereafter be screened as per average-risk guidelines.</td>
</tr>
<tr>
<td>Personal history of curative-intent resection of colorectal cancer</td>
<td>Colonoscopy*</td>
<td>Within 1 year after cancer resection</td>
<td>If normal, repeat examination in 3 years; If normal then, repeat examination every 5 years.</td>
</tr>
<tr>
<td>Either colorectal cancer or adenomatous polyps in any first-degree relative before age 60, or in two or more first-degree relatives at any age (if not a hereditary syndrome).</td>
<td>Colonoscopy*</td>
<td>Age 40, or 10 years before the youngest case in the immediate family</td>
<td>Every 5-10 years. Colorectal cancer in relatives more distant than first-degree does not increase risk substantially above the average-risk group.</td>
</tr>
</tbody>
</table>

**SOURCE:** Smith et al, 2003.

* If colonoscopy is unavailable, not feasible, or not desired by the patient, double-contrast barium enema alone (DCBE), or the combination of flexible sigmoidoscopy and DCBE are acceptable alternatives. Adding flexible sigmoidoscopy to DCBE may provide a more comprehensive diagnostic evaluation than DCBE alone in finding significant lesions. A supplementary DCBE may be needed if a colonoscopic exam fails to reach the cecum, and a supplementary colonoscopy may be needed if a DCBE identifies a possible lesion or does not adequately visualize the entire colorectum.
### American Cancer Society Colorectal Cancer Screening Guidelines for Women and Men at High Risk

<table>
<thead>
<tr>
<th>High Risk</th>
<th>Recommendation</th>
<th>Age to Begin</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Family history of familial adenomatous polyposis (FAP)</td>
<td>Early surveillance with endoscopy, and counseling to consider genetic testing</td>
<td>Puberty</td>
<td>If the genetic test is positive, colectomy is indicated. These patients are best referred to a center with experience in FAP management.</td>
</tr>
<tr>
<td>Family history of hereditary non-polyposis colon cancer (HNPCC)</td>
<td>Colonoscopy and counseling to consider genetic testing</td>
<td>Age 21</td>
<td>If the genetic test is positive or if the patient has not had genetic testing, every 1-2 years until age 40, then annually. These patients are best referred to a center with experience in HNPCC management.</td>
</tr>
<tr>
<td>Inflammatory bowel disease; chronic ulcerative colitis; Crohn's disease</td>
<td>Colonoscopy with biopsies for dysplasia</td>
<td>Risk becomes significant 8 years after the onset of pancolitis, or 12-15 years after the onset of left-sided colitis</td>
<td>Every 1-2 years. These patients are best referred to a center with experience in the surveillance and management of inflammatory bowel disease.</td>
</tr>
</tbody>
</table>

**U.S. Preventive Services Task Force**  
**Summary of Colorectal Cancer Screening Recommendations**

The U.S. Preventive Services Task Force (USPSTF) strongly recommends that clinicians screen men and women 50 years of age or older for colorectal cancer. There are insufficient data to determine which strategy is best in terms of the balance of benefits and potential harms or cost-effectiveness. Studies reviewed by the USPSTF indicate that colorectal cancer screening is likely to be cost-effective (less than $30,000 per additional year of life gained) regardless of the strategy chosen.

<table>
<thead>
<tr>
<th>Test</th>
<th>Interval (Beginning at age 50)</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fecal Occult Blood Test (FOBT) and</td>
<td>FOB every year plus flexible sigmoidoscopy at an unspecified interval</td>
<td>The combination of FOBT and sigmoidoscopy may detect more cancers and more large polyps than either test alone, but the additional benefits and potential harms of combining the two tests are uncertain. In general, FOBT should precede sigmoidoscopy because a positive test result is an indication for colonoscopy, obviating the need for sigmoidoscopy.</td>
</tr>
<tr>
<td>Flexible Sigmoidoscopy</td>
<td>Unspecified interval</td>
<td>Although sigmoidoscopy can only visualize the lower half of the colon, it has been estimated to identify 80 percent of all patients with significant findings in the colon, because findings on sigmoidoscopy will trigger examination of the entire colon.</td>
</tr>
<tr>
<td>Fecal Occult Blood Test (FOBT)</td>
<td>Every year</td>
<td>Proven methods of FOBT screening use guaiac-based test cards prepared at home by patients from three consecutive stool samples and forwarded to the clinician. Whether patients need to restrict their diet and avoid certain medications is not established. Rehydration of the specimens before testing increases the sensitivity of FOBT but substantially increases the number of false-positive test results.</td>
</tr>
<tr>
<td>Colonoscopy</td>
<td>Unspecified interval</td>
<td>The USPSTF did not find direct evidence that screening colonoscopy is effective in reducing colorectal cancer mortality. Efficacy of colonoscopy is supported by its integral role in trials of FOBT, extrapolation from sigmoidoscopy studies, limited case-control evidence, and the ability of colonoscopy to inspect the proximal colon.</td>
</tr>
<tr>
<td>Double-Contrast Barium Enema (DCBE)</td>
<td>Unspecified interval</td>
<td>Double-contrast barium enema offers an alternative means of whole-bowel examination, but it is less sensitive than colonoscopy, and there is no direct evidence that it is effective in reducing mortality rates.</td>
</tr>
</tbody>
</table>


CLICK HERE to go directly to CA: A Cancer Journal for Clinicians to read these consensus guidelines on colonoscopy surveillance after polypectomy.
Surveillance Guidelines


[CLICK HERE](http://caonline.amcancersoc.org) to go directly to CA: A Cancer Journal for Clinicians to read these consensus guidelines on colonoscopy surveillance after cancer resection.
Appendix B:

Test Your Knowledge and Answer Key
Test Your Knowledge

I. Improving Screening Rates in Practice

1. The most effective tool at a physician’s disposal for encouraging patients to be screened is:
   a. A recommendation
   b. An education pamphlet
   c. An educational video
   d. None of the above
   e. All of the above

2. Which of the following have been demonstrated to be effective in raising cancer screening rates?
   a. Postcard reminders
   b. Reminder letters
   c. Prescription reminders
   d. Telephone calls
   e. All of the above

3. Effective chart prompts include:
   a. Problem lists
   b. Screening schedules
   c. Electronic medical record reminders
   d. Chart stickers
   e. All of the above

Choose whether the statements are true or false. True/False

4. A theory-based communication strategy is more effective than generic education.  

5. Provider feedback is an effective way to improve office screening rates.  

6. Reassignment of office staff to involve them in the screening process can facilitate improved screening rates.  

7. The digital rectal exam is an accepted CRC screening practice.  

8. Doctors should do an fecal occult blood test (FOBT) in the office to make sure that at least one CRC screening test is completed.  

9. If an FOBT kit is returned and one window only is positive, the test should be repeated.  

10. A positive FOBT should be repeated if the diet restrictions were not followed.
II. Content of the Current Screening Guidelines

Categorize the risk level of the following patients as average, increased, or high.

11. A 45-year-old woman whose father was diagnosed with a CRC at age 70
   Average Increased High

12. A 30-year-old male whose older brother was diagnosed with an adenomatous polyp at age 59
   Average Increased High

13. A 50-year-old female whose uncle was diagnosed with an adenomatous polyp at age 55
   Average Increased High

14. A 20-year-old woman whose mother died of CRC at age 47
   Average Increased High

Choose the correct answer.

