Colonoscopy Standards

Colon Screening Program

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About the BC Cancer Agency

The BC Cancer Agency, an agency of the Provincial Health Services Authority, provides a comprehensive cancer control program for the people of BC in partnership with regional health authorities. This includes prevention, screening and early detection programs, research and education, and care and treatment.

The BC Cancer Agency’s mandate is a three-fold mission:

• To reduce the incidence of cancer
• To reduce the mortality rate of people with cancer
• To improve the quality of life of people living with cancer

This mission drives everything we do, including providing screening, diagnosis and care, setting treatment standards, and conducting research into causes of, and cures for, cancer.
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1. Introduction

1.1 Colon Screening Program

Colorectal cancer (CRC) is the third most common cancer and the second leading cause of cancer death in Canada and in other developed countries. The primary goal of the Colon Screening Program is to detect and remove colonic adenomas that are the precursor lesions of CRC. Detection and resection of asymptomatic CRC at an early clinical stage will be an added benefit. Ultimately, this will reduce the incidence and mortality from CRC.

1.2 Purpose of the Standards

The purpose of developing Colonoscopy Standards is to maximize participant safety and program efficiency and efficacy. There are modifiable factors, which affect the rate of colonoscopy-related complications and the rate of missed polyps and cancers. Standardization of colonoscopy quality with a goal of continuing quality improvement can address these factors. Furthermore, by improving the communication amongst health care providers and participants regarding appropriate screening and surveillance intervals, the rate of unnecessary testing will be decreased.

The following items are important determinants of colonoscopy quality and will be addressed in the colonoscopy standards.

Hospital and endoscopy unit standards
- Pre-colonoscopy participant assessment
- Protocol for endoscope cleaning
- Protocol for conscious sedation
- Post-colonoscopy participant instructions

Physician standards
- Documented training/experience with performing colonoscopy
- Direct Observation of Procedural Skills

Colonoscopy performance standards
- Serious adverse events
- Bowel preparation quality
- Cecal intubation rate
- Adenoma detection rate
- Complete adenoma resection and retrieval
- Standardized colonoscopy report
- Adherence to surveillance guidelines
- Participant satisfaction

The quality of colonoscopies performed will be evaluated through a standardized colonoscopy report, a follow-up participant phone call, pathology review and review of interval cancers diagnosed following colonoscopy.

### 1.3 Sources of Information

The sources of information for this document were derived from the published literature. Articles were identified from MEDLINE, Cancer Care Ontario Colonoscopy Standards, Canadian Association of Gastroenterology and American Society for Gastrointestinal Endoscopy guidelines, American College of Gastroenterology guidelines, American Gastroenterological Association guidelines, and NHS Joint Advisory Group on GI Endoscopy.

### 1.4 General Principles

- Minimize colonoscopy related complications
- Minimize missed polyps/cancers
- Optimize follow-up screening and surveillance
2. Hospital and Endoscopy Unit Standards

Institutions participating in the Colon Screening Program will be evaluated for the following: appropriate pre-colonoscopy assessment and post-colonoscopy discharge instructions, endoscope cleaning protocol, and conscious sedation protocol.

Participation in the Global Rating Scale (GRS) is required with submission of the action plans to the Health Authority Colonoscopist Lead\(^2\). The Canadian version of the GRS is at www.mdpub.org/grs/ and a username and password can be obtained at QP-E@cag-acg.org.

The institution must be able to provide a colonoscopy within 60 days for a participant with a positive FIT\(^3\) and within six months for a participant with a family history of colorectal cancer. For participants with a recommended surveillance interval of less than one year the colonoscopy must be provided within 60 days of the participant’s expected surveillance date and for participants with a recommended surveillance interval of one year or more, the colonoscopy must be provided within six months recommended surveillance date.

2.1 Pre-colonoscopy Participant Assessment

Program participants will be evaluated by regional health authority staff prior to the colonoscopy. The standardized assessment will include documentation of co-morbid medical conditions that may increase a participant’s risk during bowel preparation, conscious sedation and colonoscopy, see Assessment Form (Appendix A).

The health authority staff will provide education to the participant on colonoscopy, including potential adverse events, and give instructions regarding the bowel preparation. There will be specific alerts in the pre-colonoscopy assessment to prompt a discussion or a participant consultation with the colonoscopist prior to scheduling the colonoscopy. See Pre/Post Colonoscopy Assessment Standards.

2.2 Bowel Preparation

Participants should be provided with written preparation instructions as per the Bowel Preparation Algorithm in Appendix I.

Fleet phospho-soda is contraindicated as per Health Canada recommendations\(^4\).

As outlined in the Algorithm, bisacodyl is not recommended in standard bowel preparations as it does not improve bowel cleansing and there is a possible association with the development of ischemic colitis.

Studies have shown that split-dose bowel preparations, in which the second half of the bowel preparation is administered within six hours of the colonoscopy, improve the quality of the bowel preparation as compared to bowel preparations administered the day prior to colonoscopy and this has led to a significant increase in the adenoma detection rate\(^5\). PEG based regimens are the preferred preparation for:
If a colonoscopy is incomplete due to a poor bowel preparation, then the colonoscopist should specify the bowel preparation for the next colonoscopy and re-book the participant in a Colon Screening Program slot. After a failed preparation, an individualized bowel preparation will be required. On the Colonoscopy Reporting Form, the colonoscopist will tick the box for “Repeat colonoscopy required” and “Patient to be re-booked by colonoscopist”.

2.3 Informed Consent

Health authority staff will review the health authority’s Colonoscopy Consent Form with the participant, citing approximately 5/1,000 people will have a serious complication. Complications include having a reaction to the bowel preparation or medication used for sedation, cardiopulmonary events, infection, bleeding and perforation. The risk of dying from colonoscopy is less than 1/14,000. There is also a risk of missing a colorectal cancer or high risk polyp. This occurs in less than 1/10 cases. The participant will be given the opportunity to ask questions and be offered written information on colonoscopy including potential adverse events to review. The colonoscopist will obtain informed consent prior to the procedure.

2.4 Antithrombotic Therapy

Antithrombotic agents are medications that prevent blood clot formation and can be divided into anticoagulants and antiplatelet agents. These medications may increase a participant’s risk of bleeding following colonoscopic polypectomy. Non-steroidal anti-inflammatory medications (ie. ibuprofen, naproxen) are not prescribed to prevent clot formation but as a side effect they do inhibit platelet function and increase the bleeding time. Prospective studies have concluded that aspirin and non-steroidal anti-inflammatory medications can be safely continued for colonoscopy and polypectomy.

Whether a medication is discontinued prior to undergoing colonoscopy involves balancing the risk of bleeding following polypectomy and the risk of clotting if the antithrombotic medication is discontinued. Participants on antiplatelet agents (aside from aspirin and non-steroidal anti-inflammatory drugs), anti-thrombin agents and anticoagulants should be reviewed by the health care provider prior to the colonoscopy to decide timing of the colonoscopy, discontinuation of the antithrombotic agent, the need for bridging anticoagulation and when the antithrombotic agent can be restarted. These decisions may
be made in conjunction with the participant’s primary care provider, cardiologist or neurologist.

