

Quality-Based Procedures Clinical Handbook for GI Endoscopy

Ministry of Health and Long-Term Care

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Executive summary

Quality-Based Procedures (QBP) are an integral part of Ontario's Health System Funding Reform (HSFR) and a key component of Patient-Based Funding (PBF). This reform plays a role in advancing the government's quality agenda and Ontario's *Action Plan for Health Care*. HSFR has been identified as a mechanism that will strengthen the link between high quality care and fiscal sustainability.

Prior to the introduction of HSFR, a significant proportion of hospital funding was allocated through a global funding approach, with specific funding for select provincial programs and wait times services. The QBP funding model aims to shift the system from a culture of cost containment to that of quality improvement. To do so, the Ontario government is committed to a phased implementation strategy towards PBF models.

Gastrointestinal (GI) endoscopy was chosen as a QBP using an evidence- and quality-based selection framework in response to opportunities across the system to reduce practice variation and gain efficiencies while protecting and improving high-quality care.

GI Endoscopy QBP encompasses all procedures related to GI endoscopy and is defined by procedure codes required for appropriate funding. As of April 1, 2014, the government is funding GI endoscopy providers based on this new model.

Supporting the development of GI endoscopy clinical pathways, best-practice standards and in-scope procedure selections are three main panels: the GI Endoscopy Advisory Committee, the Ontario Colonoscopy Expert Panel and the Quality Management Partnership Colonoscopy / Endoscopy Expert Advisory Panel. The Ontario Colonoscopy Expert Panel was disbanded in spring of 2013 and replaced with Quality Management Partnership Expert Advisory Panel until December 2014. The objective of these groups is to define the patient population, recommend best practice for clinical pathways and provider and facility standards and develop associated performance indicators to ensure implementation of the GI Endoscopy QBP results in the provision of best practices in GI endoscopy to all Ontarians. Interim provider best-practice standards are included in Section 4.0 and will be further developed throughout fiscal year 2015/16. As of January 2015, the GI Endoscopy Advisory Committee is the primary panel overseeing GI Endoscopy QBP development, with inputs from other expert panels such as the Gastroscopy Expert Panel.

CCO is developing and implementing a multi-year performance management framework that will include regular monitoring and evaluation of data to enable system-wide quality. Performance management and evaluation began in fiscal year 2014/15 with colonoscopy and will expand to other GI endoscopy procedures as quality guidelines, standards, indicators and data infrastructure are developed.

Throughout fiscal year 2014/15, the GI Endoscopy QBP was further developed and the funding model refined. This version of the clinical handbook includes an updated list of fiscal year 2015/16 GI Endoscopy QBP in-scope procedures, groupings and associated weighted units in Appendix A.

1.0 Purpose

This clinical handbook has been created to serve as a compendium of the evidence-based rationale and clinical consensus driving the development of the policy framework and implementation approach for gastrointestinal (GI) endoscopy procedures.

This document has been prepared for informational purposes only. This document does not mandate health care providers to provide services in accordance with the recommendations included herein. The recommendations included in this document are not intended to take the place of the professional skill and judgment of health care providers.

2.0 Introduction

Historically, a large portion of health service providers' funding has been grounded on base annualized funding (global allocation), which is used to maintain day-to-day operations, such as: staff wages and benefits, overhead costs and service/maintenance contracts and new incremental funding, based on a funding formula, which takes into account demographics and acuity: growth funding targeted at fastest growing communities, hospital type (i.e., small/rural to cover service gaps, academic hospital sites to cover higher cost and acuity).

There needs to be a move to better integrate and align funding mechanisms across sectors to respond to volume and mix of services that meet population need through the pathway of care for patients. By focusing on an enhanced alignment between high-quality patient care and funding, reductions in variation in practice across the province can be achieved. The results of such reduction in practice variation facilitate the adoption of best clinical evidence-informed practices, ensuring our patients receive the right care, at the right place and at the right time.

In response to these fiscal challenges, as of April 1, 2012, the Ministry of Health and Long-Term Care (referred to as "the ministry") has implemented Health System Funding Reform (HSFR). Over the fiscal years 2012/13 to 2014/15, HSFR will shift much of Ontario's healthcare system funding for hospitals and Community Care Access Centres (CCACs) away from the current global funding allocation towards paying for activity and patient outcomes, to further support quality, efficiency and effectiveness in the healthcare system.

HSFR is predicated on the tenets of ***Ontario's Action Plan for Health Care*** and is aligned with the four core principles of the ***Excellent Care for All Act*** (ECFAA):

- Care is organized around the person to support their health.
- Quality and its continuous improvement is a critical goal across the health system.
- Quality of care is supported by the best evidence and standards of care.
- Payment, policy and planning support quality and efficient use of resources.