15. At what age should “average-risk” patients begin CRC screening?
   ____ Puberty  ____ Age 25   ____ Age 40   ____ Age 50   ____ Age 60

16. At what age should a patient with a family history of colorectal cancer or adenomatous polyps affecting one first-degree relative diagnosed at age 55 begin screening?
   ____ Puberty  ____ Age 25   ____ Age 40   ____ Age 50   ____ Age 60

17. What screening modality offers the greatest sensitivity and specificity and should be recommended to those at increased risk?
   ____ Fecal occult blood test  ____ Fecal occult blood test/Flexible sigmoidoscopy
   ____ Flexible sigmoidoscopy  ____ Colonoscopy  ____ Double contrast barium enema

18. What screening modality might you best to recommend to a patient who is distrustful of physicians or very uncomfortable with invasive procedures?
   ____ Fecal occult blood test  ____ Fecal occult blood test/Flexible sigmoidoscopy
   ____ Flexible sigmoidoscopy  ____ Colonoscopy  ____ Double contrast barium enema
19. Which of the following screening test(s) are recommended for a 40-year-old patient whose 65-year-old father had colorectal cancer or an adenomatous polyp?
   ______ Fecal occult blood testing (FOBT)
   ______ Flexible Sigmoidoscopy
   ______ Combination of FOBT plus flexible sigmoidoscopy
   ______ Colonoscopy
   ______ Double-contrast barium enema (DCBE)
   ______ All of the above

20. Which of the following screening test(s) are recommended by one or more authoritative groups for patients at risk of hereditary non-polyposis colon cancer (HNPCC) or familial adenomatous polyposis (FAP)? (Choose one.)
   ______ Fecal occult blood testing (FOBT)
   ______ Flexible Sigmoidoscopy
   ______ Combination of FOBT plus flexible sigmoidoscopy
   ______ Colonoscopy
   ______ Double-contrast barium enema (DCBE)
Answer Key

I. Improving Practice Screening Rates

1. a. A recommendation. The evidence is overwhelming that a doctor’s recommendation is the most powerful factor that influences a patient to be screened.

2. e. All of the above. There is benefit from patient reminders of many types, as shown by meta-analysis of interventions that effectively increased screening rates for breast cancer.

3. e. All of the above. There is benefit from all interventions directed at physicians. This conclusion is based on meta-analyses of the studies on interventions directed at physicians to increase screening rates for breast cancer.

Choose whether the statements are true or false.

4. True. Meta-analyses provide strong evidence that theory-based communications are more effective than generic education.

5. True. Provider feedback has been shown to be an effective way to improve office screening rates.

6. True. Reassignment of office staff to involve them in the screening process can facilitate improved screening rates.

7. False. The digital rectal exam is no longer considered to be an accepted method for CRC screening. It is omitted from all consensus guidelines.

8. False. This practice is not effective. A single FOBT in the office does not provide the benefit offered by recommended FOBT screening practices.

9. False. Every positive FOBT should be followed by a complete diagnostic examination with colonoscopy.

10. False. Lack of adherence to the diet is not a reason to depart from the rule that every positive FOBT should be followed by a complete diagnostic examination with colonoscopy.
II. The Content of the Screening Guidelines

Categorize the risk level of the following patients as average, increased, or high.

11. Increased. An individual who has a first-degree relative with CRC is at increased risk. The increased risk is slight due to the older age of the relative. Thus the American Cancer Society and the US Multi-Society Task Force on Colorectal Cancer recommend management like an average risk patient.

12. Increased. All guidelines categorize any individual with a family history of an adenomatous polyp in a first-degree relative that is under age 60 as being at increased risk.

13. Average. This woman has an uncle – not a first-degree relative – with a positive history.

14. Increased. This patient has a first-degree relative diagnosed with a CRC before age 50. This should also raise concerns about the presence of a hereditary syndrome, and family history should be carefully reviewed.

Choose the correct answer.

15. Age 50. This is the age at which “average-risk” patients should begin colorectal cancer screening.

16. Age 40. This is the age at which patients at increased risk should begin screening, according to the guidelines of the American Cancer Society and the US Multi-Society Task Force on Colorectal Cancer. These guidelines recommend colonoscopy because it is more sensitive and specific. The US Preventive Services Task Force (USPSTF) recognizes this patient as being at increased risk but does not have a specific recommendation about the age to begin screening or about the best modality. The USPSTF recognizes colonoscopy as the most sensitive and specific test available.

17. Colonoscopy. This method is recognized as the most sensitive and specific screening test available by all consensus guidelines.

18. Fecal Occult Blood Testing. FOBT testing is not invasive and can be done by an individual in the privacy of their own home.

19. Colonoscopy or All of the above. The patient is at increased risk if a first-degree relative had a CRC or an adenomatous polyp. The risk is slight due to the age (>60) of the first-degree relative. Thus, the American Cancer Society and the US Multi-Society Task Force on Colorectal Cancer would continue to offer all screening options. However, colonoscopy is an apt choice because risk is slightly increased.

20. Colonoscopy. Colonoscopy should be utilized to screen those who are at high risk because it is currently the test with the highest level of sensitivity and specificity.
Appendix C:

The Screening Practices of Primary Care Physicians
The Screening Practices of Primary Care Physicians

If a physician’s influence holds great sway in expanding screening rates, yet colorectal cancer screening rates remain low, questions arise about the current screening recommendations and practices of primary care physicians. A national survey conducted in 1999 to 2000 provides the most accurate picture to date of the practice routines of doctors in all the primary care specialties, including obstetrics and gynecology, internal medicine, family medicine, and general practice. Some of the key findings from the survey are summarized below.

Primary care physicians:

- **98% recommend screening for crc**
- **Report that they adhere to these guidelines**
  - 49% American Cancer Society
  - 28% United States Preventive Services Task Force
  - 17% US Multi-Society Task Force on Colorectal Cancer
  - 15% Other specialty guidelines
- **Prefer specific screening tests for average risk individuals**
  - 24-55% Both FOBT and flexible sigmoidoscopy (FS)
  - 7-14% Either FOBT or FS
  - 22-40% FOBT only
  - 0-4% FS only
  - 3-13% Colonoscopy (CS)
- **Recommend the following screening tests**
  - 95% FOBT
  - 61-82% FS
  - 34-49% CS
  - 5-25% DCBE
- **Obtain flexible sigmoidoscopy for their patients from the following sources**
  - 70-83% Physicians outside their practice
  - 44% Gastroenterologists
  - 21% General surgeons
  - 3% Mid-level practitioners such as nurse practitioners
- **5 to 36% do their own flexible sigmoidoscopies**

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These were endorsed by the American Cancer Society, The American Academy of Family Practice, American College of Gastroenterology, American College of Physicians-American Society of Internal Medicine, American College of Radiology, American Gastroenterological Association, American Society of Colorectal Surgeons, and the American Society of Gastrointestinal Endoscopy.

The range reflects the specific rates of the four primary care specialties.

According to Seeff, L. et al., primary care physicians do 25% of all FSs. See end note #15.

40% believe nurse practitioners and/or physicians’ assistants could do FS.

