



A Practical Guide to Increasing Screening Colonoscopy

**Proven methods for health care facilities to
prevent colorectal cancer deaths**

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Cancer Prevention and Control Program
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The New York City Department of Health and Mental Hygiene *and*
New York Citywide Colon Cancer Control Coalition

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Introduction

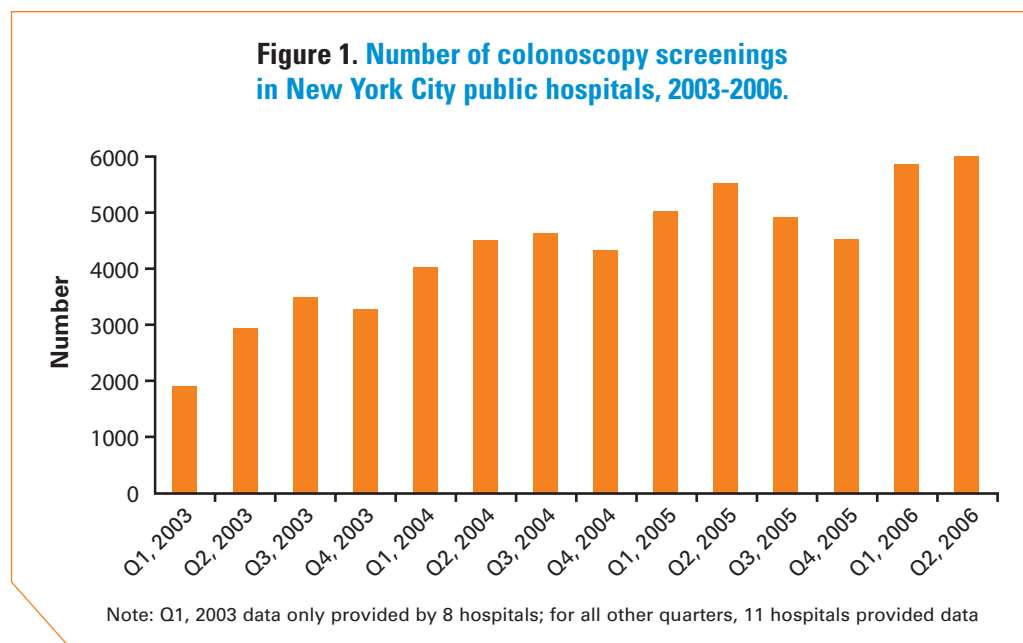
Americans face a 6% lifetime risk of developing colorectal cancer, the second leading cause of cancer death in the United States after lung cancer. In 2002, the latest year for which national statistics are available, colon cancer killed 28,471 men and 28,132 women in the United States.¹ Every year, colon cancer kills about 1,500 New Yorkers.²

Colon cancer is one of the most preventable cancers. Regular screening colonoscopy could prevent most of these deaths by early detection and removal of both cancer and precancerous polyps. A national study of colonoscopies performed on 1,418 patients with polyps suggested that periodic colonoscopy could prevent 76% to 90% of colon cancers.³ Despite this evidence, screening rates are disturbingly low—especially among African Americans (the group most likely to die of the disease) and Hispanics.²

Widespread use of colonoscopy as a routine screening tool is 10 to 15 years behind mammography. Nationally, only about 35% of people 50 and older (the age group most at risk) have ever undergone colonoscopy.⁴ In New York City, only 55% of those 50 and older have had colonoscopy in the last 10 years.⁵

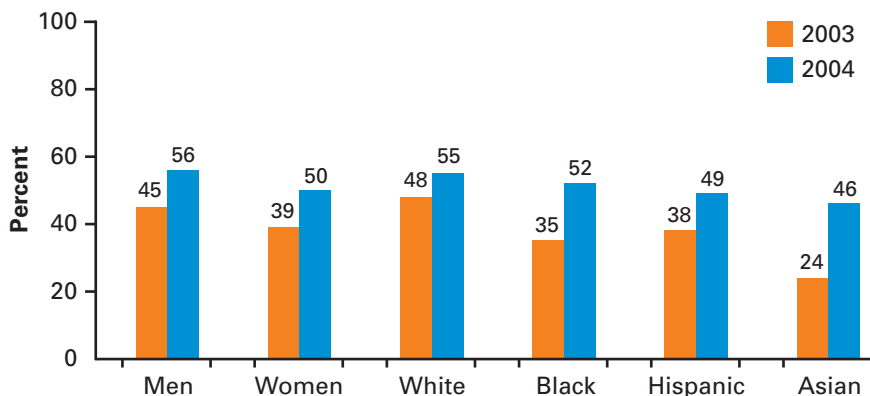
While New York City has made some progress, including doubling the number of colonoscopies performed in public hospitals (**Figure 1**) and reducing racial and ethnic disparities in screening rates (**Figure 2**), there is much more that we can and must do to significantly expand the use of colonoscopy.

The clear public health imperative, pressing medico-legal issues⁶ (such as liability for failure to diagnose cancer), and increased national attention to colorectal cancer screening (such as the new national HEDIS measure*) all drive future colonoscopy demand.



* Developed with the Centers for Disease Control and Prevention, the Harvard School of Public Health, and the RAND Corporation, the HEDIS measure assesses whether people aged 50 to 80 years have had appropriate colorectal cancer screening.

**Figure 2. Colonoscopy screening rates by race/ethnicity:
New York City, 2003-2004.***



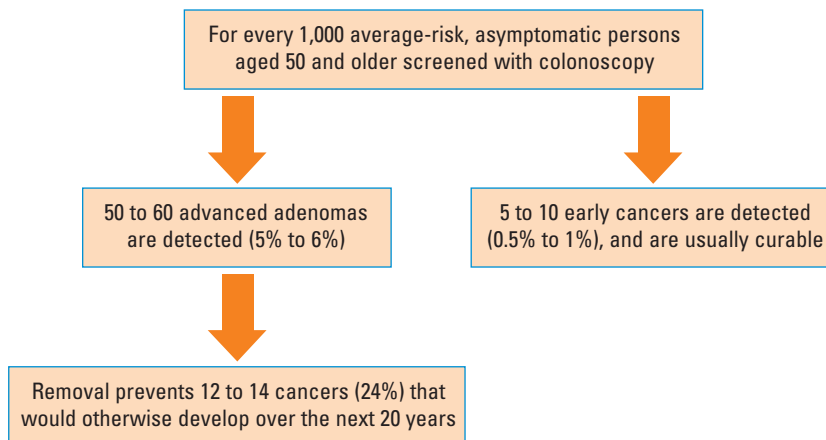
* Colonoscopy in the last 10 years among adults age 50 and older; age adjusted
Source: NYC Community Health Survey, 2003 and 2004

The Role of Colonoscopy in Preventing Colorectal Cancer

Colonoscopy is the gold standard among colon cancer screening tests.⁷ While other methods such as sigmoidoscopy, fecal occult blood testing (FOBT), double contrast barium enema, and computer tomographic (“virtual”) colonoscopy have been shown to reduce mortality, colonoscopy is the most sensitive and specific screening tool, and the only one that can actually prevent cancer. Colonoscopy allows visualization of the entire colon and rectum, enabling clinicians to identify and remove precancerous polyps and *in situ* carcinomas in a single examination.

Of 1,000 average-risk asymptomatic men and women aged 50 and older who have a screening colonoscopy, 5% to 6% will have advanced adenomas (24% of which will develop into cancer over 20 years) and 0.5% to 1% will have cancer (**Figure 3**).^{3,8}

**Figure 3. Routine colonoscopy saves lives
by preventing cancer or finding it early**



While relatively expensive, colonoscopy remains cost-effective because it is highly sensitive and needs be performed only every 10 years for people at average risk. Many insurance plans, including Medicare and Medicaid, pay all or a portion of the cost.

Doubling Colonoscopy Screening in New York City

There is no doubt that New York City's excellent medical institutions have the capacity to screen every eligible and willing resident every 10 years. Consider the following:

- In 2002, annual *unused* colonoscopy capacity was nearly 70,000, while potential maximum capacity was nearly 195,000.⁹

Public hospitals in New York City were able to double the number of screening colonoscopies between 2003 and 2006 (**Figure 1**).

- Doubling citywide delivery of colonoscopy services over the next 5 years is, therefore, a reasonable and achievable goal.

About This Guide

The New York City Department of Health and Mental Hygiene (NYC DOHMH) developed this Guide in consultation with respected experts in colorectal cancer and based on the experience of hospitals which are innovators in the field, such as the Lincoln Medical and Mental Health Center.

It offers evidence-based, expert-endorsed clinical and administrative recommendations and practical tips and tools to help endoscopy units significantly expand the use of colonoscopy to screen for and prevent colorectal cancer – while maintaining safety, quality, and cost-effectiveness.

In addition, through a system of 5 Best Practices, this Guide shows how health care facilities and endoscopy units can boost colonoscopy volume, reduce no-show rates and wait times, and improve quality of services.

5 Best Practices for Increasing Colonoscopy Screening

1. Promote routine colonoscopy referral for outpatients 50 and older.
2. Use a “direct endoscopy referral system” for eligible patients.
3. Implement triage: Screen higher risk patients first.
4. Identify patients likely to slow “throughput” and schedule them later in the day.
5. Reduce no-show rates and improve quality with a patient navigation system.

These recommendations are based on studies conducted by the DOHMH and the New York Academy of Medicine with the New York Cancer Project of AMDeC Foundation, Inc. (a consortium of medical schools and other research institutions in New York State). These studies and the recommendations of an expert panel were discussed at a colon cancer summit convened in 2003,¹⁰ and continue to drive the DOHMH's preventive strategies and initiatives, including the publication of this Guide.

