COLONOSCOPY RECOMMENDATIONS

The Nova Scotia Colon Cancer Prevention Program (CCPP) is committed to ensuring that subjects who volunteer to be part of the screening program receive the highest possible standards of care. In order to ensure that these standards are met we must ensure that the program employs skilled and experienced colonoscopists, who work in approved facilities, using appropriate equipment and acceptable techniques

The Quality and Standards committee of the Nova Scotia Colon Cancer Prevention Program endorses the standards established by Cancer Care Ontario's Expert Panel who made their recommendations after an exhaustive review of the relevant current evidence relating to patient safety and provider proficiency. The standards proposed for the Nova Scotia program are as follows:

1. Target audience

These recommendations apply to all physicians and institutions performing colonoscopy in support of Nova Scotia's Fecal Immunochemical Test (FIT)-based Colon Cancer Prevention Program (CCPP).

2. Physician endoscopist standards

Based on the consensus of opinion by members of the Quality and Standards committee: physicians wishing to become accredited in the Nova Scotia CCPP will be evaluated by virtue of their training, credentials and experience.

A. **Recently qualified gastroenterology/general surgery specialists(:)** who have completed within the previous two years a specialty/subspecialty residency program that provided them with formal training in endoscopy, colonoscopy and associated interventional techniques can be accredited by the CCP Program for an initial period of two years provided that they:
   - continue to practice, ideally performing no fewer than 200 colonoscopies annually after establishing their practice;

- maintain good standing with their hospital and the College of Physicians and Surgeons of Nova Scotia (CPSNS); and
- have no identified practice problems

B. **Practicing gastroenterologists/general surgeons** who have received formal or, in some cases, informal training and have maintained their competence in colonoscopy as defined by ongoing endoscopic practice for at least three of the previous five years can be may be accredited by the CRCP Program provided that they:
   - continue to perform no fewer than 200 colonoscopies annually
   - maintain good standing with their hospital and CPSNS; and
   - have no identified practice problems.

Individuals who complete 150 -199 colonoscopies annually can be subject to consideration. Such physicians may, after evaluation, be found to be acceptable for accreditation and/or possibly may be offered upgrading opportunities;

3. Institutional standards

Based on consensus of members of the Quality and Standards committee after reviewing all current relevant evidence, the following institutional standards are recommended.

Patient assessment

- All patients must be informed of the possible risks involved in colonoscopy and polypectomy, including (but not necessarily limited to) bleeding, perforation and death.

- All patients should receive a pre-procedure assessment, where information regarding the following items is obtained:

    - History of gastrointestinal bleeding, cardiac or respiratory disorders, coagulation disorders, and communicable diseases;
    - List of drug allergies and current medications, including anticoagulants (such as warfarin, acetylsalicylic acid and clopidogrel (Plavix);
    - Family history of CRC; and
    - List of abdominal and gynecological surgical procedures.

Use of sedation

- There is evidence that adequate sedation contributes to better patient outcomes in terms of greater patient cooperation, less patient memory of

discomfort, reduction in reported pain and increase in patient tolerance of the procedure.

- All patients should be offered sedation unless the endoscopist judges this to be contraindicated. Patients need to be aware that they have the right to refuse sedation if they so desire.

Monitoring during and after administration of conscious sedation

- The Quality and Standards committee endorses the guidelines established by the American Society of Gastrointestinal Endoscopists (ASGE) and the Canadian Society of Gastroenterology Nurses and Associates (outlined in full in Can J Gastroenterol Vol21 Suppl D November 2007) regarding monitoring of patients undergoing endoscopy:

When conscious or deep sedation is used

- Patients undergoing procedures with conscious or deep sedation must have continuous monitoring of blood pressure, pulse, respiration, level of consciousness and degree of discomfort before, during and after sedative administration.
- Continuous electrocardiogram monitoring is reasonable in high-risk patients who have a history of cardiac or pulmonary disease, are elderly, or in whom a prolonged procedure is expected.
- Postprocedure oximetry must be performed until the patient's respiratory status is stable or returned to preprocedure state;
- preprocedure teaching regarding driving, equipment operation and making decisions requiring judgement must be reinforced and provided in written form with a copy given to the patient before discharge in the company of a competent companion
- Written post-procedure instructions must include the procedures to follow if an emergency arises.