In a typical month, > 50% of all doctors who perform FS do only one to five per month.
Many primary care physicians do no flexible sigmoidoscopies
- 64% of internists and family physicians do no FSs in a typical month
- 96% of ob gyns do no FSs in a typical month

Who performs colonoscopy for their patients:†††
- 83% gastroenterologists
- 11% surgeons
- 2% primary care doctors

Who handles FOBT for their patients:
- 24% nurse practitioners or physicians’ assistants

### Screenin Modalities Recommended by Primary Care Physicians for People at Average Risk†††††††††

<table>
<thead>
<tr>
<th>Screening Modality</th>
<th>Family Practice (%, 95% CI) n=423</th>
<th>General Practice (%, 95% CI) n=100</th>
<th>Gen. Int. Medicine (%, 95% CI) n=488</th>
<th>Ob-Gynecology (%, 95% CI) n=224</th>
</tr>
</thead>
<tbody>
<tr>
<td>Both FOBT and FS</td>
<td>47.1 (42.3 - 51.9)</td>
<td>23.7 (15.3 - 32.1)</td>
<td>55.3 (50.9 - 59.7)</td>
<td>40.1 (33.7 - 46.6)</td>
</tr>
<tr>
<td>FOBT alone</td>
<td>27.3 (23.1 - 31.6)</td>
<td>41.1 (31.3 - 50.9)</td>
<td>21.8 (18.1 - 25.4)</td>
<td>30.4 (24.3 - 36.4)</td>
</tr>
<tr>
<td>Either FOBT or FS</td>
<td>10.5 (7.6 - 13.4)</td>
<td>13.9 (7.0 - 20.8)</td>
<td>7.2 (4.9 - 9.5)</td>
<td>7.1 (3.7 - 10.5)</td>
</tr>
<tr>
<td>Colonoscopy</td>
<td>3.4 (1.7 - 5.2)</td>
<td>9.1 (3.4 - 14.9)</td>
<td>5.6 (3.5 - 7.6)</td>
<td>13.0 (8.6 - 17.4)</td>
</tr>
<tr>
<td>DCBE + FS</td>
<td>1.9 (0.6 - 3.2)</td>
<td>4.0 (0.1 - 8.0)</td>
<td>3.1 (1.5 - 4.6)</td>
<td>(0.0 - 0.0)</td>
</tr>
<tr>
<td>FS alone</td>
<td>3.7 (1.9 - 5.5)</td>
<td>(0.0 - 0.0)</td>
<td>(1.1 - 3.8)</td>
<td>1.3 (0.0 - 2.8)</td>
</tr>
<tr>
<td>Other</td>
<td>4.1 (2.2 - 6.0)</td>
<td>6.0 (1.3 - 10.8)</td>
<td>(0.9 - 3.6)</td>
<td>2.7 (0.6 - 4.9)</td>
</tr>
<tr>
<td>Do not recommend</td>
<td>1.7 (0.4 - 2.9)</td>
<td>2.1 (0.0 - 5.1)</td>
<td>1.8 (0.6 - 3.0)</td>
<td>4.9 (2.1 - 7.8)</td>
</tr>
</tbody>
</table>

Source: Klabunde CN, et.al., 2003.

††††††††† Table reproduced from reference #15.
Appendix D:

Barriers to Screening for Colorectal Cancer
## APPENDIX D: Barriers to Screening for Colorectal Cancer

<table>
<thead>
<tr>
<th>Barrier</th>
<th>Clarification and Resolution</th>
</tr>
</thead>
</table>
| **Outdated knowledge**                       | • The digital rectal exam is not accepted practice.  
• A single FOBT in the office is not evidence-based.  
• A positive FOBT should not be dismissed as a likely false positive test. It should be followed up by colonoscopy.  
Introduction, Essential #1, Guidelines.  |
| **Inconsistent guidelines**                  | • Physicians often report concerns about inconsistencies in recommended guidelines.  
• In fact, differences between guidelines are minimal.  
• Risk stratification must be a priority.  
Introduction, Essential #2, Guidelines.  |
| **Guideline changes**                        | • The digital rectal is no longer accepted screening practice.  
• As additional evidence becomes available, guideline elements, i.e. age to begin screening, the screening interval, the use of different modalities also will change.  
Essential #2, Guidelines.  |
| **Screening overestimated**                  | • Physicians frequently estimate higher screening rates than the actual rates. This may dissipate a sense of urgency about screening.  
The Screening Practices of Primary Care Physicians.  |
| **Confusion about goals**                    | • The most common achievement of screening is removal of an adenomatous polyp.  
Introduction.  |
| **Lack of confidence by doctors**            | • There is high-quality evidence for the efficacy of screening.  
• Patient acceptance is better than some physicians may believe.  
Introduction, Essential #2.  |
| **Cost and reimbursement**                   | • Cost of FOBT is low and colonoscopy cost is declining.  
• Consult health departments where the uninsured cannot access complete diagnostic examinations.  
• Discuss the barrier of co-pays and deductibles.  
Introduction.  |
| **Inadequate resources and reinforcement systems** | • Nationwide, there are sufficient resources to screen the entire eligible population within one year with FOBT, plus colonoscopy for all positives. (See reference #38.)  
• Communication strategies can raise efficiency.  
• Office reminder and reinforcement systems are discussed in the section "Essential #3".  
Introduction, Essential #4, The Screening Practices of Primary Care Physicians.  |
Barriers to Screening for Colorectal Cancer

While there are a number of barriers to improved screening rates, the tools in this guide will help transcend the barriers. Of the barriers in this section, the majority may be overcome through use of the information and strategies that are offered in this publication. The sections of the guide where this barrier is addressed are identified in the table.

Outdated Knowledge
This section will discuss the following practices that are not evidence-based approaches to screening:

- The digital rectal exam
- A single FOBT in the office
- The “False-Positive” FOBT

The digital rectal exam. The digital rectal exam (DRE) is no longer recommended for CRC screening. It is not a recommended strategy in any of the three major guidelines: from the American Cancer Society, the US Multi-Society Task Force on Colorectal Cancer, or the US Preventive Services Task Force (USPSTF). Only 10% of CRCs arise within reach of the examining finger.147 A study reported in the *Annals of Internal Medicine* demonstrated that the sensitivity of the digital FOBT is 4.9% for advanced neoplasia compared to 23.9% for the six-sample home FOBT.148 The digital rectal is not an effective screening exam for colorectal cancer.

More than a decade ago, the DRE was recommended as part of the screening exam for CRC for average-risk individuals by the American Cancer Society, the National Cancer Institute, and national professional societies, and the American Academy of Family Physicians, the American College of Obstetricians and Gynecologists, and the American Society of Colon and Rectal Surgeons.149 This approach is abandoned. Recent evidence demonstrates that this is ineffective for colorectal cancer screening. It should be noted, however, that since the prostate is within the range of the examining finger, the DRE remains an accepted strategy for prostate cancer.

A single FOBT in the office. A single fecal occult blood test that is performed in the office is not sound practice. In one study, cited by the USPSTF, the first test card would have missed 42% of cancers that were detected by screening.150 And in a more recent study of more than 2,600 patients who underwent colonoscopy, 95% of cancers and significant adenomas went undetected by the single sample FOBT.176 No guideline or group recommends a “single FOBT in the office” as part of the screening regimen. In the past, it was common practice to do an FOBT in the office during the complete physical as an opportunity to complete one FOBT. The studies cited above put this view to rest. Some physicians might still wrongly believe that a single test is an acceptable substitute for the six-sample, home-based FOBT. This belief is incorrect.

The evidence for the effectiveness of FOBT as a screening test is based on the completion of three FOBT cards over three days, and on repeat of this process on an annual basis. A single FOBT in the office is not sensitive enough to satisfy the requirements of a screening test.
The “False-Positive” FOBT. One positive FOBT window is always an indication for a colonoscopy. There is no justification for repeating a positive FOBT with another FOBT. The suspicion that the positive is false because the patient failed to adhere to dietary instructions or medication restrictions is not a relevant concern. The effectiveness of the FOBT as a screening strategy rests on complete examination of the large bowel following the finding of any positive FOBT test. In addition, the complete diagnostic examination should be done by colonoscopy – not double contrast barium enema (DCBE) – as it is more sensitive and more specific than DCBE. In one study cited earlier, only 50% of patients with a positive FOBT went on to receive a complete examination of the colon.