Introduction References

1. U.S. Cancer Statistics Working Group. *United States Cancer Statistics: 1999-2002 Incidence and Mortality Web-based Report Version*. Atlanta: Department of Health and Human Services, Centers for Disease Control and Prevention, and National Cancer Institute; 2005. Available at: www.cdc.gov/cancer/npcr/uscs/.
2. Bureau of Vital Statistics, NYC Department of Health and Mental Hygiene. *Summary of Vital Statistics 2004: The City of New York*. New York: NYC Department of Health and Mental Hygiene; 2005. Available at: www.nyc.gov/html/doh/downloads/pdf/vs/2004sum.pdf. Accessed September 27, 2006.
3. Winawer SJ, Zauber AG, Ho MN, et al. Prevention of colorectal cancer by colonoscopic polypectomy. The National Polyp Study Workgroup. *N Engl J Med*. 1993;329(27):1977-1981.
4. National Center for Health Statistics. *National Health Interview Survey, 2005*. Hyattsville, Maryland: Public Health Service. 2005. Available at ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Dataset_Documentation/NHIS/2005/cancerxx_freq.pdf. Accessed September 28, 2006.
5. Bureau of Epidemiology Services, NYC Department of Health and Mental Hygiene. *The New York City Community Health Survey (CHS) 2005*. New York: NYC Department of Health and Mental Hygiene; 2006. Available at www.nyc.gov/html/doh/downloads/word/episrv/2005_publicuse_codebook.doc. Accessed September 28, 2006.
6. American Academy of Family Physicians. Graham Center studies medical errors based on malpractice cases. *FP Report Online*. May 2004; 10. Available at: www.aafp.org/fpr/20040500/12.html. Accessed September 27, 2006.
7. American Gastroenterological Association Colorectal Cancer Detection and Prevention. *Patient Center*. Available at: www.gastro.org/wmspage.cfm?parm1=684. Accessed September 27, 2006.
8. Stryker SJ, Wolff BG, Culp CE, et al. Natural history of untreated colonic polyps. *Gastroenterology*. Nov;93:1009-1013.
9. Leng JC, Thorpe LE, Feldman GE, et al. The volume and capacity of colonoscopy procedures performed at New York City hospitals in 2002. *Prev Chronic Dis*. 2005 Jan;2:A09.
10. New York City Department of Health and Mental Hygiene. *Colon Cancer Control Summit: Summit Background and Advisory Group Recommendations*. Available at: www.nyc.gov/html/doh/downloads/ppt/cancer/cancercolon-winawer.ppt#314. Accessed September 27, 2006.

Section I.

Recommendations and Best Practices for Expanding Colonoscopy

Hospitals are important settings to expand colonoscopy screening as they often serve large outpatient populations and often have, onsite, the oncological and gastroenterologic expertise needed to follow up patients with pathology. Onsite referral and screening can improve the quality of cancer prevention in hospital ambulatory services.

Best Practice #1. Promote Routine Colonoscopy Referral for Outpatients 50 and Older.

New York City’s hospital systems provide large volumes of ambulatory care. Increasing colorectal cancer screening can start in your institution’s outpatient facilities or in the community (Table 1). The key goal is to ensure that all patients age 50 and older are referred for a screening colonoscopy every 10 years.

Raising colorectal cancer awareness within your institution should be closely coordinated with endoscopy units to ensure that increased demand can be met.

Setting Up and Supporting a Model Facility

- Designate an organizational colonoscopy “champion” to promote routine screening colonoscopy. Based on experience, NYC DOHMH suggests this champion should be a GI chief, medical director, or hospital executive.
- Establish a mechanism to reward those responsible for increases in colonoscopy screenings and for procedures for the underinsured.
- If funding full-time endoscopy lines is a problem, set up a colonoscopy funding pool for part-time endoscopists.

Table 1. Outreach strategies to expand colonoscopy screening*

Ambulatory Care Clinics	Community Outreach	Information Technology	Staff
<ul style="list-style-type: none"> • Internal medicine • Family medicine • Geriatric medicine • Mammography • Diabetes • Smoking cessation 	<ul style="list-style-type: none"> • Places of worship • Community-based nonprofit organizations • Community health clinics • Barbershops/ beauty salons • Senior centers • Libraries • Motor vehicle offices 	<ul style="list-style-type: none"> • Query electronic medical record or billing systems monthly: <ul style="list-style-type: none"> • For patients turning 50 • To identify patients aged 50 to 80 w/o documented CRC screening • Program Physician Alert for patients 50+ • Chart ticklers for patients 50+ • E-mail alerts to physicians and nurse practitioners 	<ul style="list-style-type: none"> • Paychecks/ retirement checks • Employee newsletters/ bulletin boards • Insurance forms

* Partners such as the American Cancer Society may be able to help with flyers, chart ticklers, and/or incentives.

Best Practice #2. Use a “Direct Endoscopy Referral System” for Eligible Patients.

Direct endoscopy referral system (DERS), sometimes called “open access,” is designed so primary care providers and nurse practitioners can medically clear patients and refer them directly for colonoscopy. DERS procedures may vary depending on whether the patient comes from inside your hospital system or is an external referral.

Most patients – as many as 80% – have no contraindications and can be processed through DERS. **Table 2** features the Lincoln Hospital criteria for DERS.

Table 2. Which patients are eligible for direct endoscopy referral?

Most Patients ARE Eligible (Indications)	Some Are NOT (Contraindications)
Patients who meet <u>one</u> of these criteria ARE eligible for direct referral:	Patients who meet <u>one or more</u> of these criteria are NOT eligible for direct referral:
<ul style="list-style-type: none"> Colorectal cancer screen in patients aged 50 to 75 years 	<ul style="list-style-type: none"> On anticoagulation therapy
<ul style="list-style-type: none"> Positive fecal occult blood test (FOBT) or rectal bleed in a patient < 75 years of age with no prior GI endoscopic workup 	<ul style="list-style-type: none"> Age 76 or older
<ul style="list-style-type: none"> Iron deficiency anemia in patients < 75 years of age with NO prior GI endoscopic workup 	<ul style="list-style-type: none"> Has a prosthetic heart valve
<ul style="list-style-type: none"> Family history of colorectal cancer (provided patient is at least 5 yrs younger than the age at which relative was diagnosed) 	<ul style="list-style-type: none"> Has a co-morbidity with a future life expectancy of less than 5 years
<ul style="list-style-type: none"> Personal history of adenomatous colon polyps in a patient aged 50 to 75 years whose last colonoscopy was at least 5 years prior to referral 	<ul style="list-style-type: none"> Under treatment for any heart disease or heart failure*
<ul style="list-style-type: none"> Colonic mass lesion seen on barium enema or CT scan 	<ul style="list-style-type: none"> Under treatment for diabetes, emphysema, or hypertension* (if coordination with primary care provider is limited)

* Patients being treated for heart disease, heart failure, diabetes, emphysema, or hypertension should be evaluated prior to endoscopy. This may be done in the primary care setting if good coordination and information flow exists with the endoscopy unit. Patients with these conditions, in a primary care setting without good coordination with the endoscopy unit, should be referred to the GI outpatient clinic.

Best Practice #3. Implement Triage: Screen Higher Risk Patients First.

Efficient use of time and endoscopic resources depends on proper triage. Joint training for primary care physicians within the GI department is useful in setting up a triage system and increasing volume. Triage helps facilities reduce wait times by allocating limited resources based on need.

Colonoscopy Triage Priorities (from highest to lowest)

1. Symptomatic patients with rectal bleeding and/or anemia
2. Patients with positive FOBT
3. Symptomatic patients without any evidence of bleeding or obstruction
4. Patients with a family history of colorectal neoplasia
5. Asymptomatic men and women aged 50 to 75 who have never had a colonoscopy

■ Best Practice #4. Identify Patients Likely to Slow “Throughput” and Schedule Them Later in the Day.

Throughput is the total number of patients successfully completing colonoscopy in a given period. Decreasing no-show rates and safely reducing pre-op, post-op, and procedure time improves efficiency in the colonoscopy suite and increases the number of patients successfully examined. **Table 3** provides tips on minimizing delays and increasing efficiency in throughput.

Table 3. Maximizing throughput

Patients Known to Slow Throughput
• History of difficult colonoscopy
• History of diverticular disease
• History of pelvic surgery or pelvic radiation
• Over 75 years of age
• Obese
• Known to have comorbidities
• Non-adherent to scheduled appointment time
Increasing Throughput
• Schedule patients in small groups and assign an appointment time to the group; patients are then seen on a first-come, first-served basis.
• Allocate 2 procedure rooms per endoscopist, if possible.
• Keep pre-procedure time less than 1 hour.
• Use ancillary personnel to handle paperwork.
• Have patients send in their paperwork in advance.
• Call patients to confirm appointment and answer last-minute questions.
• Advise patients on how far in advance of their appointment to arrive.
• Keep patients informed by phone if endoscopist is running late.
• Start IVs in the holding area.
• Aim to keep median colonoscopy procedure time less than 30 minutes.
• Use allied personnel to handle recovery room issues.
• Examine room-cleaning process to ensure turnover in 30 minutes. A highly efficient process can turn over a room in 25 minutes.
• Examine setup of scope-cleaning stations for opportunities to reduce breakage during transport and/or time delay.
• Expand GI suite hours to evenings and weekends.

■ Best Practice #5. Reduce “No-Show” Rates and Improve Quality with a Patient Navigation System.

