Colorectal Cancer Screening

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Screening Rationale:

Adenocarcinoma of the colon and rectum is the second most common cause of death from cancer in the US and accounts for 14% of all cancer deaths. There is near equal frequency in men and women and incidence increases with age, especially after age 55 with survival closely tied to the stage at time of diagnosis. CRC screening is cost effective for all strategies and returns on investment are high in terms of years of life saved. Of all preventive cancer screening, screening for colorectal cancer has the greatest potential to save lives through the detection and removal of polyps and early cancers. All three screening modalities recommended by the USPSTF have the potential to be equally effective in the screening setting; in KPCO, flexible sigmoidoscopy has been discontinued due to patient and provider preference. Follow up of a positive fecal stool test does require colonoscopy. High risk patients should be screened with colonoscopy. As of 2008, the USPSTF has recommended discontinuation of screening after age 75 for patients with a history of previous routine screening, as the risks progressively outweigh benefits. However, since the risk of colorectal cancer rises with age, healthy unscreened adults between the ages of 76-80 years may still benefit from screening. Lastly, national racial disparities are seen both in the later stage at diagnosis and increased mortality in the African-American community. While the cause of this is still unknown, special efforts should be made to encourage screening in this group.

Clinical Settings for Application:

Adult Primary Care including Internal Medicine, Family Practice and Ob/Gyn, in cooperation with the Dept. of Gastroenterology and the Dept. of Clinical Prevention

Use of Guidelines:

These guidelines are informational only and are not intended or designed to substitute the reasonable exercise of independent clinical judgment by providers in any particular set of circumstances for each patient encounter. The guidelines are flexible and are intended to be used as a resource for integration with sound exercise of clinical judgment. They can be used to create an approach to care that is unique to the needs of each individual patient. These guidelines represent medical recommendations and implementation of these guidelines is not intended to conflict with any agreed upon health plan benefits nor is it intended to prevent access to care that the practitioner believes is warranted based on clinical judgment.

Guideline

The following recommendations are composites of several component recommendations regarding the population to be screened, screening modality, and frequency of screening.
Asymptomatic, Average-Risk Adults:
Colorectal cancer screening is strongly recommended for all asymptomatic, average-risk adults aged 50 to 75. This is an “A” recommendation by the USPSTF. Family history should be updated regularly.

1. For those with no history of routine screening, discontinuation is recommended at age 80. The decision to discontinue screening should be based on physician judgment, patient preference, the increased risk of complications in older adults, and existing comorbidities.

Acceptable options:
Either of the following tests is acceptable options for colorectal cancer screening:
1. Immunochemical FOBT every 1 to 2 years (prompted yearly)
   or
2. Colonoscopy every 10 years.

NOTE: Any positive stool test should be evaluated by colonoscopy; repeating the test is not recommended, because cancers and polyps bleed intermittently. A positive stool test following a negative colonoscopy should be discussed with GI. Evidence does not support a significant advantage of annual over biennial testing, however the annual interval is required by HEDIS and is easier operationally for patients and providers.

Less-preferred options:
The following tests are either less-preferred options or not recommended for screening. However, an adult who has had one of the tests is considered screened. Follow-up screening using a preferred option is recommended.

1. Flexible sigmoidoscopy
2. A combination of immunochemical FOBT and flexible sigmoidoscopy  
   **Note:** Flexible sigmoidoscopy is no longer offered except under special circumstances in KPCO.
3. Air contrast barium enema every 5 years
4. Virtual colonoscopy every 5 years
   - Virtual colonography (3D, thin section, helical images used to screen the colon) has a high rate of incidental extracolonic findings of which only 10% are significant. In addition, the radiation burden and cost are significant for a screening study.
   - Virtual colonography may be appropriate in special circumstances where a particular patient cannot undergo colonoscopy and yet needs diagnostic evaluation. These cases are restricted to GI and would require external referral.
5. Fecal DNA testing every 5 years.
   - DNA stool tests involve analysis of stool samples for specific tumor-associated genetic mutations associated with CRC. At this time, there is not an advantage over the immunochemical stool tests and cost is higher. Fecal DNA testing is not currently available in KPCO.
**Note:** Neither virtual colonography nor fecal DNA testing is recognized by HEDIS and neither is currently recommended as a screening modality for average risk adults by the USPSTF due to insufficient evidence regarding the balance of harms and benefits.