Inconsistent Guidelines Despite Unanimity on Principle

Minor inconsistencies in the guidelines have created confusion which must be eliminated. All the guidelines are consistent about the recommendation to screen. All agree there is strong evidence in favor of screening for colorectal cancer. The guidelines differ only in emphasis and in limited ways that create the impression of inconsistency. In a recent survey of physicians, only 37% thought the guidelines were clear. Compared to the other guidelines, the USPSTF guidelines seem to promote a narrower array of screening modalities, emphasize a more limited definition of risk, and suggest different ages for initiation of screening. In truth, these are minor variations in emphasis and there is unanimity about the importance of CRC screening. The areas of apparent inconsistency are:

- Screening options
- Risk stratification
- Age

Screening Options. The American Cancer Society and the US Multi-Society Task Force on Colorectal Cancer update of the guidelines endorse the value of all five screening options and present the evidence for each option. The USPSTF distinguishes between the options and expresses less enthusiasm for four of them. In the summary statement, the USPSTF states that the use of FOBT is supported by “good” evidence; FS or FOBT/FS are supported by “fair” evidence; colonoscopy is supported by no “direct evidence”; and DCBE is described as “less sensitive” than colonoscopy. However, the USPSTF makes it clear up front that it “strongly recommends that clinicians screen men and women 50 years of age or older for colorectal cancer.” The USPSTF also states that “colonoscopy is the most sensitive and specific test for detecting cancer and large polyps.”

Risk Stratification. The guidelines differ in their emphasis on risk and the choice of screening modality in response to risk. The American Cancer Society and the US Multi-Society Task Force on Colorectal Cancer recommend risk stratification as the initial step in determining the appropriate screen for each individual. They recommend colonoscopy for people at increased risk. A family history of colorectal cancer or adenomatous polyp in a first-degree relative increase the lifetime risk of CRC by two to three times, bringing it to 12 to 18%. If a first-degree relative presents with one of these at a young age (under 60), the lifetime risk is even greater. Lifetime risk is also increased – but less so – if these factors are present in a second degree relative, or even a third-degree relative.
The USPSTF focuses its recommendations on people at average risk. This focus is apparent in the way the recommendations are presented and summarized. Though the epidemiology section lists the risk factors (genetic syndromes, family history of CRC, long-standing ulcerative colitis, personal history of adenomatous polyps or family history of adenomatous polyps in a relative under age 60) and identifies the prevalence of adenomatous polyps as 20 to 25% by age 50, and 50% by age 75 to 80,153,154 the USPSTF summary has no special recommendation for management of the common risk factors. The USPSTF concedes that colonoscopy “may be appropriate” with “very high risk patients,”155 with the specific groups being those with familial syndromes (FAP, HNPCC) or a personal history of long-standing ulcerative colitis, not the other more common risk experiences presented in the epidemiology section.

**Age.** The recent updates of the American Cancer Society and the US Multi-Society Task Force on Colorectal Cancer recommend that screening begin 10 years before the age of the youngest relative who presented with either CRC or adenomatous polyps or at age 40, whichever comes first. The USPSTF states that, for people at higher risk (i.e. where there is a first-degree relative diagnosed with CRC before age 60), “initiating screening at an earlier age is reasonable.”

**Guideline Changes**

Some physicians may not be aware that the guidelines have all been updated in response to new evidence, most recently in 2002 and 2003. As evidence accumulated, guidelines changed. The newest guidelines superceded guidelines articulated in 1996, 1997, and 2000. Earlier guidelines date back further and may still be fixed in the minds of some practitioners. The changes are quite significant. In 1989, the US Preventive Services Task Force judged there was insufficient evidence to recommend for or against FOBT or FS screening.156 By 2002, the USPSTF found evidence that several screening methods were effective in reducing mortality. Specific areas of change include:

- **The digital rectal exam**
- **Age**
- **Diagnostic work-up**

**The Digital Rectal Exam.** The digital rectal exam is no longer considered a useful screening exam for colorectal cancer. In 1989, a digital rectal exam was considered standard practice in the health maintenance exam to look for CRC and prostate cancer.157,158 The digital rectal exam continued to be recommended for screening for both cancers into the mid 1990s. Today it is recommended as a screening exam for prostate cancer only, not colorectal cancer.

**Age.** Age 50 is currently recommended as the advent of screening for individuals at average risk. Earlier is better for individuals at increased risk surprisingly. In the past, the age to begin screening those at average risk was earlier.159 The American Cancer Society formerly recommended that screening begin at age 40. The age for screening people at increased risk has also varied. In 1979, the Canadian Task Force on the Periodic Health Examination recommended starting at age 45 with an annual FOBT for those at increased risk. Current recommendations of the American Cancer Society and the US Multi-Society Task Force on Colorectal Cancer are to begin screening 10 years before the youngest relative affected or at age 40.
**Diagnostic Work-Up.** The recommended work-up after a positive FOBT has changed somewhat since 1997. The American Cancer Society and the US Multi-Society Task Force on Colorectal Cancer previously recommended a colonoscopy or, as an alternative, DCBE plus a flexible sigmoidoscopy. The American Cancer Society and the US Multi-Society Task Force on Colorectal Cancer now recommend a colonoscopy only for this work-up because all the evidence for the effectiveness of FOBT testing in reducing mortality is based on diagnostic evaluation with colonoscopy.

**Overestimation of Current Screening Rates**
Overestimation of screening rates may lull physicians into making less effort than needed to assure that every eligible patient leaves the practice with a recommendation for screening. The fact is that CRC screening rates remain low across the country. Physicians frequently estimate higher screening rates than the actual rates. This may dissipate a sense of urgency about screening.

Further, news coverage of emerging technologies may also undercut current efforts to increase screening. Some patients and providers may decide to wait until “better” screening methods are available – not realizing how long that wait will be.

**Confusion about Priorities and Goals**
Physicians who expect to find many colorectal cancers among the patients they refer for screening will be disappointed. There are two equally important goals of screening. One is to prevent CRC, and thereby reduce the incidence of new cancers. The other is to reduce mortality from existing colorectal cancers. Cancers are prevented when adenomatous polyps are removed before they become cancerous. The removal of early CRCs before they become later stage cancers further improves the prognosis. The first of the two goals is the more common achievement. Ten to 20 percent of endoscopies find adenomatous polyps. Only 1% of endoscopies find a cancer.

**Lack of Confidence in Efficacy and Acceptability**
Despite strong new evidence that supports the efficacy of screening, some physicians may lack confidence in the efficacy of CRC screening tests. FOBT is the most popular recommendation, but only 24 to 35% of primary care physicians believe that FOBT is “very effective” in reducing mortality, despite evidence from randomized controlled studies. Only 43 to 59% believe that FS is “very effective” in reducing mortality, despite the fact that new evidence showed that FOBT plus FS (followed by colonoscopy for the positives) achieved a detection rate of 75.8%. Some physicians may believe that a flexible sigmoidoscopy or a colonoscopy is a highly distasteful choice for their patients. Though there is little evidence for this, at least one statewide survey has documented that less than 5% of those surveyed found the nature of these tests an inhibiting factor.

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**Cost and Reimbursement**

There are routes available to overcome some cost barriers. While some private insurers may not pay for all screening tests, all insurance pays for some type of screening. All will support an FOBT with a diagnostic colonoscopy if the result of the FOBT is positive. FOBTs are inexpensive tests and can be performed at home. They may be accessed at pharmacies in many areas of the country. In a study of physician attitudes in Wisconsin, cost was the most common explanation for not recommending colonoscopy. However, cost may be much less of an issue now than it was previously.

In 2004, under the influence of Medicare rates, colonoscopy was reimbursed at $300 to $400 in many locations, with a similar amount for the facility fee, and modest additional costs for anesthesia, bringing the total cost to $800 to $900. These payment levels applied if the procedure was performed in an ambulatory endoscopy or surgery center. For a procedure performed in the hospital, the charge was in the $1200 to $1500 range. However, screening colonoscopy is performed every 10 years, making the hospital-based costs similar to the cost of annual mammography when calculated as an annual cost.