Resuscitation capability

When conscious sedation is used

- At least one independent health facility personnel currently certified in Basic Cardiac Life Support must be present on-site during the procedure, and one physician certified and current in Advanced Cardiac Life Support or trained in general anesthesia should available within 5 min;
- Resuscitation equipment to be readily available includes defibrillator, endotracheal tubes, airways, laryngoscope, oxygen sources with positive pressure capabilities, emergency drugs and oxygen tanks.

Infection control

The Quality and Standards committee endorses the standards detailed by the College of physicians and Surgeons of Ontario concerning infection control which can be found at www.cpso.on.ca/ Publications/ endocsopybook.pdf (Version current at November 1, 2007).

4. Endoscopy performance standards

There is clear evidence that polyp detection is greatest when (a) bowel preparation is adequate (b) the entire colon is inspected, and (c) sufficient time is taken to examine the colon during withdrawal of the colonoscope. Further, the frequency of complications is directly related to the number of procedures performed each year (i.e., the more procedures performed, the less the incidence of complications). Bearing these facts in mind**,** the Nova Scotia Colon Cancer Prevention Program has established the following performance standards:

Equipment

- All colonoscopies should be performed using a video colonoscope with the capacity to create photographic records.

Bowel preparation

- Since there is clear evidence that proper bowel preparation enhances cecal intubation rates and improves adenoma detection rates, an assessment of bowel preparation (good, fair, poor) should be recorded for each procedure.

Cecal intubation rates

- Cecal intubation (documented by identification of the ileocecal valve or appendicular orifice) should be recorded for each procedure.
- The cecal intubation rate should normally exceed 95% for screening colonoscopy provided bowel preparation is adequate and no structural abnormalities exist.

Withdrawal time

- Withdrawal time should be measured and recorded for each procedure, since there is clear evidence (N Engl J Med. 2006;355:2533-2541) that the detection rate of colonic adenomas is significantly greater when withdrawal time exceeds 6 or 7 minutes (not including the additional time required for polypectomy, etc).

Perforation rates

- The Quality and Standards committee endorses the standards detailed in the US Multi-Society Task Force on Colon Cancer regarding perforation rates, as summarized below:
    - Screening colonoscopy perforation rates no higher than one in 2000; and
    - Overall colonoscopy perforation rates no higher than one in 1000.

5. Follow-up care

- Follow-up care should include:
    - Reports (including those to the referring physician) should be recorded in a standardized format that includes the type of procedure, date of procedure, sedation received, quality of bowel preparation, extent of colonoscope insertion, withdrawal time, and a description of all abnormal colonoscopic findings.
    - Subsequent reports should include histopathology report regarding any tissue that was removed.
    - A follow-up appointment with the physician who performed the colonoscopy, if indicated.

Post-polypectomy surveillance

- The clearly defined guidelines for frequency of post-polypectomy surveillance (Gastroenterology 2006; 130: 1872 –1885) should be followed in order to reduce unnecessary procedures and misuse of scarce resources.

6. Data collection and management

It is the aim of CCPP to provide an information technology/information management system designed to collect all relevant clinical and pathological data and to enable its integration with other relevant Cancer Care Nova Scotia initiatives.

Pathology reporting

- In order to support the systematic collection of colonoscopic and pathological findings it is the aim of the CRCP Program to develop and implement synoptic pathology reports that employ uniform criteria and nomenclature; and to provide appropriate information technology/information management infrastructure to collect these data and to enable integration with other relevant Cancer Care Nova Scotia initiatives.

SUMMARY AND CONCLUSION

It is the aim of the Nova Scotia Colon Cancer Prevention Program (CCPP) to ensure that subjects who volunteer to be part of the screening program receive the highest possible standard of care.

Quality Improvement initiatives are currently being initiated in endoscopic programs throughout the world in an attempt to enhance performance, increase efficiency and reduce complications. The standards proposed by the Clinical Advisory Committee and the Steering Committee of CCPP reflect this initiative. It is recognized that many effectively functioning units do not currently achieve compliance with all of these standards. However, an institution's wish to become part of the Province's Colon Cancer Prevention Program implies a commitment to accept the concept of Quality Improvement for its colonoscopy unit and endoscopists and to work towards achieving the highest possible standard of care.