HSFR is comprised of three key components:

1. Organizational-level funding, which will be allocated as base funding using the Health Based Allocation Model (HBAM)
2. Quality-Based Procedure (QBP) funding, which will be allocated for targeted clinical areas based on a "price x volume" approach premised on evidence-based practices and clinical and administrative data
3. A global funding approach

2.1 What are we moving towards?

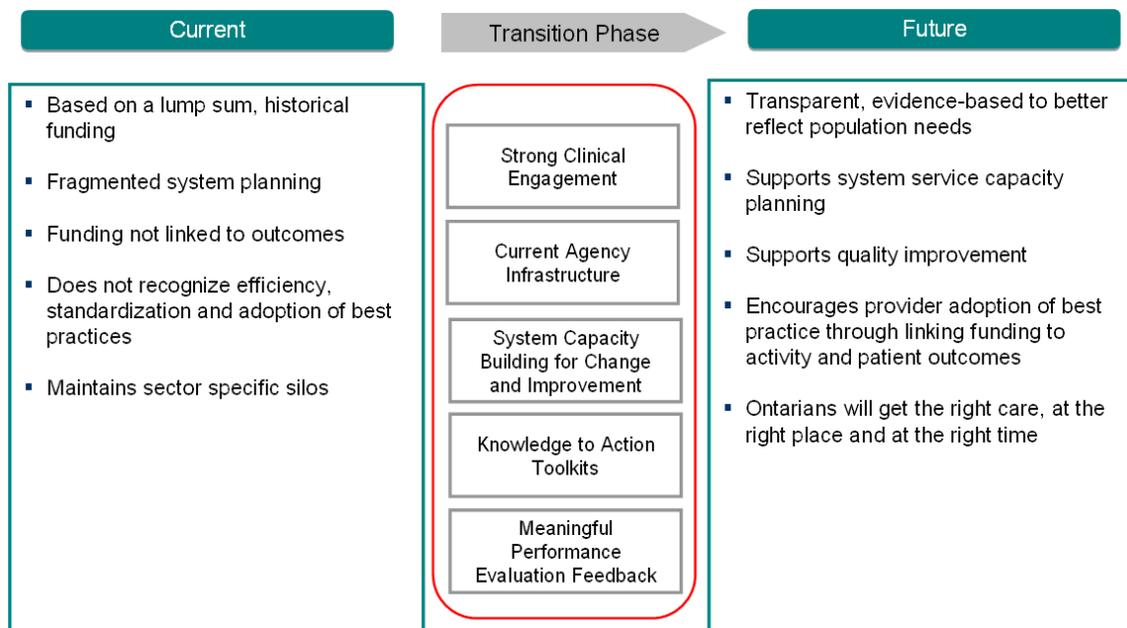
Prior to the introduction of HSRF, a significant proportion of hospital funding was allocated through a global funding approach, with specific funding for select provincial programs, wait times services and other targeted activities. A global funding approach may not account for complexity of patients, service levels and costs, and may reduce incentives to adopt best practices that result in improved patient outcomes in a cost-effective manner.

Under HSRF, provider funding is based on the types and quantities of patients providers treat, the services they deliver, the quality of care delivered and patient experience/outcomes. Specifically, QBP provides incentives to healthcare providers to become more efficient and effective in their patient management by accepting and adopting best practices that ensure Ontarians get the right care, at the right time and in the right place.

The variations in patient care evident in the global funding approach warrant the move towards a system where “money follows the patient” (Figure 1).

Internationally, similar models have been implemented since 1983. While Ontario is one of the last leading jurisdictions to move down this path, this puts the province in a unique position to learn from international best practices and pitfalls and create a funding model that is best suited for the province.

Figure 1: The Ontario government is committed to moving towards patient-centred, evidence-informed funding that reflects local population needs and incents delivery of high-quality care