Several challenges face individuals seeking colonoscopy. Fear of pain and discomfort, embarrassment, difficulty with the preparation, distrust of the health care system, problems with transportation or insurance, lack of basic knowledge about what to expect, and time constraints prevent many people from getting colonoscopy and contribute to high no-show rates in some facilities.

Patient navigators are trained one-on-one educators who use low-tech, appropriate literacy approaches to ensure better patient education, to help patients address issues and fears, and to encourage adherence to appointment time and bowel prep. Navigators may also address insurance coverage questions.

Navigators can dramatically reduce no-show rates in hospitals that have implemented such programs; the costs of implementing a patient navigation program are generally offset by increases in billing and in examined patients.

Navigators are typically allied health care workers who understand the basics of colon cancer prevention and screening, and the cultural barriers that may limit screening participation. They work to help patients overcome these barriers, leading to dramatically lower no-show rates, improved patient understanding of colonoscopy, and improved bowel cleansing.* **Table 4** on page 9 details the duties and specific services provided by patient navigators.

Follow Up Patients with Abnormal Colonoscopy Findings

Delay in follow-up is a quality issue that may also contribute to disparities in cancer mortality among various ethnic groups. It is always the facility’s responsibility to ensure that patients are notified of abnormal findings on colonoscopy.

Follow-up Managers

Assign patients with colonoscopy findings to **follow-up managers** who are charged with patient notification. **Patient navigators are ideally suited to handle this role.** Navigators can assist with many tasks, including:

- Helping patients make follow-up appointments
- Helping patients address key barriers to adherence
- Asking about any family members at high risk of colon cancer and offering counseling
- Calling patients who miss appointments to reschedule
- Conducting intensive outreach to non-adherent patients

Most non-adherent patients are receptive to outreach. See recommendations for non-adherent patient outreach in the Colon Health Patient Navigation Resource Kit, beginning on page 21.

* The NYC DOHMH partnered with NYC Health and Hospitals Corporation’s Lincoln Medical and Mental Health Center to test patient navigation. Lincoln is located in the South Bronx, one of the poorest neighborhoods in the country. Using a New York Community Trust grant, Lincoln, with support from the NYC DOHMH, *safely tripled the volume of colonoscopies performed in less than 15 months.*

Table 4. Roles and responsibilities of the Patient Navigator

• Check the daily scheduled appointments for the GI clinic, the colorectal surgery clinic, and the endoscopy suite
• Engage the patient in a conversation about any financial, logistical, or psychosocial barriers
• Provide each patient with the navigator’s name and phone number
• Schedule the pre-admission testing appointment, if applicable
• Assist eligible patients with pre-admission testing, if applicable
• Accompany patients to the pre-admission testing office for financial and medical clearance, if necessary
• Check to see if each patient is medically and financially cleared and then booked for colonoscopy
• Call each patient the day before the scheduled colonoscopy
• Review bowel prep procedure with each patient
• Make sure each patient knows the name and location of the clinic
• Give each patient clear directions to the facility and instructions on precisely where to go on arrival
• Greet patients on arrival to clinic
• Answer questions and explain delays, if any
• Enter patient data, colonoscopy results, disposition, and follow-up recommendations into the colonoscopy database as soon as available
Monitor on a Monthly Basis:
• Total number contacted through inreach
• Total number referred for screening
• Total number that declined screening
• Total number screened by type of screening
• Total number with pathologic findings
• Total number referred for case management
• Average waiting time for colonoscopy to be performed
• Total number of screening vs. diagnostic colonoscopies
• Demographics of patients undergoing screening and diagnostic colonoscopies

Data Tracking and Evaluation

Data tracking and evaluation are key components of assessing the performance and needs of any endoscopy unit. A database with key information fields should be set up to facilitate assessment. The key characteristics of a valuable database are:

- Consistent, accurate, and complete data entry
- Ability to query the data (this is not possible using most spreadsheet programs; therefore, database programs are preferable)
- Ability to generate reports

With little more than 25 variables as in the model below (**Table 5**), a database can be the most valuable tool to ensure follow-up of all patients with abnormal colonoscopy findings.

Table 5. Sample colonoscopy database entries

1. Patient ID	15. Colonoscopy Normal (Yes/No)
2. Patient Last Name	16. Follow-up Manager
3. Patient First Name	17. Number of Adenomatous Polyps Found (1,2,3, ... 10+)
4. Patient Navigator	18. Cancer (Yes/No)
5. Referring Physician	19. Stage (0,1,2,3,4,9-Undetermined)
6. Date of Referral (MM/DD/YYYY)	20. Telephone Call #1 (MM/DD/YYYY)
7. FOBT (1-positive/0-negative/9-None)	21. Telephone Call #2 (MM/DD/YYYY)
8. Date of Colonoscopy (MM/DD/YYYY)	22. Telephone Call #3 (MM/DD/YYYY)
9. Type of Colonoscopy (1-Screening/2-Diagnostic)	23. Letter #1 (MM/DD/YYYY)
10. Date of Birth (MM/DD/YYYY)	24. Letter #2 (MM/DD/YYYY)
11. Gender (M/F)	25. Letter #3 (MM/DD/YYYY)
12. Insurance Status (0-Uninsured/1-Medicaid/2-Medicare/3-Other)	26. Follow-up Care (Provider Name)
13. Ethnicity (1-Hispanic/0-Non-Hispanic)	27. Follow-up Mode
14. Race (1-White, 2-Black, 3-Asian, 4-Other)	28. Date of First Follow-up

Benchmarking

Colonoscopy has been in widespread use since the late 1980s. Agreement on benchmarks is still being sought. **Table 6** details 12 benchmarks in 4 key areas to assist with goal setting and quality improvement and control.

Table 6. Recommendations for key benchmarks

Pathology
<ul style="list-style-type: none">• 100% of positive FOBT followed with colonoscopy• About 28% of patients will have polyps• At least two-thirds of colorectal cancers found at stages 0, 1, or 2
Quality Assurance
<ul style="list-style-type: none">• Cecal intubation successfully accomplished in at least 95% of colonoscopies• Perforation rate less than 1/3,000 for screening colonoscopy• At least 200 procedures for endoscopist to achieve proficiency in colonoscopy
Volume
<ul style="list-style-type: none">• Annual minimum colonoscopy volume of 1,500• Colonoscopy no-show rates of less than 10%• At least 50% of colonoscopies done for screening
Time
<ul style="list-style-type: none">• Wait times less than 30 days for asymptomatic patients w/+FOBT who are not anemic*• Wait times less than 3 months for all other procedures• Median procedure time under 30 minutes and total time patient in unit under 2 hours

* Patients with significant rectal bleeding should be evaluated with greater priority.

Quality Improvement

Patient satisfaction is at the core of quality improvement and control. Simple, low-tech approaches such as satisfaction surveys/questionnaires appear to be effective in assessing patient satisfaction with the endoscopy unit. Some recommendations for establishing a simple and effective survey include:

- Establish the goals of the survey
- Determine your target population/sample
- Choose a method of administering survey
- Draft the survey
- Pre-test the survey in a small sample
- Disseminate the survey
- Collect and enter data
- Analyze data

Two sample questionnaires are contained in the Colon Health Patient Navigator Program Kit on pages 27-28 of this Guide.

Foreign Language Surveys

A questionnaire in Spanish is available at: www.rand.org/health/surveys.html

Questionnaires in Bengali, Chinese, French, Gujarati, Hindi, Portuguese, and Urdu are available at: www.cancernet.co.uk/isq.htm

Section II.

Clinician-Focused Tools

Bowel Preparation

Inadequate bowel preparation is found in up to 25% of patients, and hinders the visualization of small polyps, decreases efficiency, and raises costs. There are many acceptable ways to prep the bowel. The best prep is one that is acceptable to the patient and gets the bowel cleansed safely.

The following section on bowel preparation for colonoscopy is adapted with permission from the American Society of Gastrointestinal Endoscopy's Technology Status Evaluation Report.¹¹

Background

Colonoscopy has become the standard method of examining the colon; however, the diagnostic accuracy of colonoscopy depends on the quality of the preparation. The ideal preparation for colonoscopy achieves the following:

- Reliably empties the colon of all fecal material
- Has no effect on the gross or histologic appearance of the mucosa
- Requires a relatively short period for ingestion and evacuation
- Causes no patient discomfort
- Has low potential for toxicity and produces no significant shifts of fluids or electrolytes

Polyethylene glycol electrolyte lavage solution (PEG-ELS) and oral sodium phosphate (NaP) solutions are the most widely used agents for colonic cleansing before colonoscopy.

Dehydration

Preventing dehydration is a primary concern when prescribing any bowel preparation. Patients should be counseled to maintain adequate fluid intake. There may be additional risks of nephrocalcinosis and renal failure with phosphate-containing preparations in some patients. Caution should be used in selecting preparations for patients at risk.

Types of Preparations

Table 7 compares isoosmotic vs. hyperosmotic preparations according to efficacy, patient profile, adverse effects, and mode of action. Appropriate preparation should be assessed for each patient. A summary of preparation agents can be found in **Table 8**.