The following are examples of anticoagulants and antiplatelet agents with the Canadian brand names in brackets. New antithrombotic agents may be available in the near future so this list should not be considered exclusive:

**Anticoagulants**

- Warfarin (Coumadin)
- Heparin
- Low-molecular weight heparin
  - Enoxaparin (Lovenox)
  - Dalteparin (Fragmin)
- Fondaparinux (Arixtra)
- Dabigatran (Pradax)
- Rivaroxaban (Xarelto)
- Apixaban (Eliquis)
- Desirudin (Iprivask)

**Antiplatelet agents**

- Aspirin
- Cilostazol (Pletal)
- Thienopyridine agents
  - Clopidogrel (Plavix)
  - Ticlopidine (Ticlid)
  - Prasugrel (Effient)
  - Ticagrelor (Brilinta)

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### 2.5 Need for Prophylactic Antibiotics

Routine antibiotic prophylaxis is not recommended prior to colonoscopy. Antibiotic prophylaxis prior to colonoscopy is recommended for participants undergoing continuous peritoneal dialysis to prevent peritonitis. A single dose of ampicillin plus an aminoglycoside may be given intravenously just prior to the colonoscopy. Intraperitoneal antibiotics the night prior to colonoscopy is an alternative strategy. The abdomen should be emptied of fluid prior to colonoscopy.
2.6 Protocol for Endoscope Cleaning

Hospitals and endoscopy units participating in the Colon Screening Program will be required to document adherence to vendor guidelines for colonoscope cleaning and maintenance, and adherence to hospital infection control standards with periodic monitoring. It is recommended that automated machine, not manual processes, be used for cleaning of endoscopes.

The use of simethicone during colonoscopy reduces the bubbles in the colon thereby improving visibility. Simethicone does not appear to be an infection control issue.

2.7 Protocol for Conscious Sedation

Conscious sedation should be offered to all participants undergoing colonoscopy unless it is considered to be medically contraindicated by the colonoscopist. The participants should understand that they may decline sedation. Each institution providing colonoscopies for the Colon Screening Program will need to ensure the necessary protocol, equipment and personnel are present in order to provide safe and effective conscious sedation.

2.8 Monitoring Protocol

During colonoscopy with conscious sedation, monitoring of blood pressure, heart rate, oxygen saturation, level of consciousness and level of discomfort is required. The participant should be monitored post-procedure until stable. Each institution providing colonoscopies for the Colon Screening Program will need to ensure the appropriate monitoring protocol is in place.

2.9 Resuscitation Equipment

Oxygen source, airway (oral, endotracheal tube), laryngoscope, defibrillator and Advanced Cardiac Life Support protocol medications should be readily available.

2.10 Personnel Trained in Resuscitation

At least one physician with current certification in Advanced Cardiac Life Support available within 5 minutes.

2.11 Post-Colonoscopy Participant Instructions

The participant will be provided with an instruction sheet relaying the results of their procedure, when to seek medical attention for potential colonoscopy related complications and who to contact.

Health authority staff will phone each participant 14 days post-colonoscopy to assess for any unplanned events that may have occurred the day prior to colonoscopy and following
colonoscopy. The Health authority staff will discuss any pathology results with the colonoscopist and relay re-screening or surveillance recommendations to the participant.

Health authority staff will complete the Follow-up Recommendations Form (Appendix B) and fax it to the BCCA. BCCA will generate a letter based on the Follow-up Form, which will outline the next recommended screening test and interval for the participant. This letter will be sent to the primary care provider, the colonoscopist and the health authority. See Appendix C for a sample letter.

If a colorectal cancer is identified, then the colonoscopist will organize the appropriate investigations for staging, and if necessary, a surgery and oncology referral or the colonoscopist will refer the participant back to the primary care provider for the primary care provider to make these arrangements. There may be other indications for the colonoscopist to continue to care for the participant. For example, if high-risk or unusual pathology is identified, if inflammatory bowel disease is identified or if the participant has symptoms that require further investigation.
3. Physician Standards

3.1 Physician Standards

Colonoscopists participating in the program will be evaluated on the following:

- Formal colonoscopy training.
- Continuing colonoscopy experience with a minimum of 200 colonoscopies per year averaged over three years.
- Competence in biopsy, snare polypectomy (with and without cautery), submucosal injection, polyp retrieval, tattooing and endoscopic hemostasis of post-polypectomy hemorrhage.
- Colonoscopy privileges at a British Columbia hospital.
- In good standing with the College of Physicians and Surgeons of British Columbia.
- Willing to participate in continuing colonoscopy medical education and quality improvement programs including Direct Observation of Procedural Skills (DOPS).
- Willing to complete Colonoscopy Report Forms for program colonoscopies.
- Meets performance benchmarks as outlined in Section 6.

The Colonoscopy Reporting Form, Appendix D, must be used to record details of the procedure. This form is completed in addition to the hospital’s standard dictated or synoptic report. Physician colonoscopists unwilling to provide the level of detail outlined in the Colonoscopy Reporting Form cannot be part of the program.

It is the responsibility of the health authority to review annually whether a colonoscopist meets the standards as outlined above and to determine if privileges to perform Colon Screening Program colonoscopies will be granted for the coming year. The health authority has responsibility for managing what, if any, actions may result when participating colonoscopists do not meet the standard.

Colonoscopists will bill MSP with their usual process for colonoscopy and consultation as required.
3.2 Direct Observation of Procedural Skills (DOPS)

The Direct Observation of Procedural Skills (DOPS) is a formative assessment of colonoscopy skills developed by the Joint Advisory Group for Gastrointestinal Endoscopy to ensure high quality colonoscopy was performed in the UK Bowel Cancer Screening Program. DOPS has been validated in the UK for both trainees and independent endoscopists\textsuperscript{13}. The DOPS tool consists of four domains that are graded by 2 independent observers assessing at least 2 colonoscopies. Grades 3 and 4 are considered acceptable. Colonoscopist DOPS Assessors have completed a DOPS Assessor Course. The DOPS can be completed during a colonoscopist’s regular endoscopy slate and does not require additional equipment. The DOPS policy, DOPS form, grading system and description of grades are in Appendix E. Colonoscopists can register for DOPS by requesting the DOPS Request form from ColonScreeningQuality@bccancer.bc.ca and submitting the completed form.
4. Colonoscopy Performance Standards

The quality of colonoscopies performed will be evaluated in a continuing manner. Several quality indicators will be assessed including serious adverse events, bowel preparation, cecal intubation rate, complete adenoma resection and retrieval, adenoma detection rate and adherence to surveillance guidelines. Individual and aggregate results will be reported annually in the Colonoscopist Quality Report.

4.1 Serious Adverse Events

The Colon Screening Program will monitor for colonoscopy-related complications. Serious adverse events are defined as events resulting in hospitalization, blood transfusion, repeat colonoscopy, interventional radiology procedure, surgery, or death.

The overall rate of serious adverse events should be less than 5/10006. The perforation rate should be less than 1/10006,7 for all colonoscopies performed at institutions participating in the program.

There are recommendations that screening colonoscopies should have a perforation rate of less than 1/2000. Most colonoscopies performed for the Colon Screening Program are to evaluate a positive FIT, and the majority of these participants will require a polypectomy, which may increase the rate of perforation three-fold.

4.2 Bowel Preparation

An adequate bowel preparation is associated with increased cecal intubation and adenoma detection rates. If inadequate, further investigations need to be arranged, for instance a repeat colonoscopy with a more intensive bowel preparation.

Categories of bowel preparation quality:

- Excellent = no more than small bits of adherent fecal matter
- Good = small amounts of fluid or fecal matter not interfering with exam
- Fair = adequate to detect all polyps > 5mm
- Poor = inadequate to detect all polyps > 5mm

4.3 Cecal Intubation Rate

Cecal intubation is defined as insertion of the colonoscope beyond the ileocecal valve into the caput coli enabling complete visualization of the medial wall of the cecum proximal to the ileocecal valve8.