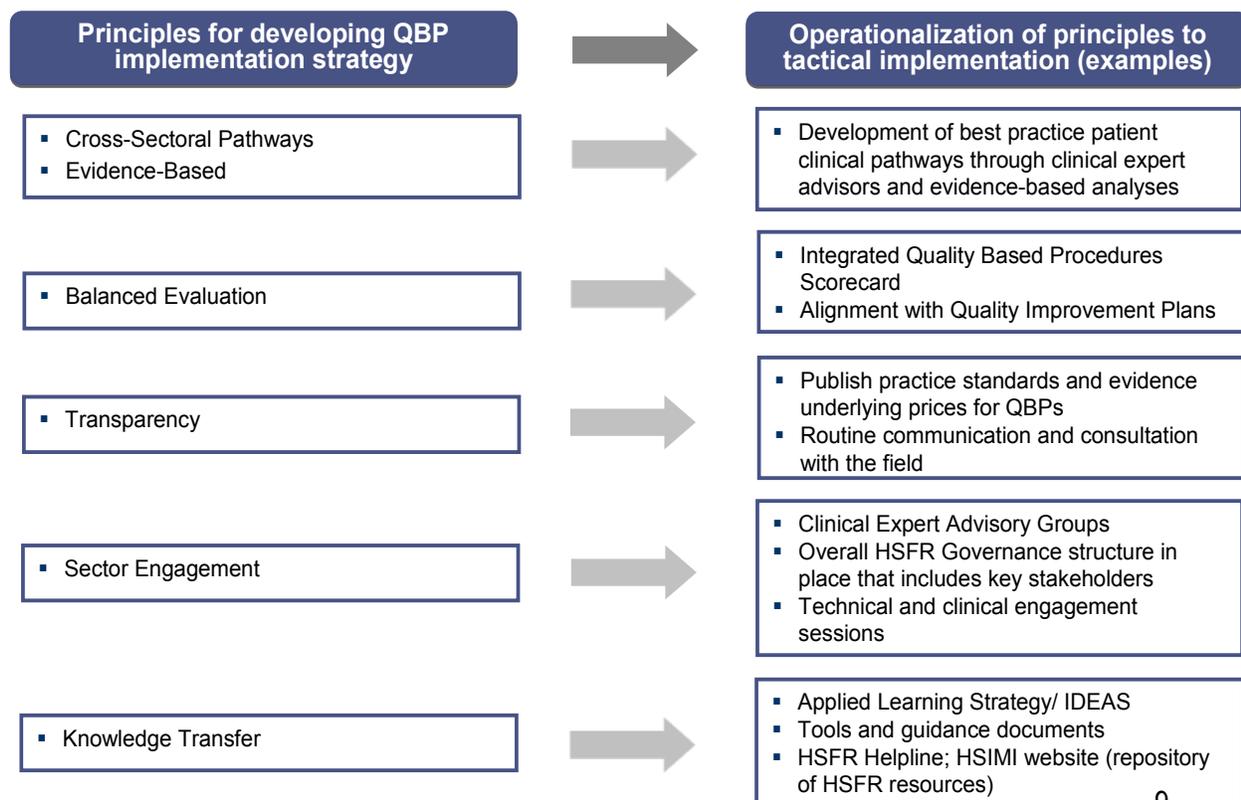
2.2 How will we get there?

The ministry has adopted a multi-year implementation strategy to phase in the HSFR strategy and will make modest funding shifts beginning April 2012. A three-year outlook has been provided to the field to support planning for upcoming funding policy changes.

The ministry has released a set of tools and guiding documents to further support the field in adopting the funding model changes. For example, a Quality-Based Procedure (QBP) interim list has been published for stakeholder consultation and to promote transparency and sector readiness. The list is intended to encourage providers across the continuum to analyze their service provision and infrastructure in order to improve clinical processes and where necessary, build local capacity. However, as implementation evolves, the interim list will continue to undergo further refinements pending stakeholder feedback and advice from the QBP Clinical Expert Advisory Groups.

The successful transition from the current, “provider-centred” funding model towards a “patient-centred model” will be catalyzed by a number of key enablers and field supports. These enablers translate to actual principles that guide the development of the funding reform implementation strategy related to QBPs. These principles further translate into operational goals and tactical implementation, as presented in Figure 2.

Figure 2: Principles guiding the implementation of funding reform related to Quality-Based Procedures