### Asymptomatic Adults at Increased Risk for Colorectal Cancer:

1. Colonoscopy screening beginning at age 40, or 10 years younger than the earliest diagnosis in the first-degree relative, is recommended every 5 years in adults with the following significant family history of colorectal cancer:
   - One first-degree relative (parent, sibling, or offspring) with a diagnosis of colorectal cancer at age 60 or younger.
   - Two or more first-degree relatives diagnosed with colorectal cancer at any age.
2. For adults with a family history of advanced adenomas (> or = 10 mm, or with villous features or high-grade dysplasia) presenting before age 60, colonoscopy screening beginning at age 50 is preferred.
3. Consider referral to genetics for the following members:
   - Family history of a known mutation associated with increased risk of colon cancer OR
   - Family history of multiple members (including personal history) in the same lineage (maternal or paternal) with colon cancer under the age of 50 and/or endometrial cancer any age and/or ovarian cancer any age.
4. For evaluation and follow-up of hereditary colorectal cancer syndromes and inflammatory bowel disease, referral to Gastroenterology is recommended. Hereditary syndromes include familial adenomatous polyposis (FAP), Gardner’s syndrome, and hereditary nonpolyposis colon cancer (HNPCC or Lynch syndrome), all of which may increase risk for non-GI malignancies as well.
5. Special efforts are recommended to ensure screening among adults aged 60 to 75 (as risk rises with age) and African-Americans, using any of the accepted screening modalities.
   - If colonoscopy is used for screening in adults without a family history of colorectal cancer, it is most likely to be beneficial for fit adults aged 60 to 75, where the incidence of proximal cancers is higher and the balance of benefits vs. harms is favorable. Because colonoscopy requires procedural sedation and vigorous bowel preparation and has a higher rate of complications than other tests, counseling on the benefits and risks of screening is recommended, especially in older adults with co-morbidities.
   - Observational national data demonstrate an increased risk of colorectal cancer and a more advanced stage of disease at diagnosis among blacks than among whites. It is not clear whether this disparity is due to differences in the biological behavior of colorectal cancer in blacks, differences in socioeconomic status, or differences in access to care.

Based on individual patient characteristics and clinical scenarios, more frequent screening may be appropriate. Discontinuation of screening at age 75 for high risk individuals may be recommended if there has been routine screening depending on the discretion of the provider and patient.

### Evaluation of the Symptomatic Patient:
Discuss with GI, use GI advice or referral after appropriate initial diagnostic evaluation.
**Surveillance after colonoscopy:**
See the Guideline for CRC and Polyp Surveillance

1. If no polyps or small hyperplastic polyps, repeat colonoscopy in 10 years.
2. If only 1 or 2 small (< 1 cm) tubular adenomas, repeat colonoscopy in 5 years (according to GI recommendation).
3. If 3-10 adenomas or any adenoma ≥ 1 cm, or with villous features or high-grade dysplasia, repeat colonoscopy in 3 years or per GI.

**Follow-up for members with colorectal cancer:**

1. All patients should have high quality colonoscopy of the entire colon to clear multifocal disease. If lesion is obstructing, this should be done as soon as possible after resection.
2. Repeat colonoscopy 1 year after a curative resection or the clearing colonoscopy, then in 3 years, and if normal, every 5 years or per GI.

**Methods for Measuring Compliance:**

Screening rates for members aged 50 to 75 years of age, modality of screening and compliance with screening recommendations.

**Evidence Review:**
A comprehensive review and update of the evidence with evidence tables is available in the National Colorectal Cancer Screening Guideline 2010.

The other primary source for this guideline is the 2008 set of recommendations from the USPSTF.