The expected adjusted cecal intubation rate is ≥ 95% for screening colonoscopies and the unadjusted cecal intubation rate is ≥ 90%.12 Adjusted cecal intubation rate does not include
Colon screenings terminated due to an inadequate bowel preparation or severe colitis but does include those terminated due to an obstructing lesion.

Photo documentation of the cecum is required.

If the cecum is not intubated, further investigations need to be arranged within 60 days; this is the responsibility of the colonoscopist. Repeat colonoscopy is strongly recommended. If repeat colonoscopy cannot be completed, then CT Colonography is another option.

Biopsies of the terminal ileum to document a complete colonoscopy is discouraged.

4.4 Adenoma Detection Rate

A high adenoma detection rate is associated with fewer interval colorectal cancers\(^{14}\) and death due to colorectal cancer\(^{15}\).

Adenoma detection rate depends on successful cecal intubation, an adequate bowel preparation and appropriate withdrawal time. However, when these indicators are held constant, the most important predictor of adenoma detection rate is the colonoscopist. Ensuring high quality withdrawal technique to maximize visualization of the colonic mucosa by distending, cleaning, suctioning fluid, examining the proximal side of folds and re-examining colon segments is essential to optimizing adenoma detection.

The adenoma detection rate of individual colonoscopists will be compared to the mean adenoma detection rate for the entire program. The benchmark for adenoma detection rate following a positive FIT is > 50%\(^{16}\).

4.5 Withdrawal Time

A longer withdrawal time is associated with an increased adenoma detection rate\(^{17}\).

The minimum colonoscope withdrawal time for colorectal cancer screening is 6 minutes, not including time to perform polypectomy.

The withdrawal time will increase depending on various factors including colon length, bowel preparation quality and haustral prominence. Timing colonoscope withdrawal begins once cecal intubation is confirmed.

An endoscopist’s mean withdrawal time is based on procedures in which no intervention was performed and withdrawal time does not need to be recorded for procedures in which polypectomies are undertaken.

4.6 Complete Adenoma Resection and Retrieval

Incomplete adenoma resection is thought to be associated with interval cancers\(^{18}\). All polyps should be completely excised from the colon and rectum with the possible exception of typical hyperplastic rectal polyps. If piecemeal resection of a high risk polyp is required then a repeat colonoscopy to evaluate for adequacy of resection in 6 months is recommended\(^{19}\).
Snare polypectomy is more likely to completely resect a polyp than biopsy forceps. Cold snare polypectomy is an excellent choice for polyps less than 1 cm in size as it decreases the risk of perforation and has not been shown to increase the risk of post-polypectomy hemorrhage. Submucosal injection of saline or other solution prior to snare polypectomy of a sessile polyp may also reduce the risk of perforation. Similarly, many experts are using blended current for polypectomy rather than pure coagulation in an attempt to reduce the incidence of post-polypectomy perforation. The newer electrosurgical generators produce high frequency pulses of cutting current and a prolonged coagulation current to achieve hemostasis without deep tissue injury.

Reasonable effort should be made to retrieve all polyp fragments to submit for pathologic assessment.

4.7 Colorectal Cancers Diagnosed Outside of the Screening Program

Screening Program participants will be monitored for the diagnosis of colorectal cancers outside of the screening program. A post-screen detected colorectal cancer is defined as cancer diagnosed in the time interval between the date of the participant’s last screening test and the date they were due for their next screening test plus six months. A non-compliance colorectal cancer is defined as a cancer diagnosed more than six months after the participants last recommended screening date.
5. Screening and Surveillance Guidelines

5.1 Screening and Surveillance Guidelines

Following a negative (no adenomas or SSA/P) colonoscopy:

- Average risk participants who had a positive FIT result but a negative colonoscopy will re-enter FIT screening in the 10th year following colonoscopy\(^2\). See Appendix H for further information.

- Participants with one first degree relative with CRC diagnosed under the age of 60 years or ≥2 first degree relatives with CRC diagnosed at any age will have a repeat colonoscopy in five years\(^1\).

- Adenoma or SSA/P identified at last prior screening episode, repeat colonoscopy in five years\(^1\).

- For average risk participants who have previously had a low risk adenoma or SSA/P resected and a normal colonoscopy at the 5 year surveillance interval, the colonoscopist may elect to extend the interval for the next colonoscopy out to 10 years at their discretion\(^1\).

Further investigations of a positive FIT following a negative colonoscopy may be indicated in a participant with upper gastrointestinal symptoms or iron deficiency anemia and will be at the discretion of the participant’s physician.

Following a colonoscopy with removal of an adenoma or SSA/P\(^2\):

- Repeat colonoscopy in five years for a low risk adenoma or SSA/P.

- Repeat colonoscopy in three years for a high risk adenoma or SSA/P or ≥ 3 low risk adenomas or SSA/Ps.

- A high risk adenoma or SSA/P includes the following:
  - High grade dysplasia
  - Villous features
  - Size ≥ 10 mm
  - Sessile serrated polyp/adenoma ≥ 10 mm in size
  - Sessile serrated polyp/adenoma of any size with dysplasia
  - Traditional serrated adenoma of any size
- **Piecemeal resection of a high risk adenoma or SSA/P:**
  - Repeat colonoscopy in 6 months to document complete excision. If the pathologist is able to document complete excision on the pathologic specimen than repeating the colonoscopy within 6 months is not necessary and the surveillance interval is determined using the criteria above. If there is no evidence of residual neoplastic tissue, then the next colonoscopy is 3 years from the original colonoscopy. For lateral spreading tumors, even once complete excision is established, more frequent surveillance may be indicated at the discretion of the colonoscopist.

**Following a colonoscopy where cancer is identified**\(^\text{21}\):

Referral for staging and treatment should be arranged through the usual practice in the community. The colonoscopist would either:

- Arrange staging and treatment and advise the primary care provider this has been done or;
- Refer the participant back to the primary care provider for the primary care provider to arrange staging and treatment.

**Following an incomplete (negative) colonoscopy and negative CT colonography:**

If CT colonography is performed and is negative, then re-screening with FIT should resume in five years.

### 5.2 Deviation from Guidelines

There may be individual variation in surveillance recommendations following adenoma excision based on various factors including the quality of the bowel preparation and concern regarding the completeness of polypectomy or a participant's risk. In these situations, the surveillance interval is left to the colonoscopist's judgment.

The only reasons for a participant to leave the Colon Screening Program are age >74 years, a diagnosis of colorectal cancer, or a diagnosis of ulcerative or Crohn's disease. Individuals with Lynch Syndrome or Attenuated Familial Adenomatous Polyposis require screening for other malignancies and should also be managed outside the Colon Screening Program by a colonoscopist with expertise in hereditary colon cancer syndromes. All other participants should continue to be screened and surveyed in the program and if their screening needs to be individualized, then this can be done by citing and explaining the deviation on the follow-up form. Participants can be seen for office visits at the colonoscopist’s discretion while still participating in the Colon Screening Program.

Below are two instances when surveillance at an interval less than three years should be considered\(^\text{21}\).
More than 10 adenomas at one exam:

Once the colon is cleared of polyps, more frequent surveillance may be indicated. More than 10 adenomas could indicate a genetic mutation and referral to the Hereditary Cancer Program should be considered (see below).