2.3 What are Quality-Based Procedures?

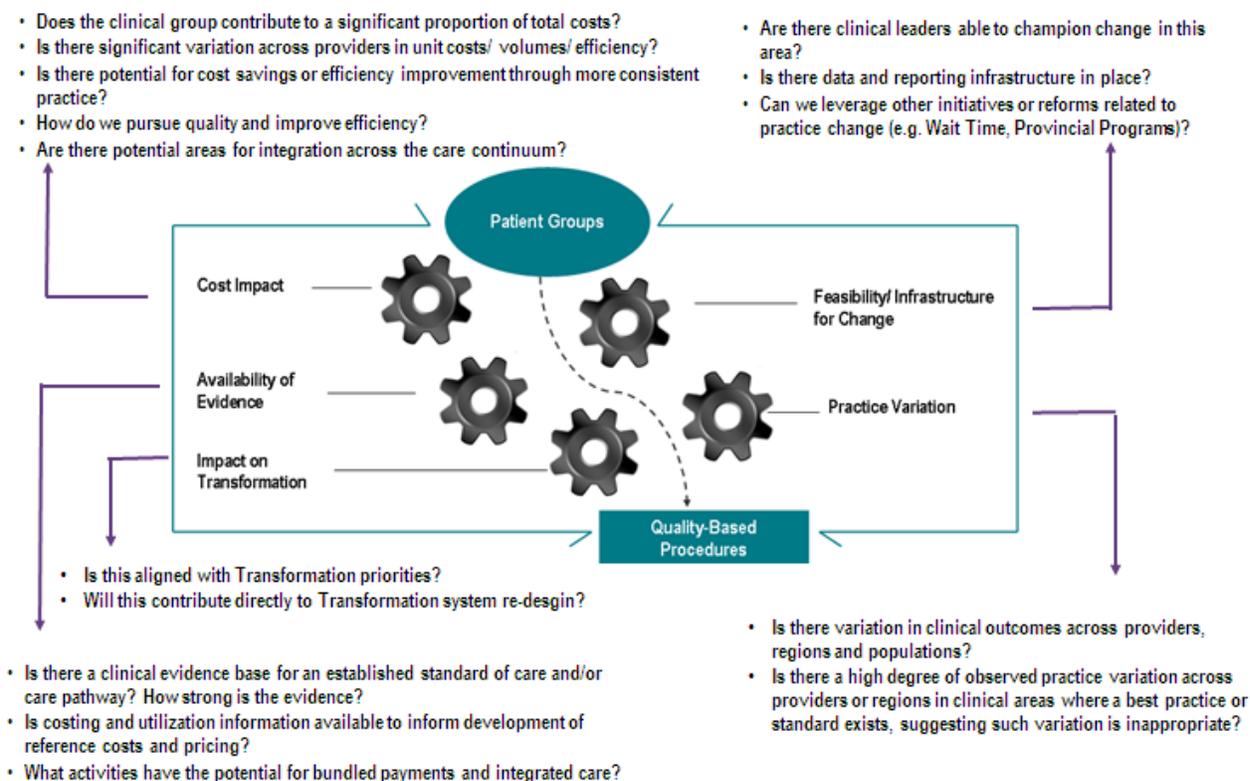
QBP are clusters of patients with clinically related diagnoses or treatments that have been identified using an evidence-based framework as providing an opportunity for process improvements, clinical re-design, improved patient outcomes, and enhanced patient experience and potential cost savings.

The evidence-based framework uses data from the Discharge Abstract Database (DAD) and National Ambulatory Care Reporting System (NACRS) adapted by the ministry for its HBAM repository. The HBAM Inpatient Grouper (HIG) groups inpatients based on the diagnosis or treatment responsible for the majority of their patient stay. Additional data were used from the Ontario Case Costing Initiative (OCCI) and Ontario Cost Distribution Methodology (OCDM). Evidence such as publications from Canada and other jurisdictions and World Health Organization reports was also used to assist with the patient clusters and the assessment of potential opportunities.

The evidence-based framework assessed patients using five perspectives, as presented in Figure 3. This evidence-based framework has identified QBPs that have the potential to improve quality of care, standardize care delivery across the province and show increased cost efficiency.

Figure 3: Evidence-based framework

An evidence and quality-based framework has identified Quality-Based Procedures that have the potential to both improve quality outcomes and reduce costs



1. Practice Variation

The DAD has every Canadian patient discharge (except Quebec) coded and abstracted for over 50 years. This information is used to identify patient transition through the acute care sector, including discharge locations, expected lengths of stay and readmissions for each and every patient, based on their diagnosis and treatment, age, gender, co-morbidities, complexities and other condition specific data. A demonstrated large practice or outcome variance may represent a significant opportunity to improve patient outcomes by reducing this practice variation and focusing on evidence-informed practice. A large number of “Beyond Expected Length of Stay” and a large standard deviation for length of stay and costs were flags to such variation. Ontario has detailed case costing data from many hospitals, as far back as 1991 for all patients discharged from some case costing hospitals, as well as daily use and cost data by department, by day and by admission.

2. Availability of Evidence

A significant amount of research has been completed both in Canada and across the world to develop and guide clinical practice. Working with the clinical experts, best-practice guidelines and clinical pathways can be developed for these QBP's and appropriate evidence-informed indicators can be established to measure the quality of QBP care and help identify areas for improvement at the provider level and to monitor and evaluate the impact of QBP implementation.

3. Feasibility/Infrastructure for Change

Clinical leaders play an integral role in this process. Their knowledge of the patients and the care provided or required represents an invaluable component of assessing where improvements can and should be made. Many groups of clinicians have already formed and provided evidence and the rationale for care pathways and evidence-informed practice.

4. Cost Impact

The selected QBP should have as a guide no less than 1,000 cases per year in Ontario and represent at least 1% of the provincial direct cost budget. While cases that fall below these thresholds may in fact represent improvement opportunity, the resource requirements to implement a QBP may inhibit the effectiveness for such a small patient cluster, even if there are some cost efficiencies to be found. Clinicians may still work on implementing best practices for these patient sub-groups, especially if they align with the changes in similar groups. However, at this time, there will be no funding implications. The introduction of evidence into agreed-upon practice for a set of patient clusters that demonstrates opportunity as identified by the framework can directly link quality with funding.