Table 7. Isoosmotic vs. hyperosmotic bowel preparation

Isoosmotic (PEG-ELS methods)	Hyperosmotic
Mode of Action	
<ul style="list-style-type: none"> • Preparations containing polyethylene glycol (PEG) • Osmotically balanced, non-absorbable electrolyte solutions that cleanse bowel by washout of ingested fluid without significant fluid and electrolyte shifts. 	<ul style="list-style-type: none"> • Hyperosmotic preparations containing monobasic and dibasic sodium phosphate (NaP) draw plasma water into bowel lumen to promote evacuation. • Liquid and tablet forms currently available.
Efficacy	
<ul style="list-style-type: none"> • Produces adequate colon cleansing in 90% of adult and pediatric cases. • Although 25% of patients receiving PEG-ELS experienced what they describe as more than minimal discomfort, 86% to 90% would repeat this method in the future. • Three studies comparing standard 4-liter PEG-ELS with 2-liter PEG-ELS and either magnesium citrate or bisacodyl preparation have shown equal efficacy for cleansing with increased patient acceptance for the lower volume regimen. 	<ul style="list-style-type: none"> • Small volume hyperosmotic NaP preparations have been compared to PEG-ELS. • A meta-analysis of 1,286 subjects from 8 trials showed patients were somewhat more likely to complete the NaP based preparation, but that the 2 were therapeutically equivalent when successfully completed. • There were no significant differences in the quality of the preparation across the groups when a tablet form of NaP was compared to conventional (liquid) NaP and PEG-ELS. Patients found the tablet preparation and aqueous NaP significantly easier to take than the PEG solution: 81.6% of those randomized to tablets, and 53.3% to the aqueous NaP reported they would take the preparation again for a future colonoscopy, whereas only 25% of the PEG group reported that they would choose this preparation.
Adverse Effects	
<ul style="list-style-type: none"> • 5% - 15% of patients either have difficulty drinking the large amounts of fluid necessary, or develop symptoms such as nausea, vomiting, abdominal fullness, and cramps, leading to incomplete preparations. • Rarely, nausea, abdominal pain, aspiration of the solution, Mallory-Weiss tear, toxic colitis, PEG-induced pancreatitis, lavage induced pill malabsorption, SIADH, and cardiac arrhythmias. • Increase in plasma volume following PEG ingestion (2 studies), suggesting that careful monitoring of patients with concomitant disease states known to cause fluid retention may be warranted. • Net fluid absorption may be due to simultaneous ingestion of sugar from soda or fruit juice along with the preparation. Since glucose allows the sodium in the PEG-ELS to be absorbed, patients should be advised not to consume sugar-containing liquids within a few hours of their ingestion as glucose allows sodium in the PEG-ELS to be absorbed. 	<ul style="list-style-type: none"> • Both aqueous and tablet forms of NaP may alter serum electrolytes and extracellular fluid status by initially increasing retention of fluid, then causing excessive losses of both fluid and electrolytes in stool. • NaP based bowel preparations have been identified as a cause of renal failure from nephrocalcinosis. To alleviate possible complications from volume contraction, patients using NaP based preparations should be encouraged to drink fluids liberally during the day prior to their colonoscopy. • Asymptomatic hyperphosphatemia occurs in up to 40% of patients, but clinically significant hyperphosphatemia is rare and usually limited to patients with renal failure. • In 1 study, 20% of patients undergoing bowel preparation had abnormally low potassium levels. NaP may be contraindicated in patients with renal failure, acute myocardial infarction or unstable angina, congestive heart failure, hypertension, ileus, intestinal malabsorption, and significant ascites.
Other	
<ul style="list-style-type: none"> • Attempts to improve taste by altering specific electrolyte composition or addition of flavoring have met with conflicting results. • PEG-ELS produces no significant change in weight, vital signs, serum electrolytes, or complete blood counts. • PEG-ELS is relatively safe for patients with electrolyte imbalance, advanced liver disease, poorly compensated congestive heart failure, or renal failure. • Does not alter the histologic appearance of the colonic mucosa. 	<ul style="list-style-type: none"> • Macroscopic and histological changes to the mucosa have been described in some patients who received NaP as a preparation for colonoscopy. • Aphthoid erosions after colonic cleansing with NaP mimicking those seen in inflammatory bowel disease (2 reports). Therefore, many clinicians avoid the use of NaP preps in patients with suspected inflammatory bowel disease.

Financial Considerations

Product pricing was obtained through online pharmacy sources in February 2006 and is detailed in **Table 8**.

Summary

The choice of a bowel preparation for colonoscopy is influenced by cleansing effectiveness, safety, ease of completion, adverse effects, patient tolerance, and cost. Although PEG-ELS and NaP are equally effective in colonic cleansing, NaP is better tolerated. However, NaP may be contraindicated in certain patient populations. The selection of a colonoscopy preparation requires clinical judgment and informed patient preference. Practitioners should continue to monitor the medical literature for subsequent data about efficacy, safety, and cost of colonoscopy preparations.

Table 8. Summary of agents for colonoscopy preparation

Agent	Volume	Mechanism	Efficacy	Cost*	Comments
PEG-based Prep - Recommended for general use					
PEG-ELS: Colyte, GoLYTELY	4 Liters	Isoosmotic	33%-91%	\$18 - \$20 for generic; \$23-\$34 for brands	<ul style="list-style-type: none"> Relatively safe for patients with electrolyte imbalance, advanced liver disease, poorly compensated congestive heart failure, or renal failure. Since glucose allows the sodium in the PEG-ELS to be absorbed, patients should be advised not to consume sugar-containing liquids within a few hours of their ingestion of PEG-ELS.
PEG-ELS: HalfLytely	2 Liters + 4 bisacodyl (5 mg each) tablets	Isoosmotic plus stimulant	93%-100%	\$47.99**	
Sodium-Phosphate Based Prep – Alternative for consideration in select patients					
NaP (aqueous) Fleet Phosphosoda	90ml	Hyperosmotic	64%-90%	(90ml = 3fl. oz.) \$11 for 2 1.5 oz. bottles	<ul style="list-style-type: none"> To alleviate possible complications from volume contraction, patients should be encouraged to drink fluids liberally during the day prior to their colonoscopy. May be contraindicated in patients with renal failure, acute myocardial infarction or unstable angina, congestive heart failure, hypertension, ileus, intestinal malabsorption, and significant ascites.
NaP (tablet) Visicol	28-40 tablets	Hyperosmotic	80%	\$66.25 for 40 tablets**	

* Prices from Walgreens.com and Costco.com

** Prices from Drugstore.com

Sedation

Most patients tolerate colonoscopy well with conscious sedation. Currently, standard conscious sedation consists of benzodiazepine plus a narcotic. This regimen provides low-cost, safe, and effective sedation.

Patient comfort and satisfaction are key indicators of intention to return for follow-up procedures.

Propofol

Propofol (or Diprivan®) is an intravenous sedative-hypnotic agent from a class of intravenous anesthetics called alkylphenols. Currently, use of propofol is not standard in most GI practices for first colonoscopies but some experts recommend using the drug selectively in patients who have had prior difficulty with colonoscopy.

Some endoscopists prefer propofol because it has a more rapid onset, decreases frequency of repositioning, reduces post-procedure recovery time, and increases patient satisfaction with the procedure. Care must be taken with its use, however, because it provides a deeper level of sedation than benzodiazepine plus a narcotic, and may be associated with pulmonary aspiration or hypotension.

Compared with benzodiazepine plus a narcotic, propofol increases procedural costs up to \$1,000 or more when administered by an anesthesiologist. Propofol is not a medically necessary expense for most average-risk colonoscopy patients without comorbidities.

Recommendations for Appropriate Conscious Sedation Agent Selection

- Consider standard conscious sedation for most patients having first colonoscopy
- Consider propofol with appropriate monitoring support for patients who have had a previous colonoscopy and had prior difficulties with colonoscopy
- Consult an anesthesiologist if neither standard conscious sedation nor propofol can be used

Minimizing Complications

Patients and referring physicians should understand the risks of colonoscopy, including the risks of not having one. This allows both to make a truly informed choice. Common complications detailed by the recent medical literature are detailed in **Table 9**. In general, for every 1 person screened who suffers a non-fatal colonoscopy complication, nearly 20 who are **not** screened die from colon cancer.

The most systematic recent study was a retrospective review of colonoscopies performed at the Mayo Clinic¹² from 1994 through 2000. Among the 78,702 colonoscopies performed, there were 66 perforations and 1 death thought to be attributable to the procedure.

A Veteran's Administration Cooperative Study¹³ in 2000 reported no perforations and no deaths in 3,121 screening colonoscopies. For every patient in the study who suffered a non-fatal complication (i.e., bleeding), there were 8.1 diagnoses and treatment of high-grade dysplasia or cancer, and 32.9 diagnoses and treatment of polyps greater than 10 mm, which shows the very positive risk to benefit relationship for colonoscopy.

Table 9. Colonoscopy complications*

Study*	Year	Type	N	Polyps %	Cancer %	Perforation %	Bleeding %	Note
Anderson	2000	Mixed	10,486			0.19		
Cobb	2004	Mixed	43,609			0.03		
Dafnis	2001	Diagnostic	4,677			0.11		
Dafnis	2001	Therapeutic	1,389			0.22	0.86	
Gatto	2003	Mixed	39,286			0.20		
Imperiale	2000	Screening	1,994	23	0.6	0.05	0.15	Bleeding includes polypectomies
Iqbal	2005	Mixed	78,702			0.08		
Lieberman	2000	Screening 97% male	3,121	38	1.0	0.00	0.22	Bleeding includes polypectomies
Schoenfeld	2005	Screening 100% female	1,463	20.4	0.1	0.00	0.00	

* All studies can be found in the Key Articles on pages 31-33.

The overall health status of the patient may determine the choice of site where the procedure is performed, the form of sedation to be used, and whether the services of an anesthesiologist might help minimize risk. Comorbidity or procedural risk may tip the balance against recommending screening in some patients. Incidence of colonic neoplasia is higher in the elderly, but unfortunately, so is procedural risk.