**Serrated Polyposis Syndrome:**

Hyperplastic polyps are typically small, occur in the left side of the colon and do not increase an individual’s risk of CRC. Larger, proximal and numerous hyperplastic polyps are classified as Serrated Polyposis Syndrome (formerly Hyperplastic Polyposis Syndrome).

**Serrated Polyposis Syndrome** is defined by one of the following three criteria:

1. \( \geq 5 \) serrated polyps proximal to the sigmoid colon of which \( \geq 2 \) are \( \geq 1 \)cm.
2. 30 serrated polyps of any size distributed throughout the colon.
3. A first-degree relative with Serrated Polyposis Syndrome and serrated polyps proximal to the sigmoid colon.

Serrated Polyposis Syndrome increases an individual’s risk of colorectal cancer. More frequent colonoscopic surveillance is indicated (1-2 years).

5.3 Other significant findings

Colonoscopies performed within the Colon Screening Program may reveal significant findings beyond the scope of the program. For instance, participants diagnosed with anal intraepithelial neoplasia or squamous cell carcinoma of the anus, carcinoid tumors, gastrointestinal stromal tumors, or Peutz-Jehger polyps. In this situation, the colonoscopist should either arrange follow-up or guide the primary health care provider in the appropriate management.

These participants will remain in the Colon Screening Program and be re-called at the appropriate interval for colorectal cancer re-screening or surveillance as outlined above.
5.4 Hereditary Colorectal Cancer

Referral to the Hereditary Cancer Program may be indicated for Screening Program participants with high-risk colonoscopy findings or a high-risk family history. It is the responsibility of the colonoscopist to guide the primary health care provider in making the referral. Further information regarding the Hereditary Cancer Program referral criteria are available on the BCCA website.

- Participants with 10 or more neoplastic polyps (adenomas, sessile serrated adenoma/polyps, traditional serrated adenomas) during their lifetime may have a hereditary polyposis syndrome and require more frequent colonoscopy surveillance.

- Serrated Polyposis Syndrome increases an individual's risk of colorectal cancer. More frequent colonoscopic surveillance is indicated (1 - 2 years). Serrated Polyposis Syndrome is defined by one of the following three criteria:
  - > 5 serrated polyps proximal to the sigmoid colon of which ≥ 2 are ≥ 1cm.
  - 30 serrated polyps of any size distributed throughout the colon.
  - A first-degree relative with Serrated Polyposis Syndrome and serrated polyps proximal to the sigmoid colon.

- Possible Lynch Syndrome:
  - Personal history of:
    - colorectal cancer ≤ age 40
    - colorectal cancer ≤ age 50 AND no family history known due to adoption
    - a Lynch syndrome related cancer at any age with IHC-deficient/MSI-H result (report required)
    - 2 Lynch syndrome related cancers, with at least 1 colorectal cancer and a cancer ≤ age 50
  - Family history that includes:
    - a close relative with personal history as above, OR
    - 2 first degree relatives with a Lynch syndrome related cancer, both ≤ age 50 and including at least 1 colorectal cancer, OR
    - 3 or more Lynch syndrome related cancers, involving more than 1 generation, with at least 1 colorectal cancer and at least 1 cancer diagnosed ≤ age 50 (Lynch syndrome related cancers include: colorectal, endometrial, ovarian, gastric, small bowel, hepatobiliary, pancreatic, kidney, ureter, brain tumours, sebaceous gland adenomas, or pathologically-confirmed colorectal adenoma ≤ age 40)
6. Colonoscopy Continuous Quality Improvement

The goal of the Colon Screening Program is to provide safe colorectal cancer screening and prevention in a cost-effective manner for the population of British Columbia. To ensure safe and efficient provision of colonoscopy screening, regular monitoring of colonoscopy outcome data against established standards is essential. Identification of results below benchmarks offers the opportunity for immediate improvement.

Colonoscopy procedure data will be captured at the time of the procedure on the Colonoscopy Reporting Form.

Performance indicators evaluated include the following:

- **Adjusted cecal intubation rates**
  - Benchmark ≥ 95%

- **Unadjusted cecal intubation rates**
  - Benchmark ≥ 90%

- **Adenoma detection rates**
  - ≥ 50% at colonoscopy for abnormal FIT.

- **Adenoma resection rates for polyps < 20 mm in size**

- **Adenoma retrieval rates**
  - Benchmark: ≥ 90%

- **Unplanned events**
  - All colonoscopies for Colon Screening Program participants with unplanned events will be reviewed and serious adverse events aggregate rates monitored.
  - Serious adverse events less than 5/1000 for Colon Screening Program participants and perforation rate of less than 1/1000 for all colonoscopies.
  - Unplanned events the day prior to colonoscopy and within 14 days post-procedure will be captured by the health authority staff during the phone interview.

- **Follow-up recommendations based upon the pathology report** will be monitored to assure surveillance intervals are in keeping with the published guidelines.

- **Participant and physician satisfaction surveys** will be required at regular intervals.

- **Wait times for colonoscopy**
  - Abnormal FIT result (date of FIT result to procedure)
    - Benchmark: 60 days
  - Initial family history screen (date of referral to procedure)
    - Benchmark: 6 months
Colon Screening Program: Colonoscopy Standards

- Surveillance (date of previous procedure and recommended interval to procedure)
  - Recommended surveillance interval < 1 year benchmark: 60 days
  - Recommended surveillance interval ≥ 1 year benchmark: 6 months
7. References


19. GPAC guidelines. Follow-up of colorectal cancer or polyps. March 2013, http://www2.gov.bc.ca/gov/content/health/practitioner-professional-resources/bc-guidelines


# Appendix A - Assessment Form

**INSTRUCTIONS:** Fax page 3 to the Colon Screening Program.

<table>
<thead>
<tr>
<th>Patient Name</th>
<th>Date of Birth (dd/mm/yyyy)</th>
<th>PIN</th>
</tr>
</thead>
</table>

## Alerts for Colonoscopy:
- Anticoagulation
- Antiplatelet agent
- Defibrillator/Pacemaker
- Diabetic insulin/insulin pumps
- Sleep Apnea

### Comments:

## Assessment Date (dd/mm/yyyy):

### Medication

<table>
<thead>
<tr>
<th>Medication</th>
<th>Dose</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

### Allergies:
- N/A

## Reason for Colonoscopy Assessment:
- + FIT (g/ml)
- + Family History
- + Surveillance/Deivation

## Symptoms (within last 6 months):

<table>
<thead>
<tr>
<th>BM Frequency (≤3/day)</th>
<th>No</th>
<th>Yes</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recent changes in bowel habits</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diarrhea</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Constipation</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Rectal bleeding</td>
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<tr>
<td>Bowel urgency</td>
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<td></td>
<td></td>
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<tr>
<td>Unexplained weight loss</td>
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<tr>
<td>Abdominal pain</td>
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<tr>
<td>Upper GI Symptoms (e.g. nausea, swallowing difficulty, anemia)</td>
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</tr>
</tbody>
</table>

### Comments:

---

**Colon Screening Program**

Page 1 of 4

FORM 21001  VERSION: 12/NOVEMBER2014

501-600 West Broadway | Vancouver, BC | V5Z 1G1 | 1-877-70-COLON | www.screenbc.ca