5. Impact of Transformation

The selected QBP's must align with the government's transformational priorities including alignment with the tenets of ***Ontario's Action Plan for Health Care***. In addition, a natural progression and trajectory to assess a QBP's impact on transformation would be to begin to look at other patient cohorts (e.g. pediatric patient populations), impact on the transition of care from acute-inpatient to community care setting, significant changes from historical funding models/approaches, integrated care models etc. QBP's with a lesser cost impact but a large impact on the transformation agenda may still be a high priority for creation and implementation.

2.4 How will QBPs encourage innovation in health care delivery?

QBP strategy is driven by clinical evidence and best-practice recommendations from the Clinical Expert Advisory Groups. The Clinical Expert Advisory Groups are comprised of cross-sectorial, multi-geographic and multi-disciplinary membership with representation from patients, as well. The panel members leverage their clinical experience and knowledge to define the patient populations and recommend best practices.

Once recommended best practices are defined, these practices are used to understand required resource utilization for the QBPs and further assist in the development of evidence-informed prices. The development of evidence-informed pricing for the QBPs is intended to incent healthcare providers to adopt best practices in their care delivery models, maximize their efficiency and effectiveness, and engage in process improvements and/or clinical redesign to improve patient outcomes.

Best practice development for the QBPs is intended to promote standardization of care by reducing unexplained variation and ensure the patient gets the right care, at the right place and at the right time. Best-practice standards will encourage health service providers to ensure the appropriate resources are focused on the most clinically and cost-effective approaches.

QBPs create opportunities for health system change where evidence-informed prices can be used as a financial lever to incent providers to:

- Adopt best-practice standards
- Re-engineer their clinical processes to improve patient outcomes
- Improve coding and costing practices
- Develop innovative care delivery models to enhance the experience of patients

An integral part of the enhanced focus on high-quality patient care will be in the development of indicators to allow for the evaluation and monitoring of actual practice and support on-going quality improvement.

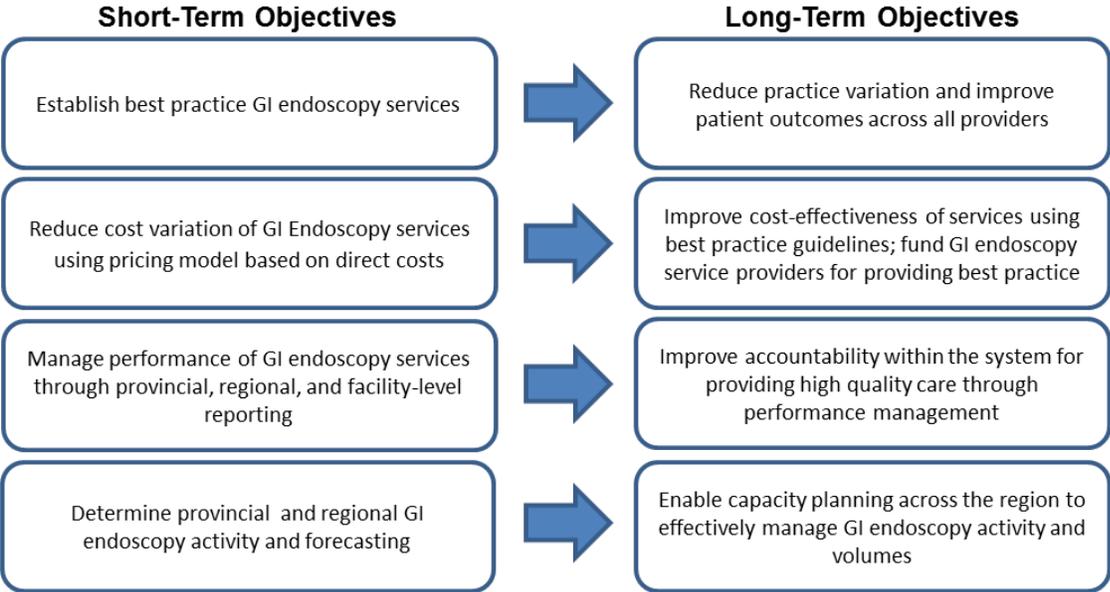
3.0 Description of GI Endoscopy QBP

3.1 Objectives

A number of factors have contributed to the rationale behind the transformation of gastrointestinal (GI) endoscopy service funding. As data from National Ambulatory Care Reporting System (NACRS) and the Discharge Abstract Database (DAD) have demonstrated, the demand for GI endoscopy procedures in Ontario has increased dramatically in recent years as a result of the aging population, growth in population size and initiatives to promote colorectal cancer screening. Analysis of data from Ontario Health Insurance Plan (OHIP) data from fiscal year 2010 to 2013 has shown the increased demand for GI endoscopy has also led to an increase in the volume of out-of-hospital premises (OHPs) GI endoscopy services, particularly in populated areas with high wait times. This service delivery change across Ontario has increased the need for an organized program to ensure consistent quality across all service providers.