Recommendations for Minimizing Complications

- Adherence with guidelines issued by specialty societies, such as the American Society for Gastrointestinal Endoscopy, helps ensure good practice standards.
- All patients should be assigned an American Society of Anesthesiologists (ASA) physical status.
- Most patients assigned ASA Class 3 should have their endoscopy performed in a hospital setting.* Screening colonoscopy is usually not appropriate for patients with an ASA classification higher than 3.

Follow-up of Patients with Adenomas

The timing of subsequent colonoscopies for patients with adenomas depends on the pathology and the number of adenomas detected. In many cases, endoscopy units' availability for screening can be increased by decreasing unnecessarily frequent follow-up procedures.

Recommendations for Follow-up Colonoscopies in Patients with Adenomas¹⁴

- Patients with small rectal hyperplastic polyps should be considered to have had normal colonoscopies and be scheduled for subsequent colonoscopies in 10 years.
- Patients with only 1 or 2 small (<1 cm) tubular adenomas with only low-grade dysplasia should have their next colonoscopy in 5 to 10 years.
- Patients with 3 to 10 adenomas, any adenomas \geq 1 cm, any adenoma with villous features, or high-grade dysplasia should have a follow-up colonoscopy in 3 years if the adenomas have been completely removed.
- Patients who have more than 10 adenomas should have their first follow-up colonoscopy in less than 3 years.
- Patients who have sessile adenomas that are removed piecemeal should have a short interval follow-up colonoscopy (2-6 months).

Section II References

11. Nelson DB, Barkun AN, Block KP, et al. (Technology Committee of the American Society for Gastrointestinal Endoscopy). Technology Status Evaluation Report: Colonoscopy Preparations. *Gastrointestinal Endoscopy* 2001;54(6):829-832.
12. Iqbal CW, Chun YS, Farley DR. Colonoscopic perforations: a retrospective review. *J Gastrointest Surg*. 2005 Dec;9(9):1229-35: discussion 1236.
13. Lieberman DA, Prindiville S, Weiss DG, Willett W; VA Cooperative Study Group 380. Risk factors for advanced colonic neoplasia and hyperplastic polyps in asymptomatic individuals. *JAMA*. 2003;290(22):2959-2967.
14. Winawer SJ, Zauber AG, Fletcher RH, Stillman JS, O'Brien MJ, Levin B, Smith RA, Lieberman DA, Burt RW, Levin TR, Bond JH, Brooks D, Byers T, Hyman N, Kirk L, Thorson A, Simmang C, Johnson D, Rex DK. Guidelines for colonoscopy surveillance after polypectomy: a consensus update by the US Multi-Society Task Force on Colorectal Cancer and the American Cancer Society. *CA Cancer J Clin*. 2006 May-Jun;56(3):143-59; quiz 184-5.

* American Society of Anesthesiologists Physical Status Classification System: ASA Class 1 – A normal healthy patient; ASA Class 2 – A patient with mild systemic disease; **ASA Class 3 – A patient with severe systemic disease**; ASA Class 4 – A patient with severe systemic disease process that is a constant threat to life; ASA Class 5 – A moribund patient who is not expected to survive without the operation; ASA Class 6 – A declared brain-dead patient whose organs are being removed for donor purposes.

Section III.

Tools and Resources for Administrators and Clinicians

There are many tools available to facilitate management of increased colonoscopy screenings, including navigation tools that enhance providers' time management and improve processes overall in the colonoscopy suite (pages 21-26). Assessment tools are useful to monitor and ensure patient satisfaction (pages 27-28). A myriad of online resources are also available for busy clinicians and their patients (pages 29-30).

CPT codes for colonoscopy

CPT Code	Description
45355	Colonoscopy, rigid or flexible, transabdominal via colotomy, single or multiple
45378	Colonoscopy, flexible, proximal to splenic flexure; diagnostic, with or without collection of specimen(s) by brushing or washing, with or without colon decompression (separate procedure)
45379	With removal of foreign body
45380	With biopsy, single or multiple
45382	With control of bleeding, any method
45383	With ablation of tumor(s), polyp(s), or other lesion(s) not amenable to removal by hot biopsy forceps, bipolar cautery, or snare technique
45384	With removal of tumor(s), polyp(s), or other lesion(s) by hot biopsy forceps or bipolar cautery
45385	With removal of tumor(s), polyp(s), or other lesion(s) by snare technique

General Referral for Colonoscopy

From: _____

Address: _____

Phone: _____

Fax: _____

To: _____

Address: _____

Phone: _____

Fax: _____

Patient: _____

DOB: _____

Phone #: Home _____

Work _____

Contact Person (if not Patient):

Name: _____

Phone #: Home _____

Work _____

Insurance Carrier: _____

Policy ID #: _____

Plan Authorization #: _____

Request for: () Colonoscopy Procedure
() Consultation ONLY

Reasons for Consultation: (check all that apply)

____ History of colon or rectal cancer or polyps

____ Family history of colon or rectal cancer or polyps

____ History of Crohn's disease or ulcerative colitis

____ Any of the following: abdominal pain, cramps, rectal bleeding, diarrhea, constipation, change in usual bowel habits, loss of appetite, unexplained weight loss, nausea, vomiting, or black stool

____ Other gastrointestinal disorder (specify below)

____ Relevant history:

Prosthetic heart valve

Hypertension

Heart disease

Class III or IV heart failure

Diabetes

Emphysema

Other severe

pulmonary disease

____ Other significant comorbidity (specify below)

____ Patient on Coumadin or anti-platelet therapy

____ History of adverse reaction to sedation or anesthesia

Date of Referral

Signature of Referring MD

To Referring Physician:

The above patient has been scheduled for a (circle one) consultation colonoscopy. This appointment is scheduled with

Dr. _____ on _____ at _____ AM/PM

Name

Date

Time

at _____

Location

You can contact this physician at _____

Phone

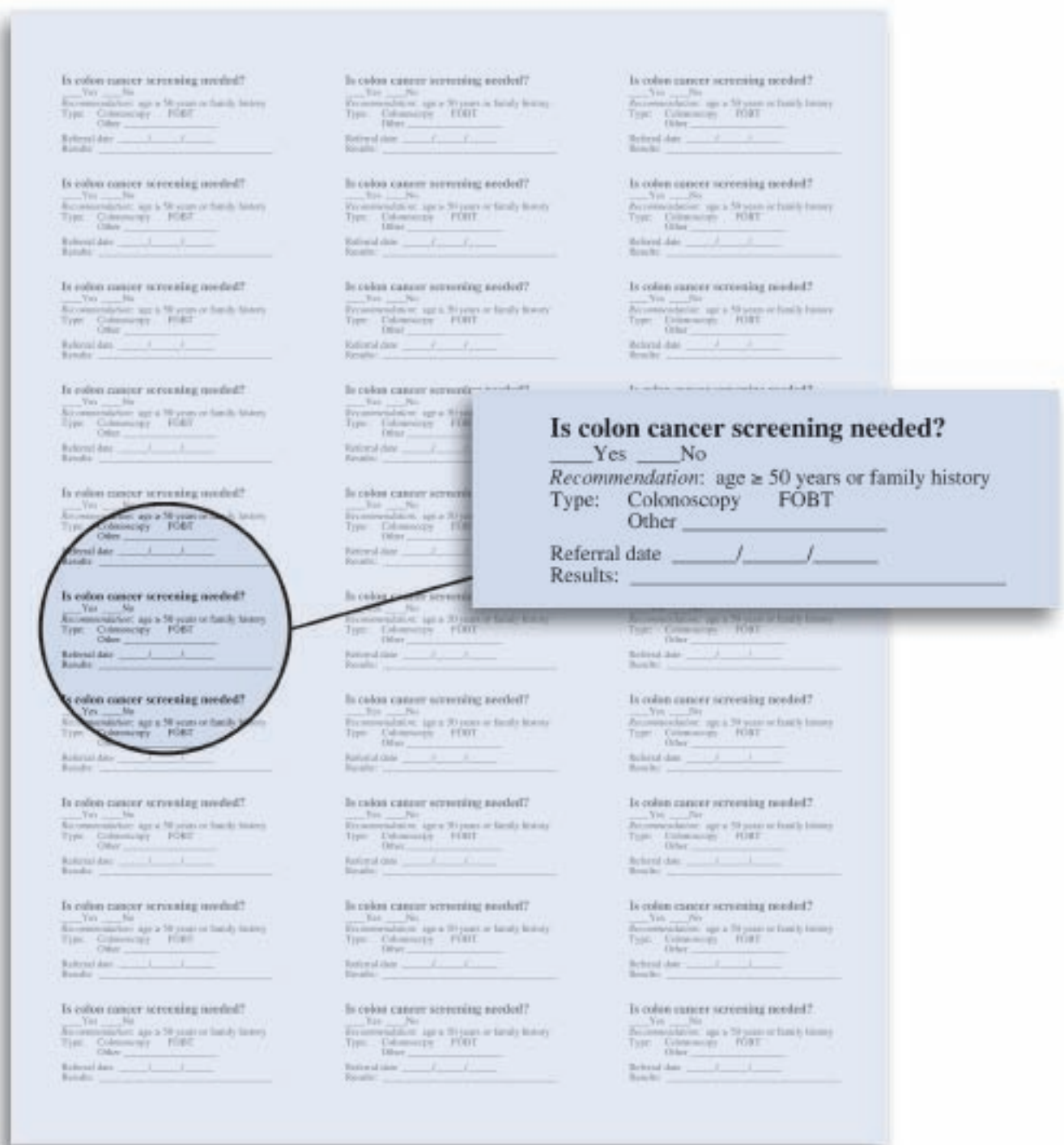


Colon Cancer Screening Chart Stickers

Printable sheet of 30 labels per page

Available at:

<http://www.nyc.gov/html/doh/downloads/pdf/csi/coloncancerkit-clin-sticker.pdf>



Low-Cost Colonoscopy Programs

New York City-specific guidelines for colorectal cancer screening recommend that most people 50 years of age and older should undergo colonoscopy every 10 years.