Page 24
### Colon Screening Program: Colonoscopy Standards

<table>
<thead>
<tr>
<th>Medical History</th>
<th>Yes</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gastrointestinal (e.g., ulcers, Barrett's, Ménétrier's disease)</td>
<td></td>
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<tr>
<td>M. colonoscopy or flexible sigmoidoscopy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Surgery (e.g., cholecystectomy and other)</td>
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<td></td>
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<tr>
<td>Cardiac (e.g., Atrial Fibrillation, CHD, CVD)</td>
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<tr>
<td>Hypertension</td>
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<td></td>
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<tr>
<td>Respiratory (e.g., Sleep Apnea, Asthma, COPD)</td>
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<tr>
<td>Liver</td>
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<tr>
<td>Renal (e.g., Documented eGFR &lt;60 ml/min, condition requiring E.K.T. [1 L/min])</td>
<td></td>
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<tr>
<td>Diabetes (e.g., Type 1/2, Insulin, and GLP-1 agonists)</td>
<td></td>
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<tr>
<td>Glaucoma</td>
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<td>Epilepsy</td>
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<td>Stroke</td>
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<tr>
<td>Cancer</td>
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<tr>
<td>Bleeding disorder</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blood transfusion concerns (e.g., anemia with iron)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Problems with sedation or anesthesia</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Comments / Other Medical Concerns:**

---

**Patient Lives:**
- [ ] Alone
- [ ] With (specify): ____________

**Do you consider yourself to have a disability?**
- [ ] No
- [ ] Yes
  - [ ] Mental health difficulty
  - [ ] Diabetes
  - [ ] Mobility
  - [ ] Progressive disability (e.g., MS)
  - [ ] Learning disability
  - [ ] Blind/partially blind
  - [ ] Deaf/HOH
  - [ ] Other (specify):

**Smoker:**
- [ ] No
- [ ] Yes
  - [ ] Yes, how many (specify): ____________

**ETOH:**
- [ ] No
- [ ] Yes
  - [ ] Yes, units/week: ____________

**Recreational or illicit Drug Use:**
- [ ] No
- [ ] Yes
  - [ ] Substance: ____________
  - [ ] Frequency: ____________

**Height (cm):** ____________

**Weight (kg):** ____________

**BMI:** ____________
Assessment Form

INSTRUCTIONS: For Info page to the Colon Screening Program 1-800-257-9540

<table>
<thead>
<tr>
<th>PATIENT NAME</th>
<th>DATE OF BIRTH (dd/mm/yy)</th>
<th>PHN</th>
</tr>
</thead>
</table>

Date Patient 1st Contacted (dd/mm/yy)
Assessment: [ ] In Person  [ ] By Phone  [ ] Patient Not Contacted

FOR ALL PATIENTS
Family History: 1st degree relative with CRC: [ ] No  [ ] Yes  [ ] More than three 1st degree relatives

<table>
<thead>
<tr>
<th>Relative</th>
<th>Age of Diagnosis (years)</th>
<th>Any relative with HNPCC connected Cancer?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relative</td>
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</tr>
<tr>
<td>Relative</td>
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</tr>
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</table>

[ ] Patient proceeding to colonoscopy at part of the Colon Screening Program

<table>
<thead>
<tr>
<th>1st available date (dd/mm/yy)</th>
<th>Booked date (dd/mm/yy)</th>
<th>Procedure Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient teaching</td>
<td>Patient instructions (if applicable)</td>
<td></td>
</tr>
<tr>
<td>Appointment details provided</td>
<td>Advised to discontinue iron 5-7 days prior</td>
<td></td>
</tr>
<tr>
<td>Procedure explained</td>
<td>Diabetics - patient aware to consult w/ GP or specialist regarding fasting &amp; medications</td>
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<td>Pacemaker - ensure hospital protocols are met for these patients</td>
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<td></td>
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<td>Transportation home discussed, ride to be provided by:</td>
<td>Teaching date/time:</td>
<td>Teaching Coordinator:</td>
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[ ] Patient NOT proceeding to colonoscopy as part of the Colon Screening Program (please specify)

- Communication provided to OP/NP
  - Colonoscopy screening/surveillance/follow-up
  - CRC surveillance
  - Other (please specify)
- Outside the target age: [ ] Patient declined
- Medically unfit: [ ] Unable to contact patient
- Family history does not meet colonoscopy eligibility: [ ] Other (please specify)
- Patient is not proceeding at this time but a future recall is required: future date (dd/mm/yy): [ ] FIT  [ ] Colonoscopy

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פסקה ב minded תורגם באופן טבעי: Colon Screening Program: Colonoscopy Standards

Assessment Form

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Assessment Form

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[ ] Patient NOT proceeding to colonoscopy as part of the Colon Screening Program (please specify)

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  - CRC surveillance
  - Other (please specify)
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- Patient is not proceeding at this time but a future recall is required: future date (dd/mm/yy): [ ] FIT  [ ] Colonoscopy

Comments:

<table>
<thead>
<tr>
<th>Patient Coordinator Name</th>
<th>Patient Coordinator Signature</th>
<th>Location</th>
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</thead>
<tbody>
<tr>
<td>Date</td>
<td>Notes</td>
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</table>
## Appendix B - Follow Up Recommendation Form

### Follow up Recommendations

**Instructions:** For a copy of the Colon Screening Program: 1-800-297-8560

<table>
<thead>
<tr>
<th>Patient Name</th>
<th>Date of Birth (dd/mm/yy)</th>
<th>PHN</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Colonoscopylist</th>
<th>Colonoscopy Date (dd/mm/yy)</th>
<th>Follow-up Date (dd/mm/yy)</th>
</tr>
</thead>
</table>

- Partial follow-up only (complete unplanned event section only); repeat colonoscopy required and was indicated on CRP.

### 1) Unplanned Events

- Did the patient require medical attention the day prior to the procedure or up to 14 days after colonoscopy?
- Yes [ ]
- No [ ]
- Unable to contact [ ]
- If yes, please complete Unplanned event form

### 2) Summarization of Colonoscopy Findings (Clinical/Pathology) (Please select one option)

- Hyperplastic polyp removed, other findings or no polyps found (please specify):
  - No family history of CRC or 1 first degree relative with CRC diagnosed after age 60 (PET re-screening in 10 years)
  - 1 first degree relative with CRC diagnosed before age 60 or 2 or more first degree relatives with CRC at any age (Repeat colonoscopy in 5 years)
  - Personal history of adenoma(s) (request colonoscopy in 5 years)

- Adenoma removed (please specify):
  - < 3 low risk adenomas (Repeat colonoscopy in 5 years)
  - > 3 low risk adenomas or high risk* polyps removed (Repeat colonoscopy in 5 years)
  - *A high-risk polyp has villous features, high-grade dysplasia or ≥ 10 mm. Sizable Serrated Adenomas with dysplasia and Traditional Serrated Adenomas are high-risk.

- Other (please specify):
  - Colorectal adenocarcinoma identified; recommendations per medical team, patient no longer followed by program
  - Inflammatory bowel disease identified; recommendations per medical team, patient no longer followed by program.