The objectives of the GI Endoscopy Quality-Based Procedure (QBP) stem from the need to address practice variation and the changing nature of service delivery, while protecting and improving high-quality care. Both long-term and short-term objectives are identified in Figure 4.

Figure 4: GI Endoscopy QBP short- and long-term objectives



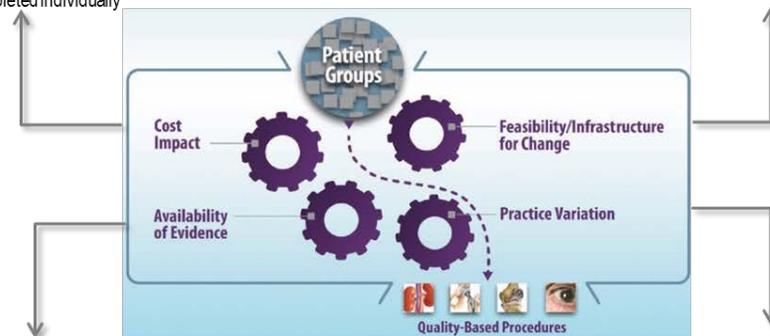
As the GI Endoscopy QBP works towards achieving both short and long-term objectives, stakeholder engagement and collaboration will be critical to ensure successful implementation of the GI Endoscopy QBP.

3.2 History of the GI Endoscopy QBP

Initial analysis into the current state of colonoscopy service delivery in Ontario revealed significant variation in practice and cost of services. This was the driving factor to confirm colonoscopy as a QBP in the summer of 2012. Extensive research was then conducted by a team of healthcare statisticians and case costing experts to investigate the volumes and costs of colonoscopy procedures from 114 Ontario hospitals. Through this analysis, it became apparent that separating colonoscopy procedures from other GI endoscopy services was difficult due to the way services are provided and data are captured. Multiple endoscopy procedures are often performed within the same episode of care to minimize patient visits and build economies of scale. As a result, in December 2012, the Ministry of Health and Long-term Care (referred to as “the ministry”) confirmed the expansion of the colonoscopy QBP to encompass all GI endoscopy procedures. The expanded scope provides the opportunity for greater system optimization through the implementation of high-quality standards and funding for like procedures. The GI Endoscopy QBP evidence-based framework is outlined on the following page.

Figure 5 - Evidence-based framework for GI Endoscopy QBP as of fiscal year 2012/13 ^{1, 2, 3}

- During fiscal year 2011/12, 504,774 GI Endoscopy QBP procedures were completed in hospitals accounting for approximately \$125M of provincial funds (direct costs only; excludes professional fees)
- Among 126 hospitals providing GI endoscopic services, 55 report endoscopy expenses in a dedicated functional center accounting for 89% of provincial endoscopy direct expenses
- Substantial number of provincial colonoscopies are performed at out of hospital premises (OHPs); associated costs for these procedures were not included in the \$125M hospital estimate for fiscal year 2011/12
- Ontario Case Costing Initiative (OCCI) data is readily available for colonoscopy procedures
 - Analysis indicates variation in cost of colonoscopies across hospitals and LHINs
- Micro-costing analysis indicates variance in cost between GI endoscopy procedures performed in OHPs and hospitals
- Economies of scale exist when completing colonoscopies in conjunction with other procedures. For example, the cost of completing a colonoscopy and gastroscopy together is less than the sum of each completed individually
- Clinical Leadership forums exist to inform the development of funding framework and support the improvement of GI endoscopy services. These include,
 - CCO GI Endoscopy Advisory Committee
 - Ontario Colonoscopy Expert Panel (*September 2012 – March 2013*)
 - CCO/CPSO Quality Management Partnership Colonoscopy/Endoscopy Expert Advisory Panel (replaced the Ontario Colonoscopy Expert Panel)
- Existing data infrastructure can be leveraged to collect and inform operational and quality indicators
 - Colonoscopy Interim Reporting Tool (CIRT) implemented at all ColonCancerCheck hospitals (n=61) and some non-CCC volunteer hospitals (n=10)
 - Cancer System Quality Index (CSQI)
- QMP to develop provincial colonoscopy quality management program



- Program in Evidence Based Care (PEBC) existing guideline, 'Gastroscopy following a Positive Fecal Occult Blood Test and Negative Colonoscopy' (2009)
- ColonCancerCheck has adopted 'Guidelines for Colonoscopy Surveillance After Polypectomy: A Consensus Update' by the U.S. Multi-Society Task Force on Colorectal Cancer and the American Cancer Society² (2006)
- PEBC published 'Guideline for Colonoscopy Quality Assurance in Ontario' organizational guidelines³ in fall 2013
- PEBC colorectal screening guidelines development is underway
- CCO is developing gastroscopy standards in fiscal year 2014/15
- On January 1, 2013 new colonoscopy billing rules were added to the physician Schedule of Benefits that may alter practice patterns
- GI endoscopy procedures are increasingly performed in out of hospital premises (OHPs)
 - The proportion of colonoscopies completed in hospitals as compared to OHPs decreased by 18% from 2002 to 2010
- The proportion of colonoscopies completed in OHPs as compared to hospitals is variable across LHINs, ranging from 0 – 50% in 2010
- Evidence suggests variable patient outcomes exist:
 - Colorectal cancer screening abnormal follow up rate ranges from 67% to 84% across LHINs in 2012

