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Priorities in Prevention

Colorectal Cancer Screening • April 2000

Colons. Rectums. Bowels. "It's not exactly the stuff of cocktail party conversation," said Katie Couric on her morning news show last month. Her efforts helped ignite a national conversation on colorectal cancer, or cancer of the large intestine (colon) and rectum.

Despite a national public awareness campaign and a new Medicare screening benefit, colorectal cancer screening rates remain too low. But both the public and private sectors can make a difference: see page 2.

Colorectal Cancer: Deadly, but Preventable

Fact 1–Colorectal cancer is killing Americans; lots of them. Colorectal cancer is the second leading cause of cancer-related deaths in the United States, second only to lung cancer.[1] In 1998, about 21 of every 100,000 Americans died from colorectal cancer.[2] This year about 93,800 Americans will be diagnosed with colon cancer and 36,400 with rectal cancer.[3]

Fact 2–Most colorectal cancer deaths can be prevented. Healthy lifestyles, screening to find and remove pre-cancerous polyps, and early treatment are proven ways to prevent colorectal cancer-related deaths.

The risk of colorectal cancer may be decreased by eating diets rich in vegetables and low in fat and red meat. To date, there is no definitive evidence of the association between diet and colorectal cancer, although this type of diet has many other benefits such as reducing obesity and risk of heart disease and diabetes. The results of large cohort studies in the near future may reveal more answers. Eliminating cigarettes and being physically active are also important for good health, including possible reductions in the risk of colorectal cancer.[4,5]

Because about 75% of all colorectal cancer occurs in people with no known risk factors,[6] routine screening is important for both men and women. Screening can prevent cancer development by letting clinicians find and remove benign polyps, which can exist for 10 years or more before becoming cancerous. Regular screening also helps detect cancer in its earliest stages. In fact, survival rates are good when colorectal cancer is treated early. Five-year survival for cancer that has not spread approaches 90%. But almost 2 of every 3 patients are not diagnosed at this early stage.

Fact 3–Too few Americans are screened for colorectal cancer. In 1997, only about 20% of U.S. residents aged 50+ had had an fecal occult blood test (FOBT) during the preceding year.[7]

The U.S. Preventive Services Task Force (USPSTF)[8] recommends an annual FOBT and/or periodic[9] sigmoidoscopy for people aged 50+ years. Routine screening should start earlier for people with one or more risk factors: inflammatory bowel disease, a family history of colorectal cancer, and certain hereditary conditions.[10]

Similarly, the U.S. General Accounting Office (GAO) found that in 1999 only 14.1% of Medicare beneficiaries had used any covered services for screening or diagnosis of colorectal cancer, a rate almost unchanged from that in 1995 (13.6%).[11] The stable rate is disturbing when a major barrier to screening – lack of Medicare coverage[12] – was removed in 1998.

Screening Tests: What Works?

Clinicians use several tests to screen colorectal cancer and search for precancerous polyps. Each has its limitations. More research is needed to understand optimal use, develop better screening technologies, and refine clinical protocols.

Only two colorectal cancer screening tests – FOBT and sigmoidoscopy – are proven to be effective screening tools for large numbers of asymptomatic people. An expert panel convened by the Agency for Healthcare Research and Quality (AHRQ) conducted a comprehensive review of scientific information on colorectal cancer screening. The panel found evidence that both FOBT and sigmoidoscopy screening tests

lessen colorectal cancer mortality. Indirect evidence supported the use of barium enema to reduce colorectal cancer-related deaths. The panel found no research supporting the effectiveness of colonoscopy in preventing colorectal cancer mortality, but did conclude that evidence supports using colonoscopy to monitor patients after detection of polyps or cancer.[13] USPSTF excluded barium enema and colonoscopy from its colorectal cancer screening recommendations because of insufficient evidence.[10]

Screening Tests

Fecal occult blood test (FOBT) checks for blood in feces, the presence of which could indicate cancer and precancerous polyps. Clinicians can detect a high proportion of polyps with serial FOBT over several years. Annual FOBT use can reduce colorectal cancer deaths by a third.[14,15,16] Because several conditions can cause blood in the stool, people with positive FOBT results must have further diagnostic tests.