### 3) Follow Up Recommendations (Please select one option)

- Follow up as per Colon Screening Program Re Screening and Surveillance Guidelines (as above)
- Follow up deviates from Colon Screening Program Re Screening and Surveillance Guidelines (as below)

Colonscopy is recommended in _____ Months _____ Years

- Incomplete Visualization:
  - Adequacy of polypectomy uncertain
  - Other: ____________________________

Other: ____________________________

4) Other

- Patient required surgery for polyp removal
- Patient required CT colonoscopy for complete visualization
- Normal CTC, FIT re-screening in 5 years

<table>
<thead>
<tr>
<th>Patient Coordinator Name</th>
<th>Patient Coordinator Signature</th>
<th>Date Signed (dd/mm/yy)</th>
</tr>
</thead>
</table>

---

800-636 West Broadway | Vancouver, BC | V5Z 1L1 | 1-677-79-COLON | www.screeningbc.ca

Page 28
Appendix C - Sample Follow Up Recommendations Letter

04 Aug 2017

DR. MAY CHIN
ST. LUKE FAMILY PRACTICE
5 - 5761 GLOVER ROAD
LANGLEY, BC V3A 0M8

Notification: Colon Screening Program Follow-Up Recommendations

To: __________________________

From: __________________________

Reason: __________________________

Patient was booked for a colonoscopy through the Colon Screening Program with __________________________

Reason for Colonoscopy: Surveillance reasons

No unplanned events were reported requiring medical attention in the two week period immediately after the booked colonoscopy date.

Next Steps: This patient will be re-called by the Colon Screening Program for a surveillance colonoscopy in 3 years. Further FIT screening is not required for this patient as this recommendation replaces biennial FIT screening.

Reference Information

The colonoscopist and patient coordinator are being sent copies of this letter to validate that the correct follow-up information has been captured for this patient. Please document any requested corrections below, sign and date, then fax to 604-297-9340. An amended letter will then be generated. This letter was sent to: DR. MAY CHIN: Dr Vivian, Anthony; Fraser East Colonoscopy Centre.

If your patient has moved and changed their address, please contact the program at 1-877-702-6586 so we can update their information.

Colon Screening Program
801-686 W Broadway | Vancouver, BC | V5E 1G1 Tel | 1-877-70-COLON | Fax | 1-604-297-9340 | www.screeningbc.ca
## Colonoscopy Reporting Form

**Patient Name:** [Last, First Middle]  
**Date of Birth:** (mm/dd/yyyy)  
**Procedure Date:** (mm/dd/yyyy)  
**Procedure Start Time:** (24 hr)  
**Hospital Site:**  
**Colonoscopist:**

### 1. Bowel Preparation
- Excellent  
- Good  
- Fair (adequate to visualize all polyps > 5mm)  
- Poor (inadequate to visualize all polyps > 5mm)

### 2. Cecal Intubation (or Becoloscopy anoscopy achieved)
- Yes → Photo documentation?  
- No

### 3. Unplanned Events
- None  
- Perforation  
- Bleeding  
- Reversal agents  
- Cardiovascular  
- Death  
- Respiratory  
- Other (specify):

### Specimen Table

<table>
<thead>
<tr>
<th>Specimen Type</th>
<th>Location</th>
<th>Staining</th>
<th>Morphology</th>
<th>Primary Removal Mode</th>
<th>Complete Retrieval (Y/N)</th>
<th>Comp Ret Time (Y/N)</th>
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### Additional Specimens
- Additional specimen recorded on Page 3

### Repeat Colonoscopy Required
- Patient to be re-worked by Colonoscopist
- Patient to be re-worked by Patient Coordination (complete ‘C’ column on follow-up recommendations page)

### Pathology Report

**Send Copies of Pathology Report To:**

1. BCRA Colon Screening Program  
   Fax: 1 (604) 297-9340

2. [GP Name & NDC]  
3. [Other Name & NDC]  
4. [Other Name & NDC]

**Specimen Tracking Required by Facility**:  
- [No] Yes  
- Number of samples sent to collection lab:  
- Number of samples transported to lab:  
- Number of samples received by lab:  

**Pathology Copy**: Fax this copy to 1 (604) 297-9340

**Information On This Form Is Confidential. If You Receive This In Error, Please Fax To Quality Dept. 1 (888) 675-7223**
Policy Title: Reporting of Direct Observation of Procedural Skills (DOPS) to Colon Screening Program
Quality Management Committee

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<td>Effective:</td>
<td>14 Dec 2016</td>
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1. **SCOPE**

DOPS Assessors
Colonoscopists participating in the Colon Screening Program
Health Authority appointed Colonoscopy Leads
Colon Screening Program Staff
Medical Director, Colon Screening

2. **POLICY**

Direct Observation of Procedural Skills (DOPS) is a peer assessment of colonoscopists’ performing colonoscopy for the Colon Screening Program. Responsibility for colonoscopists’ performance review, privileging and credentialing remains with the Regional Health Authorities

DOPS reviews are conducted under Section 51 of the BC Evidence Act, for the purpose of quality improvement within the Colon Screening Program.

The Colon Screening Program will be transparent about its purpose, collection and handling of information.

For each DOPS review, two trained DOPS Assessors will simultaneously and independently observe a colonoscopist perform two consecutive colonoscopies. For each observation, each DOPS Assessor will complete a validated DOPS assessment. This will result in four written assessments for each DOPS review performed. The assessment form will be faxed to the Colon Screening Program and then given by the DOPS Assessor to the colonoscopist. The assessment form will not be retained by the DOPS Assessor.

DOPS Assessors will provide feedback to colonoscopists undergoing DOPS. The Colon Screening Program and DOPS Assessors will provide information on continuing education opportunities as part of quality improvement to colonoscopists participating in DOPS.
The Colon Screening Program Quality Management Committee will receive and review aggregate data.

DOPS Assessors will report concerns identified in DOPS Assessments to the Health Authority appointed Colonoscopist Lead (CL) in that colonoscopist’s Health Authority (HA). The CL will review the concern at the Colon Screening Program Quality Management Committee (QMC).

The recommendations from the QMC will be communicated to the colonoscopist as part of quality improvement. As appropriate, concerns will be reported to the HA senior medical administration.

The College of Physicians and Surgeons of BC should be alerted if a colonoscopist is physically or mentally impaired and unable to perform colonoscopy at the time the DOPS is performed.

The Colon Screening Program will not share results of the DOPS Assessment when reporting concerns to the HA or the College of Physicians and Surgeons of BC. This information will be kept confidential at the BC Cancer Agency Colon Screening Program. It is the colonoscopist's decision to share their DOPS Assessment with their HA.

3. RELATED POLICIES

N/A

4. RESPONSIBLE PARTY

Medical Director, Colon Screening Program

Screening Operations Director, Colon Screening Program

Approved by Colon Quality Management Committee on December 14, 2016.
**Formative DOPS Assessment Form**