3.3 Defining the scope of the GI Endoscopy QBP

The GI Endoscopy QBP encompasses all procedures related to GI endoscopy and is defined by procedure codes derived from Canadian Institute for Health Information (CIHI) databases, specifically DAD and NACRS.

To define the scope of the GI Endoscopy QBP, a list of GI endoscopy codes, as identified by CIHI, were reviewed with clinical experts, and a subset of codes was removed because they were identified as unrelated to GI endoscopy.

A sample of 19 hospitals was selected to review the list of codes and to confirm the completeness and accuracy of the list. In addition, the hospitals were asked to review the costing methodology based on those codes and validate their respective NACRS and DAD volumes, and Ontario Healthcare Reporting Standards (MIS) expenditures. The sample of hospitals was selected to ensure provincial representation of GI endoscopy providers, taking into consideration:

- hospitals from all LHINs
- large community and teaching hospitals
- small community and teaching hospitals
- hospitals with varying degrees of specialization
- hospitals with a high percentage of in-patient procedures
- hospitals where services are reported/performed in an operating room instead of an endoscopy suite
- hospitals with potential data quality issues or unexpected results (outliers)

The hospitals were asked to confirm if the costing methodology and activities listed as in-scope accurately reflected GI endoscopy services in hospitals. Almost all hospitals reconciled their reported volumes and expenses within 99% of the estimates based on the costing methodology identified. This review process subsequently expanded to a broader province-wide review with all hospitals. This activity and costing validation process helped further define the list of procedure codes in-scope for the GI Endoscopy QBP. (Appendix A)

3.4 Scope of implementation: fiscal year 2014/15

As of April 1, 2014, the following exclusions have been applied to the GI Endoscopy QBP funding:

Facilities:

Small hospitals: defined by the Ministry as a hospital with fewer than 2,700 acute and day surgery cases for any two of the prior three years.

(Please note that although not part of the funding component of the GI Endoscopy QBP, small hospitals will be accountable for the quality, performance and capacity management components of the QBP.)

Procedures:

Pediatric cases: Any procedure that is completed for an individual less than 18 years of age.

Ontario Non-OHIP activity: Any procedure that is completed for an Ontario resident who does not have a valid Ontario Health Insurance Plan (OHIP) or where funding is provided from a source other than OHIP. (Inclusion only in cases where province issuing Health Card = "ON" and CIHI DAD/NACRS field Responsibility for Payment = "01".)

Out-of-province activity: Any procedure that is completed for a non-Ontario resident.

Cancelled procedures: Any GI endoscopic procedure for a patient that is cancelled before the initiation of the scheduled procedure.

Abandoned procedures: A procedure that is not completed – abandoned after onset. (Any case where CIHI DAD/NACRS Intervention status is listed as "A".)

4.0 Best practices* guiding the implementation of GI Endoscopy QBP

4.1 GI endoscopy clinical pathway

The clinical pathway in this handbook outlines the patient journey from a primary care provider to a shared care setting with associated screening and surveillance pathways in order to address gastrointestinal (GI) complaints.

The surveillance and follow-up clinical pathways are based on guidelines from the ColonCancerCheck (CCC) program, Ontario's organized colorectal cancer (CRC) screening program. The CCC program recommends that patients who present with symptoms of CRC be referred directly for colonoscopy.