Medicare pays for all screening options. An entry physical that includes CRC screening is now, as of 2005, part of the Medicare routine. Some states have regulations that shape insurance coverage. In eighteen states, insurance plans are required to pay for all options. The Health Plan Employer Data and Information Set (HEDIS) reporting requirements (the employers’ required data set for health plans) have started to include CRC screening rates. These are reported to the public in 2006. This will influence insurers to include CRC in standard policies and pay for more options. However, even where reimbursement is available, deductibles and co-pays may be a barrier.

Of great concern are the 45 million individuals who lack health insurance coverage. Fortunately, the uninsured rates for those over the age of 50 are less than the nationwide average. However, for individuals at increased risk, the lack of insurance can be a highly detrimental barrier. Health departments in some areas of the country have programs available that provide access to screening and a complete diagnostic examination.

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*MEDICARE issued a new policy in 2001. It began paying for screening CS every 10 years. No longer are symptoms of CRC required in order for Medicare to reimburse for screening colonoscopy.*
Inadequate Medical Resources and Reinforcement Systems

Inadequate local medical resources may appear to present a barrier. If screening rates are increased, knowledge of local resources is key. While most primary care physicians choose a combination of FOBT and flexible sigmoidoscopy as the optimal screening combination, it is getting difficult to obtain flexible sigmoidoscopy.$^{166}$ In areas where reimbursement has declined steeply, sigmoidoscopy is available only on a limited basis.$^{167}$

Staffing needs have grown due to the more complex reimbursement milieu of managed care, and there is concern that patient education wastes time and detracts from activities that better support the bottom line.$^{168}$ Efficient communication and reminder systems are needed if office practices are to succeed in raising screening rates.

Offices appear to make limited use of reminder systems despite the evidence for them. A Wisconsin survey revealed that only 5% of primary care physicians had a computer reminder system; 37% had a paper reminder system; and 58% had no reminder system at all.$^{169}$ The lengthy interval between screening tests (FS every five years or CS every 10 years) makes it difficult to maintain follow-up and makes reminder systems even more important, unlike the annual mammogram or FOBT that are easy to remember. In the absence of reminder systems, it is difficult to identify patients who are due for screening or to contact them. Since referral and scheduling processes are often cumbersome, time-consuming, and discouraging, follow-up is essential. Tracking patients through the system, or waiting for feedback from consultants to confirm follow-up and follow-through, may be a challenge. More attention is needed to the act of communication of results from consultants to primary care doctors.
Appendix E: Tools

I. Phone Scripts, Reminder Letters, and Postcards
II. Preventive Services Schedules
III. Audit and Tracking Sheets
IV. Brochures, Pamphlets, and Posters
APPENDIX E: Tools: Phone Scripts, Reminder Letters, Postcards

I. Phone Scripts, Reminder Letters, Postcards

FOBT Follow-up Phone Script for Average-Risk Individuals

Introduction:
Good morning/afternoon. May I speak with ____________________________?
(Note: Due to HIPAA regulations, the conversation should not proceed unless speaking directly with the patient.)

My name is ____________________ and I am calling from _______________________.

You recently received a stool test for colon cancer screening.

Did you have any questions about the test?

We are calling everyone who received one of these to see if there is any way we can help you complete the test.

1. “Have you had the chance to complete and mail your kit?”

   If the answer is YES, get the approximate date to ensure that the test will be valid, and get the approximate date of receipt. Thank the participant and let them know that you will mail them their results.

   If the answer is NO, ask the following question.

   Mr./Ms. ____________________, is there any reason why you have not completed your kit? (Document reason; possible reasons are listed below.)

   □ Diet and drug restrictions
   □ Test is difficult and disgusting
   □ Haven’t had the time
   □ Changed my mind
   □ Received other colorectal cancer testing
   □ Believe it is not effective way of screening
   □ Health insurance/doctor

2. Emphasize the benefits of screening and program services.

   “Colorectal cancer can affect anyone – men and women alike – and your risk increases with age. Colorectal cancer is highly preventable, treatable, and often curable. There are several screening tests for colorectal cancer. These tests not only detect colorectal cancer early, but can prevent colorectal cancer.”

APPENDIX E: Tools: Phone Scripts, Reminder Letters, Postcards

Beginning at age 50, men and women should be screened regularly for colorectal cancer. If you have a personal or family history of colorectal cancer or colorectal polyps, or personal history of another cancer or inflammatory bowel disease, you should begin screening earlier.

It is recommended that average-risk people screen by using the fecal occult blood test every year plus a flexible sigmoidoscopy every five years or a colonoscopy every 10 years.

3. If patient indicates that they prefer a colonoscopy, ask “Do you have health insurance?”

If they are insured, suggest a visit to an endoscopist (gastroenterologist or general surgeon) for a colonoscopy. If they do not know a gastroenterologist, give a physician referral phone number and appropriate form.

If they are uninsured, encourage them to follow through with FOBT.

Mr./Ms.__________________ Thank you for your time today.

Do you have any questions? If you need further assistance with completing your kit or have any questions, please give us a call at _______________________.


APPENDIX E: Tools: Phone Scripts, Reminder Letters, Postcards

Note: Please document and track these conversations.

Follow-up Phone Script for Individuals at Increased Risk

Introduction:
Good morning/afternoon. May I speak with ______________________DOB: ____________
(Full Name)
(Note: Due to HIPAA regulations, the conversation should not proceed unless speaking directly with the patient.)
My name is ____________________ and I am calling from _______________________.
You recently received a referral for a colonoscopy screening test for colon cancer.
Did you have any questions about the test?
We are calling to see if there is any way we can help you get screening for colorectal cancer.

1. “I see that on the form you filled out, you checked off.” (Confirm their response.)
   □ Family history of colorectal cancer or polyps – specify: __________________________
   □ Personal history of colorectal cancer or polyps – specify: __________________________
   or *inflammatory bowel disease – specify: __________________________

2. “Can you tell me more about your history (family history) or symptoms?”
   Assess the history or symptoms for significance. (Significant personal or family history is an adenomatous polyp or colorectal cancer in one first-order relative under age 60 or more than one first or second degree relative over age 60, or a personal history of inflammatory bowel disease such as Crohn’s disease or ulcerative colitis* for over eight years.)

3. “Because of your history/family history/symptoms, we recommend that you have a colonoscopy for proper screening.”

4. If the person needs more motivation, emphasize the benefits of screening.
   “Colorectal cancer can affect anyone – men and women alike – and your risk increases with age. Colorectal cancer is highly preventable, treatable, and often curable. Most colorectal cancers cause no symptoms in the early stages, which is why screening is so important. There are several screening tests for colorectal cancer. These tests not only detect colorectal cancer early but can also prevent colorectal cancer. Beginning at age 50, men and women should be screened regularly for colorectal cancer. If you have a personal or family history of colorectal cancer or colorectal polyps, or a personal history of an inflammatory bowel disease, you should begin screening earlier.”
   *

* Inflammatory bowel disease – ulcerative colitis, Crohn’s disease.

5. “Have you heard about the colonoscopy (or other procedures)?”
   Discuss as appropriate.
   If further assessment indicates that the individual is at increased risk or has significant symptoms, continue to encourage a colonoscopy.

6. “Do you have health insurance? Do you have a gastroenterologist or surgeon who does colonoscopy?”
   Respond as appropriate with suggestions and problem solving.
   If they are uninsured, explore alternative options that are available. The office should determine in advance what these options might be.
   Mr./Ms.__________________ Thank you for your time today.
   Do you have any questions? If you need further assistance or have any questions, please give us a call at__________________________________________________.
Letter to Patient at Average Risk

MAIN STREET MEDICAL

Name
Street
City

Dear (Name):

Our office has made a commitment to promote the health of its members, and to provide education regarding preventive health measures that you can take to maintain a healthy lifestyle. Our records indicate that you are either overdue for colorectal cancer screening tests, or that you have never had a colorectal cancer screening test.