1) New York City Health and Hospitals Corporation (HHC)

Brooklyn

- Coney Island Hospital (718) 616-3000
- Kings County Hospital Center (718) 245-3131
- Woodhull Medical and Mental Health Center (718) 963-8000

Manhattan

- Bellevue Hospital Center (212) 562-4141
- Harlem Hospital Center (212) 939-1000
- Metropolitan Hospital Center (212) 423-6262

Bronx

- Jacobi Medical Center (718) 918-5000
- Lincoln Medical and Mental Health Center (718) 579-5000
- North Central Bronx Hospital (718) 519-5000

Queens

- Elmhurst Hospital Center (718) 334-4000
- Queens Hospital Center (718) 883-3000

HHC provides colonoscopy for patients who are uninsured. Patients may first need to see a primary care physician, who will then refer the patient to HHC for colonoscopy. Hospital staff will assist patients with applications for Medicare or Medicaid. Patients not eligible for insurance will be offered a sliding scale fee-for-service.

2) Staten Island

- **Staten Island University Hospital** Colo-Rectal Cancer Screening Center (718) 226-2370 or www.siu.edu
- **American Cancer Society (ACS)** Staten Island Region (718) 987-8871
 - ➔ **Cancer Support Groups** Contact Michelle Fusaro or Fran Newman (718) 987-8872
 - ➔ **The Healthy Woman Partnership** Contact Kay Wilday, Yvette Serrano, or Jaymie Conte (718) 987-8872

Free Colorectal Cancer Screening Programs

3) New York State Department of Health: Cancer Services Program

The Cancer Services Program (CSP) Partnerships throughout the state provide cancer screening to low income, underinsured or uninsured residents.

Hospitals can become providers by contacting and agreeing to work with an existing contract holder. A letter of agreement to comply with eligibility guidelines, reimbursement schedules, and data submission requirements is also needed.

To become a provider with this program, hospitals can work with the local CSP Partnerships listed below. Contact information for CSP Partnerships outside the city can be found at <http://www.health.state.ny.us/nysdoh/cancer/center/partnerships.htm>.

Borough	Contractor	Contact	Phone
New York	Columbia University	Grace Hillyer	(212) 342-1658
Queens	American Cancer Society	Carol Weber	(718) 263-2225 x37
Brooklyn	Bedford Stuyvesant Family Health	Jorge Bedon	(718) 636-4500 x115

Colon Health Patient Navigation Resource Kit

Sample forms in the following resource kit were adapted using the Healthcare Association of New York State Breast Cancer Demonstration Project:

www.hanys.org/bcdp/resource_kits/pnresourcekit.cfm

SAMPLE

Colon Health Patient Navigator Program Description

Please customize this program description to address your organization's needs.

I. Shape Your Program

- Define program goals, objectives, and time frames.
- Formulate a patient navigator role description:
 - Define activities
 - Identify supervisor (for feedback and support) of this role
- Develop tools:
 - Intake form
 - Tracking system/follow-up log
 - Decision tree/algorithm
 - Brochures describing the program
- Identify other departments involved in caring for target patients:
 - Involve appropriate departments in program planning (i.e., radiology, radiation oncology, patient billing, rehabilitation, hematology/oncology clinic, and surgical, medical, and nursing staff)
- Formulate outreach and education strategies

II. Identify Potential Costs

- Patient navigator hiring, training, salary, and benefits
- Supervision
- Supplies, materials, and equipment:
 - Computers
 - Patient education/support/outreach materials
- Transportation (for patients who need it)
- Outreach incentives
- Advertising
- Evaluation

III. Identify Program Evaluation Methods

- Assess collected data.
- Assess whether the program is meeting goals and objectives.
- Assess the effect on the target population.
- Assess efficiency and effectiveness of program methods.

Colon Health Patient Navigator Job Description

The following describes the type of work required by colon health patient navigators.

< YOUR FACILITY NAME >

Position Title:	Colon Health Patient Navigator
Reports To:	Director, Gastroenterology Health Services
Main Responsibilities:	The colon health patient navigator's primary function is guiding colon health patients through the health care system by assisting them with access issues, developing relationships with service providers, and tracking interventions and outcomes.

■ Colon Health Patient Navigator Activities Include:

- Guide patients through the health care system and help patients arrive at scheduled appointments on time and prepared.
- Follow up with patients when they have a suspicious colonoscopy or a positive finding.
- Connect patients to community and social support services.
- Facilitate interaction and communication with health care staff and providers.
- Provide colon health education to individuals and groups.
- Offer patient-education materials in several languages.
- Identify and develop relationships with personnel in departments involved in the care of colon health patients (i.e., physicians, surgeons, nurses, radiology staff, social services staff, radiation oncology staff, hematology/oncology clinic staff); offer educational sessions to inform practitioners of colon health patient navigator's role and services, and to encourage referrals.
- Help patients find ways to pay for their colon health care.
- Help arrange patient transportation as needed.
- Build relationships with other patient navigators.
- Track interventions and outcomes.

■ Colon Health Patient Navigator Outreach Activities

- Use community health data such as cancer mapping to identify areas of high need colon health services.
- Work with churches, synagogues, schools, libraries, and community groups to increase colon health awareness. Involve the community in program planning if possible.
- Use interventions and strategies that are appropriate to the population by taking into account culture, language, age, gender and other factors.
- Conduct colon health education classes with individuals and groups.

■ Basic Requirements

The ideal candidate should:

- Have strong computer skills.
- Have excellent communication and writing skills.
- Work effectively in a team.
- Speak and read languages common to the community.
- Be familiar with community resources and hospital processes, structure, and function.

Colon Health Patient Navigator Policies and Procedures

The following are sample policies and procedures to consider for a colon health patient navigator program.

■ Colon Health Patient Navigator/Patient Referral Policy Statement and Procedure

It is the policy of < YOUR FACILITY NAME > to provide colon health patients with an overview of the colon health patient navigator's activities and responsibilities when providing referrals for community resources.

Objective: To ensure colon health patients receive appropriate referrals in a timely manner.

Colon health patient navigators will:

1. Provide patient with information about available services, resources, and support groups (internal and external).
2. Provide appropriate resources in a timely manner to meet specific patients' needs.
3. Consider language, culture, and age in choosing referral options.
4. Allow patients time to consider resource options.
5. Serve as a liaison between the patient and the medical staff and services.
6. Assist with paperwork as needed (including social services and medical appointment assistance).
7. Document interventions.

■ Colon Health Patient Navigator Appointment Reminder Policy Statement and Procedure

It is the policy of < YOUR FACILITY NAME > to provide an overview of the colon health patient navigator's activities and responsibilities when assisting patients with scheduling and keeping appointments.

Objective: To ensure optimal patient follow-up rates.

Colon health patient navigators will:

1. Contact the patient via mail (up to 3 times) to remind the patient to make an appointment for screening.
2. Contact the patient via telephone. If the patient does not respond after the third telephone attempt, or if the patient does not have a telephone, send a certified letter.
3. For patients that need a follow-up appointment, set up the appointment while the patient is receiving treatment (i.e., while patient is still in the clinic and before he/she leaves the hospital).
4. Coordinate follow-up visits if possible.

■ Colon Health Patient Navigator In-Service Policy Statement and Procedure

It is the policy of < YOUR FACILITY NAME > to provide an overview of the colon health patient navigator's activities and responsibilities in defining their role to other hospital personnel.

Objective: To inform practitioners of services provided and encourage referrals.

Colon health patient navigators should:

1. Conduct in-service educational training with staff on colorectal cancer screening with colonoscopy, and the colon health patient navigator role.
2. Contact nursing/medical education department to inquire if continuing education credits are available.
3. Discuss importance of navigator's role (i.e., education, patient support and tracking, and treatment adherence).
4. Discuss available community resources.
5. Give insight into characteristics of the population served.
6. Request referrals.
7. Explain the referral process.
8. Provide contact information (business card or other material) to hospital staff.

■ Colon Health Patient Navigator Community Outreach Policy Statement and Procedure

It is the policy of < YOUR FACILITY NAME > to provide an overview of the colon health patient navigator's activities and responsibilities in providing colon health education to the community.

Objective: To ensure the community has access to colon health services information and education.

Colon health patient navigators should:

1. Use community health data such as cancer mapping to identify areas of high need colon health services.
2. Work with churches, synagogues, schools, libraries, and community groups to increase colon health awareness. Involve the community in program planning if possible.
3. Formulate and implement strategies and methods to reach target population.
4. Provide the community with educational classes on colon cancer prevention, early detection, and give screening guidelines.
5. Use appropriate interventions for providing colon health education to specific patient populations (i.e., culture- and age-appropriate educational materials and methods).
6. Discuss information regarding available colon health services at < YOUR FACILITY NAME >.
7. Document interventions, number of people reached, etc.

Colon Health Patient Navigator Intake Form

Name _____ Date _____

Address _____

_____ Telephone Number _____

Emergency Contact Person _____ Telephone Number _____

How were you referred to the Colon Health Patient Navigator Program?