**Colonoscopy and Flexible Sigmoidoscopy**

*Adapted from Joint Advisory Group on G Endoscopy*

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<td><strong>Assessment, consent, communication</strong></td>
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<tr>
<td>- Obtains informed consent using a structured approach</td>
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<td>- Satisfactory procedural information</td>
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<tr>
<td>- Risk and complications explained</td>
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<td>- Co-morbidity</td>
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<td>- Sedation</td>
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<tr>
<td>- Opportunity for questions</td>
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<td>- Demonstrates respect for patient’s views and dignity during the procedure</td>
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<tr>
<td>- Communicates clearly with patient, including outcome of procedure with appropriate management and follow-up plan. Full endoscopy report.</td>
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<tr>
<td><strong>Safety and sedation</strong></td>
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<tr>
<td>- Safe and secure IV access</td>
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<tr>
<td>- Uses appropriate dose of anaesthesia and sedation and ensures adequate oxygenation and monitoring of patient</td>
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<tr>
<td>- Demonstrates good communication with the nursing staff, including dosages and vital signs</td>
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<tr>
<td><strong>Endoscopic skills during insertion and procedure</strong></td>
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<tr>
<td>- Checks endoscope function before intubation</td>
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<tr>
<td>- Performs PR</td>
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<tr>
<td>- Maintains lateral view / inserts in lateral direction</td>
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<tr>
<td>- Demonstrates awareness of patient’s consciousness and pain during the procedure and takes appropriate action</td>
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<tr>
<td>- Uses torque steering and controles appropriately</td>
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<tr>
<td>- Uses distension, suction and tube washing appropriately</td>
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<tr>
<td>- Recognizes and logically resolves loop formation</td>
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<td>- Uses position change and abdominal pressure to aid lateral views</td>
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<td>- Completes procedure in reasonable time</td>
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<tr>
<td><strong>Diagnostic and therapeutic ability</strong></td>
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<tr>
<td>- Adequate mucosal visualisation</td>
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<td>- Recognises caecal/desc. colon landmarks or incomplete examination</td>
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<tr>
<td>- Accurate identification and management of pathology</td>
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<tr>
<td>- Uses dosage and therapeutic techniques appropriately and safely</td>
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<tr>
<td>- Recognises and manages complications appropriately</td>
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<td>Average</td>
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<td>Hardly difficult</td>
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<td>Very challenging</td>
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*BC Cancer Agency*
DOPS Grade Descriptors: Colonoscopy and Flexible Sigmoidoscopy

Descriptors for each grade in all four domains are given below to improve consistency of grading. The key descriptor level is Grade 3. Grade 4 assumes achievement of all components at Grade 3 level and some achievement above this. The descriptors set expectations for the performance in each domain, but should be used as a guide – colonoscopists do not have to meet all criteria in each descriptor to achieve a grade in that domain.

Assessment, Consent and Communication

Grade 4
Complete and full explanation in clear terms including proportionate risks and consequences with no omissions of significance, and not unnecessarily raising concerns. No jargon. Encourages questions by verbal and non-verbal skills and is thoroughly respectful of individual’s views, concerns and perceptions. Good rapport with patient. Seeks to ensure procedure is carried out with as much dignity and privacy as possible. Clear and appropriate communication throughout procedure and afterwards a thorough explanation of results and management plan.

Grade 3
Good clear explanation with few significant omissions, covering key aspects of the procedure and complications with some quantification of risk. Little jargon, and gives sufficient opportunity for questions. Responds to individual’s perspective. Aware of and acts to maintain individual’s dignity. Appropriate communication during procedure including warning patient of probable discomfort. Satisfactory discussion of results and management plan with adequate detail.

Grade 2
Explains procedure but with several omissions, some of significance. Little or no quantification of risk, or raises occasional unnecessary concerns. Some jargon and limited opportunity for questions or sub-optimal responses. Incomplete acknowledgement of individual’s views and perceptions. A few lapses of dignity only partially or tardily remedied. Occasional communication during the procedure and intermittent warnings of impending discomfort. Barely adequate explanation with some aspects unclear, inaccurate or lacking in detail.

Adapted from Joint Advisory Group on GI Endoscopy from thejaq.org.uk

DOPSCR 15.JANUARY.2015
Grade 1

Incomplete explanation with several significant omissions and inadequate discussion, lacking quantification of risks or raising significant fears. Uses a lot of jargon or technical language; minimal or no opportunity for questions. Fails to acknowledge or respect individual's views or concerns. Procedure lacks dignity and there is minimal or no communication during it. Explanation of results and management is unclear, inaccurate or lacking in detail without opportunity for discussion.

Safety and Sedation

Grade 4

Safe and secure IV access with doses of analgesia and sedation according to patient's age and physiological state, clearly checked and confirmed with nursing staff. Patient very comfortable throughout. Oxygenation and vital signs monitored continually as appropriate, remaining satisfactory throughout or rapid and appropriate action taken if sub-optimal. Clear, relevant and proactive communication with endoscopy staff.

Grade 3

Secure IV access with a standard cannula and appropriate dose of analgesia and sedation within current guidelines, checked and confirmed with nursing staff. Patient reasonably comfortable throughout, some tolerable discomfort may be present. Oxygenation and vital signs regularly monitored and satisfactory throughout, or appropriate action taken. Clear communication with endoscopy staff.

Grade 2

IV access acceptable with just satisfactory analgesia and sedation incompletely confirmed or checked with nursing staff, patient too sedated or too aware and in discomfort. Oxygenation and vital signs monitored but less frequently than appropriate or parameters occasionally unsatisfactory with action taken only after prompting or delay. Intermittent or sub-optimal communication with endoscopy staff.

Grade 1

Insecure or absent IV access or butterfly used; inadequate or inaccurate check of analgesia and sedation. Patient significantly under- or over-sedated or needing use of a reversal agent because of inappropriate dosaging. Patient in discomfort much of the time, or significant periods of severe discomfort. Oxygenation and vital signs rarely or inadequately monitored and mostly ignored even if unsatisfactory. Minimal or significantly flawed communication with endoscopy staff.

Adapted from Joint Advisory Group on GI Endoscopy from Jpideq.org.uk

DOPSIR 15 JANUARY 2016

Page 35
Endoscopic Skills During Insertion and Withdrawal

Grade 4
Excellent luminal views throughout the vast majority of the examination, with judicious use of "slide-by". Skilled torque steering and well judged use of distension, suction and lens clearing. Rapid recognition and resolution of loops. Quick to use position change or other manoeuvres when appropriate. Immediately aware of patient discomfort with rapid response. Smooth scope manipulation using angulation control knobs and torque steering.

Grade 3
Checks scope functions, performs PR. Clear luminal view most of the time or uses slide-by appropriately. Appropriate use of angulation control knobs. Uses torque steering adequately. Aids progress using distension, suction and lens washing. Recognises most loops quickly and attempts logical resolution. Good use of position changes to negotiate difficulties. Aware of any discomfort to patient and responds with appropriate actions. Timely completion of procedure, not too quick or too slow for the circumstances.

Grade 2
Omits scope check or PR. Luminal views lost a little more than desirable or uses slide-by a little too long or frequently. Could torque steer usefully more often or more effectively. Some under or over distension or lack of lens wash. Recognises most loops with reasonable attempts at resolution. Use of position change or other manoeuvres occasionally late or inappropriately. Aware of and responsive to patient but may be slow to do so. Procedure slightly too fast or too slow.

Grade 1
Omits to check scope or rectal examination. Luminal views frequently lost for long periods and pushes on regardless. Little or no use of torque steering. Under- or over-distension of bowel, or fails to attempt lens clearing. Recognises loops late or not at all and little or no structured attempt to resolve them. Inappropriate or no use of position change or other manoeuvres. Barely aware of patient's status, or very tardy / inappropriate / no response to discomfort. Completes examination too quickly or takes far too long.

Adapted from Joint Advisory Group on GI Endoscopy from thejag.org.uk

DOPSCR 16 JANUARY 2015
Diagnostic and Therapeutic Ability

Grade 4
Excellent mucosal views throughout the majority of the procedure. Recognition of all caecal landmarks present or rapidly identifies incomplete examination. Faecal pools fully suctioned. Retroflexes in rectum. Thorough assessment and accurate identification of pathology present. Skilled and competent management of diathermy and therapeutic techniques. Rapid recognition and appropriate management of complications.

Grade 3
Adequate mucosal visualisation with only occasional loss or sub-optimal views unless out with control of endoscopist (eg stool, severe diverticular disease). Faecal pools adequately suctioned. Attempts to retroflex in rectum. Correctly identifies caecal landmarks or incomplete examination. Accurately identifies pathology and manages appropriately according to current guidelines. Correct and safe use of diathermy and therapeutic techniques. Rapid recognition of complications with safe management.