I am writing to ask you to call our office today to schedule a colorectal cancer screening appointment. By getting colorectal cancer screening tests regularly, colorectal cancer can be found and treated early when the chances for cure are best. These tests can also help prevent the development of colorectal cancer.

The American Cancer Society recommends that average-risk individuals choose one of the following five options for colorectal cancer screening. Screening should begin at age 50.

- Fecal occult blood test (FOBT) every year and flexible sigmoidoscopy every five years (preferred over either strategy alone)
- Flexible sigmoidoscopy every five years
- FOBT every year
- Colonoscopy every 10 years
- Double-contrast barium enema (DCBE) every five years

We have also included for your reference an informational pamphlet on colorectal cancer. Should you have any questions about this pamphlet or colorectal cancer screening tests, please contact us. Thank you for taking time to take care of your health.

Sincerely,

Enclosure: Colorectal Cancer Screening Brochure
Reminder Letter to Patient at Average Risk

MAIN STREET MEDICAL

Date

Name
Street
City

Dear (Name):

Colorectal cancer is the second leading cause of cancer death among men and women in the United States. The good news is that this disease can be prevented. Screening tests are vital to preventing colorectal cancer because they can detect pre-cancerous polyps that can be removed easily with routine procedures. Lifestyle changes, such as improving diet and increasing physical activity, can also reduce the risk of cancer.

Like many people, you are at risk for colorectal cancer. I am writing to remind you to call your primary care physician today to schedule a colorectal cancer screening appointment. By getting colorectal cancer screening tests regularly, colorectal cancer can be found and treated early when the chances for cure are best.

Please read the enclosed brochure to learn about colorectal cancer screening. If you’d like to know more about colon cancer and the testing process, I would be happy to talk with you about it further. You can also call the American Cancer Society at 1-800-ACS-2345 or visit www.cancer.org. Whatever your next step, I hope you’ll schedule your next screening test soon. It just might save your life.

Sincerely,

Enclosure: Colorectal Cancer Screening brochure
Dear (Name):

Colon cancer is the second leading cause of cancer-related deaths in the United States, and men and women are equally at risk. The good news is that colon cancer can be prevented or detected early and death from colon cancer can be prevented if screening is done on a regular basis.

Our records indicate that it is time for your annual physical and cancer screening. Please call your primary care physician, at XXX-XXX-XXXX so that you can schedule an appointment at your earliest convenience.

Sincerely,
Letter to Patient at Increased or High Risk

MAIN STREET MEDICAL

Date

Name
Street
City

Dear (Name):

According to our records, you indicated that either you or a family member who is under age 60 has a history of colorectal polyps or cancer. This medical history places you at increased risk for colorectal cancer. Because of this, it is advisable that you have a colonoscopy now.

If you had a negative FOBT test, you still need a colonoscopy.

A colonoscopy is a procedure that must be done by a gastroenterologist or a surgeon at an endoscopy center or hospital. This test will allow a doctor to look inside the entire colon (large intestine) to check for a polyp or cancer.

If you do not have health insurance, please do not let this keep you from getting a colonoscopy. We can assist you with scheduling a colonoscopy or finding a doctor who will see you. Please call _________________ to set up an appointment if you have questions.

If you have health insurance (or Medicare/Medicaid), our office will refer you for a colonoscopy. To obtain the referral, call or take this letter with you to your next doctor’s appointment.

Thank you for taking care of your health and following through on this important test.

Sincerely,

Medical Director
Result Letter: Patient Who Has an FOBT Positive Result

MAIN STREET MEDICAL

Date

Name
Street
City

Dear ________________.

We wanted to congratulate you on successfully completing the fecal occult blood test (FOBT). The results of your FOBT test for colon and rectal cancer screening showed that you may have blood in your stool and that further testing is needed.

You now need a colonoscopy to look for a possible source of the bleeding and to determine if a polyp or cancer is present. Usually there is no serious problem. If a precancerous growth is found, it can be removed to prevent cancer. However, cancer is one of the potential causes for your bleeding and we want to be very careful to rule out this possibility. A colonoscopy is a procedure that must be done by a doctor at an endoscopy center or a hospital. This test will require that you have anesthesia and will allow a doctor to look inside your entire large intestine to check for a growth or a polyp or cancer. The doctor will explain the colonoscopy results to you after the test.

We can assist you with scheduling a colonoscopy. Please call or visit our office at ________________ to obtain a referral or set up an appointment. Also, please take this letter with you to your next doctor’s appointment.

Thank you for following up on your healthcare needs. I am enclosing a brochure that describes colonoscopy. We have a video tape available if you would like to view it.

Sincerely,

Medical Director

Enclosure
II. Preventive Services Schedules*

### Clinical Preventive Services for Normal-Risk Adults

**Recommended by the U.S. Preventive Services Task Force**

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Range of Recommended Ages

* To remain up to date, see www.preventiveservices.ahrq.gov.
# APPENDIX E: TOOLS: Preventive Services Schedules

## Adult Female Age 50 to 65 Preventive Care Flow Sheet

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### HEALTH GUIDELINES

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O = Ordered, N = Normal, A = Abnormal Result, R = Refused, E = Done Elsewhere

Flow sheet developed by Wesley Medical Center, Wichita, Kan., adapted from Put Prevention Into Practice, Office of Disease Prevention and Health Promotion, Public Health Service.

* For current recommendations of immunization practices, go to www.cdc.gov
# APPENDIX E: Tools: Preventive Services Schedules

## Adult Female Over 65 Preventive Care Flow Sheet

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<td>Occupational health</td>
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- - = Discussed w/ patient

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* For current recommendations of immunization practices, go to www.cdc.gov
# APPENDIX E: Tools: Preventive Services Schedules

## Adult Male Age 50 to 65 Preventive Care Flow Sheet

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**Put Prevention Into Practice**

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* = Discussed w/ patient

### EXAMINATION & TESTS

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### IMMUNIZATIONS

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**O** = Ordered, **N** = Normal, **A** = Abnormal Result, **R** = Refused, **E** = Done Elsewhere

*Source: Adapted from Moser ME, Geier DM. Implementing preventive care flow sheets. *Fam Pract Manag*. February 2003:51-53. Flow sheet developed by Wesley Medical Center, Wichita, Kan; adapted from Preventive Info and Practice, Office of Disease Prevention and Health Promotion, Public Health Service

* For current recommendations of immunization practices, go to www.cdc.gov
APPENDIX E: Tools: Preventive Services Schedules

Adult Male Over 65 Preventive Care Flow Sheet

<table>
<thead>
<tr>
<th>PATIENT NAME</th>
<th>Put Prevention into Practice</th>
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<tbody>
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<td>DOB / /</td>
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**DATE**

<table>
<thead>
<tr>
<th>HEALTH GUIDELINES</th>
<th>AGE</th>
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<tr>
<td>Abuse</td>
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<td>Advance directives</td>
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<td>Aspirin</td>
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<td>Dental health</td>
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<td>Drugs/alcohol</td>
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<td>HIV/AIDS</td>
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<td>Injuries</td>
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<td>Mental health/depression</td>
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<tr>
<td>Nutrition</td>
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<tr>
<td>Occupational health</td>
<td></td>
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<tr>
<td>Physical activity</td>
<td></td>
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<tr>
<td>Sexual behavior</td>
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<tr>
<td>Testicular self-exam</td>
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<tr>
<td>Tobacco</td>
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<tr>
<td>UV exposure</td>
<td></td>
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<tr>
<td>Violence &amp; guns</td>
<td></td>
</tr>
</tbody>
</table>