- | | |
|---|------------------------|
| <input type="checkbox"/> Health care provider | Provider's Name: _____ |
| <input type="checkbox"/> Hospital | Hospital Name: _____ |
| <input type="checkbox"/> Support group | Name of Group: _____ |
| <input type="checkbox"/> Clinic | Name of Clinic: _____ |
| <input type="checkbox"/> Other | Please Explain: _____ |

Why were you referred to the Colon Health Patient Navigator Program?

Do any of the following hinder your ability to get to your appointments?

	Yes	No
Childcare	<input type="checkbox"/>	<input type="checkbox"/>
Transportation	<input type="checkbox"/>	<input type="checkbox"/>
Job responsibilities	<input type="checkbox"/>	<input type="checkbox"/>
Other (please explain):	<input type="checkbox"/>	<input type="checkbox"/>

Do you have health insurance? Yes No

Learning preferences:

In which language(s) do you prefer to learn? _____

Which of the following methods are most helpful in learning a new subject?

(Check all that apply)

- | | | | |
|---------|--------------------------|---------------|--------------------------|
| Written | <input type="checkbox"/> | Video | <input type="checkbox"/> |
| Oral | <input type="checkbox"/> | Demonstration | <input type="checkbox"/> |

Support system:

Who do you have available to help you at this time? _____

Who do you have available to help you at home? _____

How has your family or significant other responded? _____

Screening and follow-up care:

Date of Colonoscopy: _____

Further Needs: _____

Biopsy: _____

Follow-up: _____

Other: _____

Follow-up: _____

How do you feel the Colon Health Patient Navigator Program can best assist your personal needs?

Colon Health Patient Navigator Program

Patient Satisfaction Survey (#1)

< YOUR FACILITY NAME >
< YOUR FACILITY ADDRESS >

We want to know what you think! We will use your comments to improve the Colon Health Patient Navigator Program. Please mark only one answer for each question and return this form in the postage-paid envelope provided.

Please check the appropriate box:

	Agree	Somewhat Agree	Somewhat Disagree	Disagree
1. The patient navigator was courteous	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. The patient navigator was sensitive	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. The patient navigator was respectful	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. The patient navigator was friendly	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. The patient navigator was thorough	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. I liked working with the navigator	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Education materials I received were helpful	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Support services referrals met my needs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. I received financial information (if needed)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. I would recommend this service to others	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Do you have any suggestions for improving this service?

If you would like to discuss this further, please include your name and contact information:

Name: _____

Telephone (or other contact information): _____

Best time to contact you: _____

Thank you for your input.

Patient Satisfaction Survey (#2)

DATE: ____ / ____ / _____

Please take just 5 minutes to fill out this survey about your recent colonoscopy at < YOUR FACILITY NAME >

Circle the answer that is closest to how you feel.

THIS WILL ONLY TAKE 5 MINUTES OF YOUR TIME.

1. Was the staff polite and courteous—before, during, and after your colonoscopy?

- a) Yes.
- b) Some people were polite.
- c) I really didn't notice one way or the other.
- d) Someone wasn't nice to me. I think the person's name or position was:

2. The prep the night before the colonoscopy was:

- a) As bad as I thought it would be.
- b) Worse than I thought it would be.
- c) Better than I thought it would be.
- d) So unpleasant that I would refuse to have another colonoscopy.

3. The information I was given about my colonoscopy before the test was:

- a) More than I needed.
- b) Just right.
- c) Not enough.
- d) Not nearly enough. I still don't know why I needed a colonoscopy.

4. During the actual colonoscopy:

- a) I was out of it. I don't even remember having the test.
- b) I was mostly out, but I remember a short time.
- c) I remember a short time with some pain, cramps, or discomfort.
- d) I was very uncomfortable.
- e) I was so uncomfortable that I would not have another colonoscopy.

5. Overall, my first colonoscopy experience was:

- a) Great. Nothing to it.
- b) OK. It wasn't as bad as I thought it was going to be.
- c) Worse than I was expecting. The worst part was: _____.
- d) Very unpleasant. I wouldn't do it ever again, even if my doctor said I had to.

Other suggestions, comments, or complaints:

YOUR NAME IS NOT REQUIRED (but you can give it if you want to)

Useful Online Resources

FOR PATIENTS

From New York City Department of Health and Mental Hygiene:

Brochure: “Get Checked” Call 311 OR, visit:

www.nyc.gov/html/doh/html/cancer/colonoscopy_brochure

Health Bulletin #4: Get Checked for Colon Cancer, Call 311 OR, visit:

www.nyc.gov/html/doh/downloads/pdf/public/dohmhnews2-02.pdf

FOR PROVIDERS AND GI UNIT ADMINISTRATORS

From New York City Department of Health and Mental Hygiene:

Colon Cancer Screening Action Kit, visit:

www.nyc.gov/html/doh/html/cancer/cancercolon_actionkit.shtml

City Health Information: Preventing Colorectal Cancer, visit:

www.nyc.gov/html/doh/downloads/pdf/chi/chi22-2.pdf

NYC Vital Signs: Cancer Screening in New York City: We Can Do Much Better, visit:

www.nyc.gov/html/doh/downloads/pdf/survey/survey-2003coloncancer.pdf

From the American Gastroenterological Association:

GI Encounter and Rounding Card, visit:

www.gastro.org/wmspage.cfm?parm1=196

GI Reimbursement/Compliance Manual 2nd Edition, visit:

www.gastro.org/wmspage.cfm?parm1=194

Going Into Practice: A Guide for the GI Physician, visit:

www.gastro.org/wmspage.cfm?parm1=195

HIPAA Tool Kit, visit:

www.gastro.org/wmspage.cfm?parm1=198

History and Physical Intake Forms, visit:

www.gastro.org/wmspage.cfm?parm1=199

Job Description Manual for the GI Practice, visit:

www.gastro.org/wmspage.cfm?parm1=193

Template for a GI Compliance Plan, visit:

www.gastro.org/wmspage.cfm?parm1=197

From the American Society for Gastrointestinal Endoscopy:

Computerized Endoscopic Medical Record Systems, visit:
www.asge.org/nspages/practice/management/establishing/computerized.cfm

Establishment of Gastrointestinal Endoscopy Areas, visit:
www.asge.org/nspages/practice/management/establishing/area.cfm

Guidelines for Open Access Endoscopy, visit:
www.asge.org/nspages/practice/management/establishing/openaccess.cfm

Infection Control During Gastrointestinal Endoscopy, visit:
www.asge.org/nspages/practice/management/establishing/infection.cfm

Medical Malpractice, visit:
www.asge.org/nspages/practice/management/establishing/risk-medical.cfm

Quality and Outcomes Assessment in Gastrointestinal Endoscopy, visit:
www.asge.org/nspages/practice/management/establishing/qual_out.pdf

Quality Improvement of Gastrointestinal Endoscopy, visit:
www.asge.org/nspages/practice/management/establishing/quality.cfm

Quality Safeguards for Ambulatory Gastrointestinal Endoscopy, visit:
www.asge.org/nspages/practice/management/establishing/safeguards.cfm

Review of Endoscopic Claims, visit:
www.asge.org/nspages/practice/management/establishing/risk-review.cfm

Standards of Care, visit:
www.asge.org/nspages/practice/management/establishing/risk-standards.cfm

Standards of Practice of Gastrointestinal Endoscopy, visit:
www.asge.org/nspages/practice/management/establishing/standards.cfm

Use of Propofol in Gastrointestinal Endoscopy, visit:
www.asge.org/nspages/practice/management/establishing/1-01.pdf

FOR INFORMATION ON INFORMED CONSENT, visit:
www.asge.org/nspages/practice/management/establishing/risk-informed.cfm

FOR INFORMATION ON DOCUMENTATION, visit:
www.asge.org/nspages/practice/management/establishing/risk-documentation.cfm

Key Articles

Anderson ML, Pasha TM, Leighton JA. Endoscopic perforation of the colon: lessons from a 10-year study. *Am J Gastroenterol*. 2000;95(12):3418-3422.

Bell GD. Preparation, premedication, and surveillance. *Endoscopy*. 2004;36(1):23-31.

Brown ML, Klabunde CN, Mysliwiec P. Current capacity for endoscopic colorectal cancer screening in the United States: data from the National Cancer Institute Survey of Colorectal Cancer Screening Practices. *Am J Med*. 2003;115(2):129-133.

Charles RJ, Cooper GS, Wong RC, et al. Effectiveness of open-access endoscopy in routine primary-care practice. *Gastrointest Endosc*. 2003;57(2):183-186.

Charles RJ, Chak A, Cooper GS, et al. Use of open access in GI endoscopy at an academic medical center. *Gastrointest Endosc*. 1999;50(4):480-485.

Citarda F, Tomaselli G, Capocaccia R, et al. Italian Multicentre Study Group: Efficacy in standard clinical practice of colonoscopic polypectomy in reducing colorectal cancer incidence. *Gut*. 2001;48(6):812-815.

Cobb WS, Heniford BT, Sigmon LB, Hasan R, Simms C, Kercher KW, Matthews BD. Colonoscopic perforations: incidence, management, and outcomes. *Am Surg*. 2004 Sep;70(9):750-7; discussion 757-8.

Cotton PB, Connor P, McGee D, et al. Colonoscopy: practice variation among 69 hospital-based endoscopists. *Gastrointest Endosc*. 2003;57(3):352-357.

Dafnis G, Granath F, Pahlman L, et al. The impact of endoscopists' experience and learning curves and interendoscopist variation on colonoscopy completion rates. *Endoscopy*. 2001;33(6):511-517.