Sigmoidoscopy uses a long, narrow scope to visually inspect the lower half of the colon, where about 50% of colorectal cancers occur. Clinicians can also biopsy suspicious lesions during the procedure. Sigmoidoscopy is associated with detecting about half of all colorectal cancers and polyps.[17,18] Together, sigmoidoscopy and FOBT can increase the rate of early cancer detection.[10]

Barium enema images the entire colon and can detect many cancers and large polyps. Sometimes clinicians substitute this test for sigmoidoscopy or colonoscopy.

Colonoscopy uses a scope similar to a sigmoidoscope, though longer and more complicated (also more expensive) to use. Clinicians can view the entire colon and immediately remove suspicious lesions. Risk is higher for complications resulting from the procedure, in part because patients are sedated. The colonoscope is less accurate than sigmoidoscopy in detecting small polyps.[13]

Cost-Effectiveness of Screening

Results of a large-scale clinical trial show FOBT to be of similar cost-effectiveness to breast cancer screening in the short term. Over the longer term, FOBT use appears to be even more cost-effective (based on estimates of the cost per life-year gained).[19] More research is needed to compare colorectal cancer screening options.

Reasons for Low Screening Rates

Medicare coverage and federal public awareness campaigns have yet to stimulate increases in screening. The GAO report identifies several reasons colorectal cancer screening is underutilized by Medicare beneficiaries:

- limited patient awareness about colorectal cancer risks and Medicare coverage for screening;
- patient hesitancy to raise the issue and undergo unpleasant or embarrassing tests;
- physician reluctance to perform the procedures because of the time and complexity involved; and
- lack of health care monitoring systems to encourage greater use.

The GAO report did not discuss how, if at all, cost-sharing requirements influence colorectal cancer screening rates – perhaps because the literature is inconclusive on this specific preventive service. Medicare does require beneficiaries to pay 20% (after the yearly deductible) of the cost of a sigmoidoscopy, barium enema, or colonoscopy. All beneficiaries can have an annual FOBT without a copay.

University of California researchers recently determined that cost-sharing requirements lowered patients' use of two cancer screening services: mammograms and pap tests. They concluded that eliminating cost-sharing for preventive services is a "relatively easy and effective means of increasing utilization of recommended clinical preventive care."[20]

Finally, 28% of employer-sponsored health plans did not cover routine colorectal cancer screening as a benefit in 1997.[21] This gap in preventive benefits means a substantial number of working Americans have to pay for the full cost of screening – a real financial barrier for those with low and moderate incomes.

Federal Efforts: Good Start, More Needed

As discussed above, Congress added colorectal cancer screening as a Medicare benefit in 1997. The Centers for Disease Control and Prevention (CDC) with other federal agencies in 1999 launched "Screen for Life," a campaign to educate older adults about colorectal cancer screening. The U.S. Senate also declared March 2000 as the first "National Colorectal Cancer Awareness Month."

One national health objective for 2010 is 14 colorectal cancer deaths/100,000 people (from the current rate of 21 deaths/100,000 people).[22] Reaching this target is achievable, but will require policymakers and business leaders to do more to prevent colorectal cancer.

Public Policy Options

Eliminate patient cost-sharing for preventive health services, including colorectal cancer screening, in Medicare, Medicaid, and other federal entitlement programs.

Cost-sharing reduces the use of many clinical preventive services by low-income populations.[23,24,25,26,27] Because

almost 75% of Medicare beneficiaries have incomes at or below $25,000/year,[28] eliminating Medicare's cost-sharing requirements for non-FOBT colorectal cancer screening may facilitate greater access to this service.

Support public awareness campaigns on colorectal cancer.
According to GAO and CDC, awareness about colorectal cancer is low. At least two studies found that people are more likely to participate in clinical screening when they understand the nature of the disease and feel they are at risk for it.[29,30] Public awareness campaigns should emphasize the benefits of screening as well as the many health benefits of good nutrition, tobacco cessation, and physical activity.

Continue support for state efforts to establish and improve cancer registries.
Population-based cancer registries provide indispensable information for clinical, epidemiological, and health services research. However, only 21 states have a population-based cancer registry (5 others participate in the National Cancer Institute's surveillance system).[22] Cancer registries produce surveillance data needed to plan cancer-control programs, allocate prevention resources, assess program outcomes, and help clinicians target high-risk populations.