✓ = Discussed w/ patient

**EXAMINATION & TESTS**

<table>
<thead>
<tr>
<th>Height, weight</th>
<th>Each visit</th>
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</thead>
<tbody>
<tr>
<td>Blood pressure</td>
<td>Each visit</td>
</tr>
<tr>
<td>Skin, oral, thyroid exam</td>
<td></td>
</tr>
<tr>
<td>Rectal prostate exam</td>
<td>Annual</td>
</tr>
<tr>
<td>Hemocult stool (home)</td>
<td>Annual ≥50</td>
</tr>
<tr>
<td>Testicular exam</td>
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</tr>
<tr>
<td>STD screening</td>
<td>Sexually active</td>
</tr>
<tr>
<td>Flex Sig/Colonoscopy</td>
<td>≥50y qly/qy</td>
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<td>Vision, glaucoma screen</td>
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</tr>
<tr>
<td>Cholesterol/lipid profile</td>
<td>qy</td>
</tr>
<tr>
<td>Glucose, fasting</td>
<td>qy</td>
</tr>
<tr>
<td>TB skin test</td>
<td>High risk: annual</td>
</tr>
<tr>
<td>PSA</td>
<td>TH: qy ≥50; FH: qy ≥40</td>
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**IMMUNIZATIONS**

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<td>Pneumovax</td>
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<tr>
<td>Hepatitis B</td>
<td>High Risk</td>
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O = Ordered, N = Normal, A = Abnormal Result, R = Refused, E = Done Elsewhere


* For current recommendations of immunization practices, go to www.cdc.gov
### III. Audit and Tracking Sheets

<table>
<thead>
<tr>
<th>Name</th>
<th>ID</th>
<th>Date</th>
<th>Gender</th>
<th>Race</th>
<th>Ethnicity</th>
<th>Screen Choice</th>
<th>Return Date</th>
<th>Y/N</th>
<th>FOBT</th>
<th>Result</th>
<th>Date</th>
<th>Y/N</th>
<th>Result</th>
<th>Date</th>
<th>Y/N</th>
<th>Flex Sig</th>
<th>Result</th>
<th>Date</th>
<th>Y/N</th>
<th>Diagnosis</th>
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Source: Adapted from materials developed by the Maryland Department of Health and Mental Hygiene Cancer Prevention Education Screening and Treatment Program.
Colorectal Cancer Screening – Tracking Template*

<table>
<thead>
<tr>
<th>Date</th>
<th>1. a. At-home FOBT Kit Given</th>
<th>b. FOBT Test Completed</th>
<th>c. Results Received</th>
<th>d. If No Completion or Results, Reminder Card/Letter Sent</th>
<th>e. Patient Notified of Finding</th>
<th>f. Referred for CS if Positive</th>
<th>g. Placed in Tickler File if Negative for Next Year</th>
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<th>c. FS Test Completed</th>
<th>d. FS Results Received</th>
<th>e. If No Completion or Results, FS Reminder Card/Letter Sent</th>
<th>f. FS Patient Notified of Finding</th>
<th>g. FS Placed in Tickler File if Negative</th>
<th>h. Scheduled for CS if Positive</th>
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<th>b. CS Scheduled</th>
<th>c. CS Test Completed</th>
<th>d. CS Results Received</th>
<th>e. If No Completion or Results, CS Reminder Card/Letter Sent</th>
<th>f. CS Patient Notified of Finding</th>
<th>g. CS Placed in Tickler File if Negative</th>
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* Adapted from materials developed by the Maryland Department of Health and Mental Hygiene Cancer Prevention Education Screening and Treatment Program.
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<th>FOBT Result</th>
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Source: Adapted from materials of the Maryland Department of Health and Mental Hygiene Cancer Prevention Education Screening and Treatment Program.
## IV. Brochures, Pamphlets, Posters

### From the Agency for Healthcare Research and Quality ([http://www.ahrq.gov/](http://www.ahrq.gov/))

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<thead>
<tr>
<th>Resource</th>
<th>Description</th>
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<tbody>
<tr>
<td>Fact sheet</td>
<td>Colorectal Cancer Screening: What’s New From the U.S. Preventive Services Task Force (requires Adobe Acrobat)</td>
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### From the American Cancer Society ([http://www.cancer.org/; 800–ACS–2345](http://www.cancer.org/))

<table>
<thead>
<tr>
<th>Resource</th>
<th>Description</th>
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<tbody>
<tr>
<td>Brochure and DVD</td>
<td>Colorectal Cancer Resource Kit with “Get Tested” DVD The brochure and DVD are also available in Spanish. Seven–minute informational video about screening tests for colorectal cancer. Also Available in 1/2” VHS format View the video and download the brochure online at: <a href="http://www.cancer.org/colonmd/patienteducation/index.html">www.cancer.org/colonmd/patienteducation/index.html</a> Also available in Spanish</td>
</tr>
<tr>
<td>Wall chart</td>
<td>Tests To Find Cancer Early Wall Chart (Cancer Screening Guidelines poster) Also available in Spanish</td>
</tr>
<tr>
<td>Interactive patient wheel and</td>
<td>American Cancer Society’s Get Your Tests! physician practice intervention (cancer screening patient prompt and physician reminder chart card) Patient wheel is available in English and Spanish Download chart online at: <a href="http://www.cancer.org/colonmd/patienteducation/index.html">www.cancer.org/colonmd/patienteducation/index.html</a></td>
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<td>reminder chart card</td>
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<tr>
<td>Tear pad</td>
<td>Get Your Tests! Take Home Tear Pad Available in English and Spanish</td>
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<tr>
<td>Laminated pocket card</td>
<td>Colorectal Cancer Prevention Pocket Card for Physicians Card is sized to fit a lab jacket pocket for quick reference during office hours. Includes colon cancer screening guidelines for average, increased and high risk patients.</td>
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### Cancer Facts & Figures 2006

View online at: www.cancer.org/docroot/STT/stt_0.asp

### Cancer Prevention & Early Detection Facts & Figures

Cancer Prevention & Early Detection Facts & Figures is an annual report that provides current national and state-level surveillance data on risk factors in children and adults (tobacco use, obesity and overweight, nutrition, and physical activity) as well as statistics and information on cancer screening.
## APPENDIX E: Tools: Brochures, Pamphlets, Posters

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<thead>
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<th>Tool Type</th>
<th>Description</th>
<th>Available Online or Location</th>
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<td>CME</td>
<td>Colorectal Cancer Prevention and Early Detection CME</td>
<td>Available online at: <a href="http://cme.amcancersoc.org/">http://cme.amcancersoc.org/</a> and on DVD (one hour)</td>
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<tr>
<td>Booklet</td>
<td>National Comprehensive Cancer Network (NCCN): Colon and Rectal Cancer – Version IV/February 2005 Treatment Guidelines for Patients</td>
<td>Also available in Spanish</td>
</tr>
<tr>
<td>Fact sheet</td>
<td>Colon Cancer Fact Sheet</td>
<td><a href="http://www.cancer.org/colonmd">www.cancer.org/colonmd</a></td>
</tr>
<tr>
<td>Poster</td>
<td>Colorectal Screening Poster – No Excuses</td>
<td>Main message: “If you’re 50 or older you need to be tested for colon cancer, no matter how good your excuse is.”</td>
</tr>
<tr>
<td>Lapel Pin</td>
<td>Blue Star Symbolizing power, hope, and awareness, the Lapel Pin with Insert Card Blue Star marks a reunited front in the fight against colon cancer</td>
<td></td>
</tr>
<tr>
<td>American Academy of Family Physicians (AAFP)/American Cancer Society online</td>
<td>Visit online at <a href="http://www.aafp.org/acfgenomics.xml">www.aafp.org/acfgenomics.xml</a></td>
<td></td>
</tr>
<tr>
<td>Brochure</td>
<td>Colon Testing Can Save Your Life (Chinese)</td>
<td>Printed in Chinese, this pamphlet written for general audiences with a higher reading level explains the importance of regular testing for colon cancer. Risk factors and symptoms are discussed, as well as American Cancer Society recommendations for screening. Advantages and disadvantages of various screening tests are presented in chart form. Includes American Cancer Society contact phone numbers, addresses and Web site for Chinese-speaking individuals.</td>
</tr>
</tbody>
</table>