Grade 2
Mucosal views intermittently lost for more than desirable periods. Recognises most caecal landmarks present or eventually identifies an incomplete examination. Most pathology identified with occasional missed or mis-identified lesions. Just acceptable use of diathermy and therapeutic tools with some sub optimal use. Delayed or incomplete recognition of complications or suboptimal management.

Grade 1
Frequent or prolonged loss of mucosal views. Incorrect identification of caecal landmarks, or fails to recognise incomplete examination. Misses significant pathology, or inappropriate management that may endanger patient or contravenes guidelines. Unsafe use of diathermy and therapeutic techniques. Fails to recognise or significantly mis-manages complications to the detriment of the patient.

Adapted from Joint Advisory Group on GI Endoscopy from thejag.org.uk
Appendix F - Colonoscopy Dictation Guidelines

Standardized reporting systems facilitate quality improvement. Clear documentation facilitates communication amongst health care providers and participants.

Quality indicators for colonoscopy reporting have been identified by expert consensus. A comprehensive colonoscopy report includes:

- Participant demographics
- Pre-assessment including co-morbid illnesses
  - e.g. ASA classification, anti-thrombotic agents, defibrillator
- Indication for colonoscopy
  - e.g. positive FIT, screening, surveillance, family history
- Medication type and dose used for conscious sedation
- Bowel preparation quality
- Cecal intubation with photo documentation
- Indication of completeness of visualization of the colonic mucosa
- Assessment of the degree of difficulty of the procedure
- Participant comfort
- Withdrawal time
- Documentation of findings
  - Polyp location, morphology, size, method of removal, and completeness of removal and retrieval
- Unplanned events
  - Use of reversal agents for conscious sedation
  - Control of bleeding
  - Immediate post-procedure interventions
- Recommendations for follow-up
  - Relayed to the participant prior to discharge
  - Review of pathology specimens may alter recommendations and should be clearly documented at that time
Appendix G - Unplanned Event Form

Pre/Post Colonoscopy Unplanned Event

INSTRUCTIONS: Fax to the Colon Screening Program

Patient Name: ____________________________ Date of Birth (dd/mm/yy): ___________ PHN: ____________________________

GP: ____________________________ Colonoscopist: ____________________________ Colonoscopy Date (dd/mm/yy): ___________

Date of Onset of Symptoms (dd/mm/yy): ___________ Symptoms Ongoing? □ No □ Yes Date of Resolution of Symptoms (dd/mm/yy): ___________

The day prior to, or within 14 days after undergoing a colonoscopy, this patient had these unplanned event(s):

☐ Bowel prep complication
☐ Rectal Bleeding → Anticoagulation: □ No □ Yes □ Perforation
☐ Infection
☐ Death: Date of death: ___________ Cause of death: ____________________________
☐ Other (specify): ____________________________ Comments: ____________________________

Patient first obtained medical attention: ___________ (dd/mm/yy)

☐ Family Physician ☐ Emergency Room ☐ Other: ____________________________

Patient required the following interventions: (check all that apply)

☐ Blood transfusion ☐ Additional Colonoscopy: ____________________________ (dd/mm/yy)
☐ Antibiotics ☐ Other: ____________________________
☐ Surgery: ____________________________ (dd/mm/yy) ☐ Hospital admission: ____________________________ to ____________________________ (dd/mm/yy)

Comments: ____________________________

Patient Coordinator Name: ____________________________ Patient Coordinator Contact Number: ____________________________

Patient Coordinator Signature: ____________________________ Follow-up Date: ____________________________

COLON SCREENING PROGRAM ADMINISTRATIVE USE ONLY:

SAE: □ No □ Yes Related to Scope: □ Probably □ Possibly □ Unlikely QM Review Date: ____________________________

Comments: ____________________________
Following a positive FIT and a negative high-quality colonoscopy in an average risk individual, FIT screening should resume in 10 years. This decision is based on the following:

1) **Cohort studies demonstrate that a negative colonoscopy is protective against the development of CRC for at least 10 years.**
   - Singh, H et al. Risk of developing colorectal cancer following a negative colonoscopy examination: Evidence for a 10-year interval between colonoscopies. JAMA 2006;295:2366
   - Imperiale, T et al. Five-year risk of colorectal neoplasia after negative screening colonoscopy. NEJM 2008;359:1218
   - Brenner, H et al. Does a negative screening colonoscopy ever need to be repeated? Gut 2006;55:1145

2) **Consensus statements by expert panels recommend that following a positive FIT and a negative colonoscopy that screening be resumed in 10 years.**
   - Other Provincial screening programs also have a 10 year interval

3) **The experience in the Colon Screening pilot program, Colon Check.**
   - The initial plan in Colon Check was to re-screen participants who had a positive FIT and negative colonoscopy with FIT at 10 years
   - This plan was met with concerns at a national level due to questionable colonoscopy quality and fears that cancers would be missed
   - Ultimately, participants in Colon Check with a positive FIT and a negative colonoscopy were re-screened with FIT at 2 years

**Results (preliminary analysis)**
   - 494 participants had a positive FIT and negative colonoscopy
   - None have developed an colorectal cancer (Cancer Registry)
   - 136 have undergone a second FIT 2 years later
     - 84% had a negative FIT and 16% had a positive FIT
Colon Screening Program: Colonoscopy Standards

- 14 with a positive FIT have undergone colonoscopy
- None had cancer
- 8 had a normal colonoscopy
- 5 had 1-2 small tubular adenomas
- 1 had 2 adenomas > 9 mm

4) The PPV of the FIT for detection of neoplasia in BCs Colon Screening Program (50%) is in keeping with the benchmark by the Canadian Partnership Against Cancer’s quality indicators (≥50%) and other studies assessing FIT.

Summary:
The decision to resumes screening in 10 years following a negative colonoscopy is supported by the evidence available and expert recommendations. The incidence of colorectal cancer is an important outcome measure in the Colon Screening Program and the program will be able to monitor cancers that develop in participants in the screening program that were not detected on a screening test.
Appendix I – Bowel Preparation Algorithm

Colon Screening Program
Bowel Preparation Guidelines

Bowel Preparations

**High Volume (4L PEG)**
Consider for:
- Constipation
- Previous poor preparation
- Narcotic use
- Poor mobility
- Morbid obesity
Examples:
- CoLyte
- GoLYTELY
- PegLyte

**Low Volume (PEG / 2L PEG)**
Examples:
- Bi-PegLyte (do not take Bisacodyl)
- MoviPrep

**Low Volume (Hyperosmolar)**
Examples:
- Picofoil
- PicoSalax
- Purg-Odan

Split-dose regimens are preferred.

PEG-based regimens are the preferred preparation for:
- Age > 65 years
- Diuretic use
- Renal Insufficiency (GFR< 60)
- Diabetes
- Congestive heart disease
- Liver cirrhosis or ascites

Adjuncts (bisacodyl, magnesium citrate, enemas) are not recommended for standard bowel preparations.

Participants requiring a repeat colonoscopy due to a poor preparation should have their preparation directed by the colonoscopist.

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<td>1, 3, 4, 6, 7, 8, 9, 10, 11, 12, 13, 16, 17, 18, 19, 20, 26, 27, 33,</td>
<td>Dr. Telford updated standards. Appendix A – Non Program colonoscopy data collection tool removed Appendix C – new sample form Appendix D – latest version of CRF</td>
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