Dafnis G, Ekblom A, Pahlman L, Blomqvist P. Complications of diagnostic and therapeutic colonoscopy within a defined population in Sweden. *Gastrointest Endosc*. 2001;54(3):302-309.

Ee HC, Semmens JB, Hoffman NE. Complete colonoscopy rarely misses cancer. *Gastrointest Endoscopy*. 2002;55(2):167-171.

Feldman GE, McCord CW, Frieden TR. Preventing colorectal cancer. *City Health Information*. 2003;22(2):1-4.

Fletcher RH, Colditz GA, Pawlson LG, et al. Screening for colorectal cancer: the business case. *Am J Manag Care*. 2002;8(6):531-538.

Freeman HP, Muth BJ, Kerner JF. Expanding access to cancer screening and clinical follow-up among the medically underserved. *Cancer Practice*. 1995; 3:19-30.

Gatto NM, Frucht H, Sundararajan V, et al. Risk of perforation after colonoscopy and sigmoidoscopy: a population-based study. *J Natl Cancer Inst*. 2003;95(3):230-236.

Gennarelli M, Jandorf L, Cromwell C, Valdimarsdottir H, Redd W, Itzkowitz S. Barriers to colorectal cancer screening: inadequate knowledge by physicians. *Mt Sinai J Med*. 2005 Jan;72(1):36-44.

Gonlusen G, Akgun H, Ertan A, et al. Renal failure and nephrocalcinosis associated with oral sodium phosphate bowel cleansing: clinical patterns and renal biopsy findings. *Arch Pathol Lab Med*. 2006;130(1):101-6.

Imperiale TF, Wagner DR, Lin CY, et al. Risk of advanced proximal neoplasms in asymptomatic adults according to the distal colorectal findings. *N Engl J Med*. 2000; 20;343(3):169-174.

Iqbal CW, Chun YS, Farley DR. Colonoscopic perforations: a retrospective review. *J Gastrointest Surg*. 2005 Dec;9(9):1229-35: discussion 1236.

Jandorf L, Gutierrez Y, Lopez J, Christie J, Itzkowitz SH. Use of a patient navigator to increase colorectal cancer screening in an urban neighborhood health clinic. *J Urban Health*. 2005 Jun;82(2):216-24.

Johanson JF. Continuous quality improvement in the ambulatory endoscopy center. *Gastrointest Endosc Clin N Am*. 2002;12(2):351-365.

Lieberman DA, Prindiville S, Weiss DG, Willett W; VA Cooperative Study Group 380. Risk factors for advanced colonic neoplasia and hyperplastic polyps in asymptomatic individuals. *JAMA*. 2003;290(22):2959-2967.

Leng JC, Thorpe LE, Feldman GE, Thomas PA, Frieden TR. The volume and capacity of colonoscopy procedures performed at New York City hospitals in 2002. *Prev Chronic Dis*. 2005 Jan;2(1):A09

Levin B, Barthel JS, Burt RW, David DS, Ford JM, Giardiello FM, Gruber SB, Halverson AL, Hamilton S, Kohmann W, Ludwig KA, Lynch PM, Marino C, Martin EW Jr, Mayer RJ, Pasche B, Pirruccello SJ, Rajput A, Rao MS, Shike M, Steinbach G, Terdiman JP, Weinberg D, Winawer SJ. Colorectal Cancer Screening Clinical Practice Guidelines. *J Natl Compr Canc Netw*. 2006 Apr;4(4):384-420.

Making colonoscopy patients comfortable. *Health Benchmarks*. 2001;(10):111-112.

Markowitz GS, Stokes MB, Radhakrishnan J, D'Agati VD. Acute phosphate nephropathy following oral sodium phosphate bowel purgative: an underrecognized cause of chronic renal failure. *J Am Soc Nephrol*. 2005; 16(11):3389-3396.

Minoli G, Meucci G, Bortoli A, et al. The ASGE guidelines for the appropriate use of colonoscopy in an open access system. *Gastrointest Endosc*. 2000;52(1):39-44.

Minoli G, Meucci G, Prada A, et al. Quality assurance and colonoscopy. *Endoscopy*. 1999;31(7):522-527.

Nash D, Azeez S, Vlahov D, Schori M. Evaluation of an intervention to increase screening colonoscopy in an urban public hospital setting. *J Urban Health*. 2006 Mar;83(2):231-43.

Nelson DB, Barkun AN, Block KP, et al. Technology Status Evaluation report. Colonoscopy preparations. May 2001. *Gastrointest Endosc*. 2001;54(6):829-832.

Nelson DB, McQuaid KR, Bond JH, et al. Procedural success and complications of large-scale screening colonoscopy. *Gastrointest Endosc*. 2002;55(3):307-314.

Patient Navigator Resource Kit. Available at: http://www.hanys.org/bcdp/resource_kits/pnresourcekit.cfm#one. Accessed September 28, 2006

Rankin, GB, Sivak Jr. MV Indications, Contraindications, and Complications of colonoscopy. In Sivak Jr. MV (ed.) *Gastroenterologic Endoscopy 2nd ed*. Philadelphia: WB Saunders; p1222-1252. 2000.

Ransohoff DF. Screening colonoscopy in balance: Issues of implementation. *Gastroenterol Clin North Am*. 2002 Dec;31(4):1031-44, vii.

Rex DK. Rationale for colonoscopy screening and estimated effectiveness in clinical practice. *Gastrointest Endosc Clin N Am*. 2002;12(1):65-75.

Rex DK, Lieberman DA. Feasibility of colonoscopy screening: discussion of issues and recommendations regarding implementation. *Gastrointest Endosc*. 2001;54(5):662-667.

Schoenfeld P, Cash B, Flood A, et al. CONCERN Study Investigators. Colonoscopic screening of average-risk women for colorectal neoplasia. *N Engl J Med*. 2005;19;352(20):2061-2068.

Seeff LC, Manninen DL, Dong FB, Chattopadhyay SK, Nadel MR, Tangka FK, Molinari NA. Is there endoscopic capacity to provide colorectal cancer screening to the unscreened population in the United States? *Gastroenterology*. 2004 Dec;127(6):1661-9.

Sonnenberg A, Delco F. Cost-effectiveness of a single colonoscopy in screening for colorectal cancer. *Arch Intern Med*. 2002;162:163-168.

Stevens T, Burke CA. Colonoscopy screening in the elderly: when to stop? *Am J Gastroenterol*. 2003;98(8):1881-1885.

- Subramanian S, Amonkar MM, Hunt TL. Use of colonoscopy for colorectal cancer screening: evidence from the 2000 National Health Interview Survey. *Cancer Epidemiol Biomarkers Prev.* 2005 Feb;14(2):409-16.
- Tassios PS, Ladas SD, Grammenos I, et al. Acquisition of competence in colonoscopy: the learning curve of trainees. *Endoscopy.* 1999;31(9):702-706.
- Thomas-Gibson S, Thapar C, Shah SG, Saunders BP. Colonoscopy at a combined district general hospital and specialist endoscopy unit: lessons from 505 consecutive examinations. *J R Soc Med.* 2002 ;95(4):194-197.
- Thorpe LE, Mostashari F, Hajat A, Nash D, Karpati A, Weber T, Winawer S, Neugut AI, Awad A, Zevallos M, Remy P, Frieden T; Citywide Colon Cancer Control Coalition. Colon cancer screening practices in New York City, 2003: results of a large random-digit dialed telephone survey. *Cancer.* 2005 Sep 1;104(5):1075-82.
- Thorpe LE, Mostashari F, Feldman G, et al. Cancer Screening in New York City: We Can Do Much Better. *NYC Vital Signs.* 2003;2(2);1-4
- Vogelaar I, van Ballegooijen M, Schrag D, Boer R, Winawer SJ, Habbema JD, Zauber AG. How much can current interventions reduce colorectal cancer mortality in the U.S.?: mortality projections for scenarios of risk-factor modification, screening, and treatment. *Cancer.* 2006 Aug 24;107(7):1624-1633
- Waye JD, Williams CB. Colonoscopy and Flexible Sigmoidoscopy: Contraindications and Risks. *In Yamada T, Textbook of Gastroenterology, 4th ed.* Philadelphia: Lippincott Williams & Wilkins. p. 2861-2862. 2003.
- Wexner SD, Garbus JE, Singh JJ. SAGES Colonoscopy Study Outcomes Group. A prospective analysis of 13,580 colonoscopies. Reevaluation of credentialing guidelines. *Surg Endosc.* 2001;15(3):251-61.
- Winawer SJ, Zauber AG, Ho MN, O'Brien MJ, Gottlieb LS, Sternberg SS, et al. Prevention of colorectal cancer by colonoscopic polypectomy. The National Polyp Study Workgroup. *N Engl J Med.* 1993;329(27):1977-1981
- Winawer SJ. Screening of colorectal cancer. *Surg Oncol Clin N Am.* 2005 Oct;14(4):699-722. Review.
- Winawer SJ, Zauber AG, Fletcher RH, Stillman JS, O'Brien MJ, Levin B, Smith RA, Lieberman DA, Burt RW, Levin TR, Bond JH, Brooks D, Byers T, Hyman N, Kirk L, Thorson A, Simmang C, Johnson D, Rex DK. Guidelines for colonoscopy surveillance after polypectomy: a consensus update by the US Multi-Society Task Force on Colorectal Cancer and the American Cancer Society. *CA Cancer J Clin.* 2006 May-Jun;56(3):143-59; quiz 184-5.

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