Invest in community colorectal cancer initiatives.
The National Breast and Cervical Cancer Early Detection Program has enabled many community-based projects to reduce cancer screening barriers, especially for low-income women and racial and ethnic minority groups. The cumulative results? More than 2 million medically underserved women have received mammograms and pap tests, and many more are now aware of these cancers.[31]

These community-based cancer initiatives, funded by CDC, supplement national campaigns with local surveillance, public education, free screening, and counseling. Many of these programs "close the loop" by getting patients with positive screening results to return for additional tests and/or treatment.

No comparable national early detection program for colorectal cancer exists. As a result, many communities lack the financial resources to plan and implement colorectal cancer-control programs. Funding is especially needed for populations less likely to receive colorectal cancer screening, including Asians, African Americans, and Hispanics.[11]

Support research to improve colorectal cancer screening technologies and refine colorectal cancer screening protocols.

The AHRQ clinical panel found all existing colorectal cancer screening technologies had limitations. More research is required to develop more accurate and safe ways to screen for colorectal cancer.

While new medical technologies are in development, ongoing evaluation of existing colorectal cancer screening methods are essential. Additional data on costs, effectiveness, and risks for existing technologies would enable USPSTF to update its colorectal cancer screening recommendations.

Support research on behavioral change.
Research is needed to understand why more people do not seek routine screening or maintain a healthy lifestyle. Health care providers, insurers, and public health officials need a better understanding of effective ways to improve use of colorectal cancer screening and promote and support good dietary and physical activity habits.

Private Sector Opportunities

To complement public health initiatives, employers, health care organizations, and managed care plans have many opportunities to help prevent colorectal cancer and increase screening rates. Such programs can reduce productivity losses due to cancer (and many other diseases), sometimes at minimal expense.

Employers can do the following.
- Ensure that employee health insurance covers routine colorectal cancer screening with minimal or no copays.
- Arrange for worksite wellness programs to help employees lower their risk of cancer through increased physical activity, nutritious food choices, and weight loss.
- Encourage employees to use preventive health services with intra-office e-mails or reminders in employee paycheck envelopes.
- Offer flexible work schedules to facilitate use of preventive health services, including colorectal cancer screening.

Health care organizations can increase the likelihood patients receive colorectal cancer screening. Intake protocols should capture patients' screening history and risk factors. Electronic medical records can enable patient tracking and monitor how well providers meet screening goals. Other interventions that may increase cancer screening include standing orders; patient or provider reminders; patient education about screening tests; and provider education.[32]

Managed Care Plans. The National Committee for Quality Assurance can add a colorectal cancer screening measure to its Health Plan Employer Data and

Information Set (HEDIS). (HEDIS assesses how well health plans provide health care services, including preventive care.) Currently, HEDIS does not report colorectal cancer screening rates, but the National Committee for Quality Assurance is working with AHRQ, CDC, and others to develop such a measure.

Health plans that publicly report HEDIS performance data tend to deliver preventive health services at higher rates than those that do not.[33] More managed care plans, especially those with Medicare beneficiaries, need to participate in HEDIS and make their results public.

Need More Information?

American Cancer Society: www.cancer.org
CDC's "Screen for Life" Colorectal Cancer Action Campaign: www.cdc.gov/cancer/screenforlife
National Cancer Institute: www.nci.nih.gov
National Center for Chronic Disease Prevention and Health Promotion: www.cdc.gov/cancer/index.html
U.S. Preventive Services Task Force recommendations: http://odphp.osophs.dhhs.gov/pubs/GUIDECPS/

About PRIORITIES IN PREVENTION

This prevention brief was produced by *Partnership for Prevention*, a national non-profit organization whose mission is to increase the resources for and knowledge about effective disease prevention and health promotion policies and practices. PRIORITIES IN PREVENTION synthesizes available research on prominent public health and prevention policy issues and identifies opportunities for the public and private sectors to improve Americans' health.

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[8] USPSTF is a non-federal expert panel convened by the U.S. Public Health Service to make recommendations on preventive health care.
[9] Rather than specify sigmoidoscopy frequency, USPSTF merely noted other groups, such as the American Cancer Society, recommend sigmoidoscopy screening every 3-5 years, and screening once every 10 years may be adequate.
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[12] Medicare covers a colonoscopy (a clinician may choose barium enema instead) every 2 years only for beneficiaries at high risk. Colorectal cancer screening for "average risk" beneficiaries is limited to an annual FOBT, with a sigmoidoscopy or barium enema every four years.
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