### From the Cancer Prevention and Research Foundation (http://www.preventcancer.org/materials_new/index.cfm)

| Fact sheet | Are You at Risk for Colorectal Cancer? (requires Adobe Acrobat) | Also available in Spanish |
| Fact sheet | What You Need to Know About Colorectal Cancer | Also available in Spanish |
| Fact sheet | What African Americans Need to Know About Colorectal Cancer | Also available in Spanish |
| Fact sheet | What Hispanics Need to Know About Colorectal Cancer | Also available in Spanish |
| Fact sheet | 5 Steps to Lowering Your Risk of Colorectal Cancer | Also available in Spanish |
### APPENDIX E: Tools: Brochures, Pamphlets, Posters

<table>
<thead>
<tr>
<th>Fact sheet</th>
<th>Talking With Your Health Care Professional About Colorectal Cancer</th>
<th>Also available in Spanish</th>
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<tbody>
<tr>
<td>Fact sheet</td>
<td>Colorectal Cancer: Myth and Realities</td>
<td>Also available in Spanish</td>
</tr>
<tr>
<td>Fact sheet</td>
<td>What to Expect From a Fecal Occult Blood Test (FOBT)</td>
<td>Also available in Spanish</td>
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<tr>
<td>Fact sheet</td>
<td>What to Expect From a Sigmoidoscopy</td>
<td>Also available in Spanish</td>
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<tr>
<td>Fact sheet</td>
<td>What to Expect From a Colonoscopy</td>
<td>Also available in Spanish</td>
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<tr>
<td>Fact sheet</td>
<td>What to Expect From a Double – Contrast Barium Enema</td>
<td>Also available in Spanish</td>
</tr>
<tr>
<td>Brochure</td>
<td>Colorectal Cancer: Preventable. Treatable. Beatable!</td>
<td>Also available in Spanish</td>
</tr>
<tr>
<td>Brochure</td>
<td>Eating Healthy – Reducing Your Cancer Risk With a Healthy Diet</td>
<td>Also available in Spanish</td>
</tr>
<tr>
<td>Brochure</td>
<td>Living Healthy – 7 Steps to Cancer Prevention</td>
<td>Also available in Spanish</td>
</tr>
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</table>

**From the Centers for Disease Control and Prevention** ([http://www.cdc.gov/cancer/screenforlife](http://www.cdc.gov/cancer/screenforlife))

<table>
<thead>
<tr>
<th>Fact sheet</th>
<th>Basic Facts on Screening</th>
<th>Also available in Spanish</th>
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<tbody>
<tr>
<td>Fact sheet</td>
<td>Detailed Facts on Screening</td>
<td>Also available in Spanish</td>
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<tr>
<td>Fact sheet</td>
<td>Facts for People With Medicare</td>
<td>Also available in Spanish</td>
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<tr>
<td>Fact sheet</td>
<td>Health Professionals Facts on Screening</td>
<td>Also available in Spanish</td>
</tr>
<tr>
<td>Brochure</td>
<td>Colorectal Cancer Screening Saves Lives</td>
<td>Also available in Spanish</td>
</tr>
<tr>
<td>Brochure</td>
<td>Let’s Break the Silence</td>
<td>Also available in Spanish</td>
</tr>
<tr>
<td>Brochure</td>
<td>Colorectal Cancer Screening for People With Medicare</td>
<td>Also available in Spanish</td>
</tr>
<tr>
<td>Poster</td>
<td>Art Gallery</td>
<td>Also available in Spanish</td>
</tr>
<tr>
<td>Poster</td>
<td>Busy People</td>
<td>Also available in Spanish</td>
</tr>
<tr>
<td>Poster</td>
<td>True or False</td>
<td>Also available in Spanish</td>
</tr>
<tr>
<td>Poster</td>
<td>No Symptoms</td>
<td>Also available in Hispanic, Caucasian, African American, and Asian versions.</td>
</tr>
<tr>
<td>Poster</td>
<td>Good News</td>
<td>Also available in Hispanic, Caucasian, African American, and Asian versions.</td>
</tr>
</tbody>
</table>


| Brochure   | Women and Colorectal Cancer. What Are the Facts? | Also available in Hispanic, Caucasian, African American, and Asian versions. |

*Continued on next page*
## APPENDIX E: Tools: Brochures, Pamphlets, Posters

<table>
<thead>
<tr>
<th>Source</th>
<th>Title</th>
<th>Additional Information</th>
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<tbody>
<tr>
<td>From the Harvard Center for Cancer Prevention (<a href="http://www.hsph.harvard.edu/cancer">http://www.hsph.harvard.edu/cancer</a>; 617–998–1034)</td>
<td>Brochure: You Can Prevent Colorectal Cancer</td>
<td>Also available in Spanish, Chinese, Portuguese, Vietnamese, Khmer, Russian, and French</td>
</tr>
<tr>
<td></td>
<td>Brochure: Take Control: Get Tested for Colorectal Cancer</td>
<td>Also available in Spanish, Chinese, Portuguese, Vietnamese, Khmer, Russian, and French</td>
</tr>
<tr>
<td></td>
<td>Fact sheet: Colorectal Cancer Fact Sheet (requires Adobe Acrobat)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Slide set: Everything You Ever Wanted to Know About Colorectal Cancer Prevention and Screening (requires PowerPoint)</td>
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<td>From the Indian Health Service (<a href="http://www.ihs.gov/medicalprograms/mch/w/whdownloads">http://www.ihs.gov/medicalprograms/mch/w/whdownloads</a>)</td>
<td>Brochure: Colon Cancer</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Brochure: My Doctor Wants Me to Do What?!?</td>
<td></td>
</tr>
<tr>
<td>Other Native American (<a href="http://natacancer.org">http://natacancer.org</a>)</td>
<td>Brochure: Get on the Path to Colon Health</td>
<td></td>
</tr>
<tr>
<td>From the National Cancer Institute (<a href="http://www.cancer.gov/">http://www.cancer.gov/</a>; 800-4-CANCER)</td>
<td>Fact sheet: Screening for Colorectal Cancer</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Booklet: What You Need to Know About Cancer of the Colon and Rectum</td>
<td></td>
</tr>
</tbody>
</table>
REFERENCES

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121 Yabroff KR, Mandelblatt JS, Interventions targeted toward patients to Increase Mammography Use.


141 Ibid.

142 Klabunde CN, op cit.


147 Ibid.


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160 Dulai GW, Farmer MM, Ganz A, et al. Primary Care Provider Perceptions of Barriers to and Facilitators of Colorectal Cancer Screening in a Managed Care Setting. Cancer. May 1, 1004; 100 (9): 1843-1852.


**Consider The Facts:**

- Colorectal cancer (CRC) is the second leading cause of cancer mortality in the US even though it is largely preventable through screening and polypectomy.
- A doctor's recommendation has the greatest influence on a patient's likelihood of completing screening.
- Less than 50% of the population has had one of the recommended screening tests.
- There are proven approaches that can help doctors screen all eligible patients.
- Most primary care physicians believe a substantial proportion of their own patients are not screened.
- Members of minority groups are less likely to be screened.
- A significant percent of patients with a positive screen never receive a complete diagnostic evaluation.
- Colorectal cancer generated some of the highest malpractice awards in 2004.
- Quality guidelines require that health plans now publicly report CRC screening rates.
- Practice improvements that raise screening rates can earn Continuing Medical Education credit.

**Highlights of this Guide**

- Four essentials for improved screening rates
- Current screening guidelines
- How to overcome screening barriers
- The screening practices of primary care physicians
- Tools for your practice

This manual is available online at www.cancer.org/colonmd