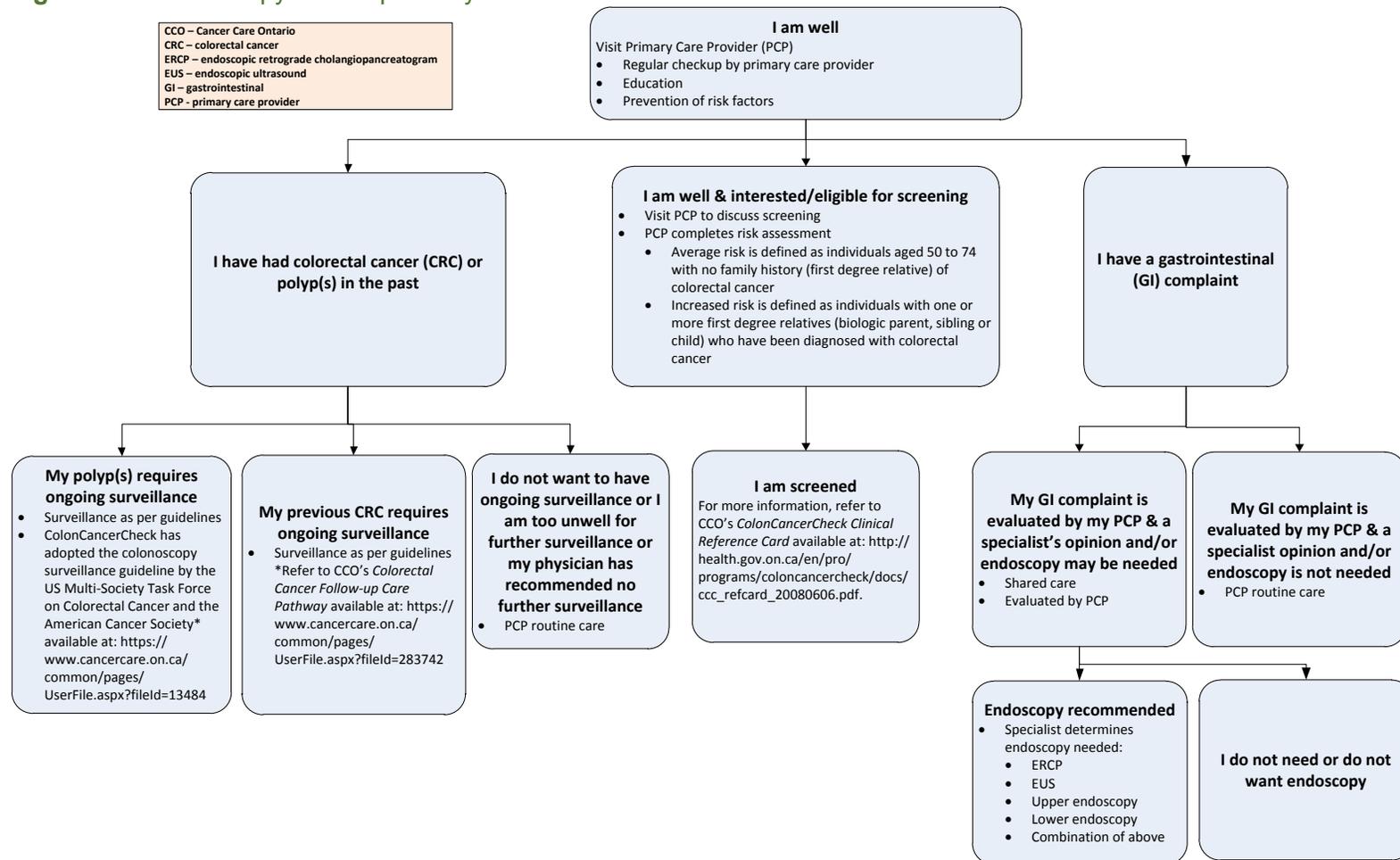
For individuals without symptoms who are eligible for screening, CCC recommends clinical algorithms to determine appropriate screening tests and follow-up care for two patient populations: individuals at average risk for CRC and individuals at increased risk due to a family history (first-degree relative) of CRC. These clinical pathways were developed based on the best available evidence from national and international guidelines with input from Ontario clinical experts. A summary of these clinical pathways is available on CCO's website at

<https://www.cancercare.on.ca/common/pages/UserFile.aspx?fileId=260208>

Cancer Care Ontario (CCO) is updating this evidence base by working with the Program in Evidence-Based Care (PEBC) – a robust and rigorous guideline development program – to develop clinical practice guidelines for CRC screening. The guidelines will evaluate the evidence for colorectal cancer screening tests in the context of an organized, population-based screening program.

* Best practice refers to a combination of best available evidence and clinical consensus as recommended by the Clinical Expert Advisory Groups

Figure 6: GI endoscopy clinical pathway*



* CCO is currently working with the Program in Evidence-Based Care, a robust and rigorous guideline development program, to develop a clinical practice guideline for colorectal cancer screening for average risk individuals. CCO is also reviewing recent guidelines on surveillance intervals, and in the future, plans to develop a clinical practice guideline for screening for individuals at increased risk of colorectal cancer. The clinical handbook will be updated as these guidelines are completed.

4.2 Defining GI endoscopy facility and provider best-practice standards

In addition to clinical pathways, facility and provider best-practice standards exist to ensure that high-quality services are delivered. In a parallel initiative, CCO and the College of Physicians and Surgeons of Ontario (CPSO) have formed the Quality Management Partnership. The Quality Management Partnership's mandate includes the establishment of comprehensive quality management programs for several health services, including colonoscopy. A dedicated Quality Management Partnership Colonoscopy/ Endoscopy Expert Advisory Panel was responsible for the development and/or endorsement of provider and facility best-practice standards. The GI Endoscopy QBP plans to leverage these standards as they become available. In the interim, the GI Endoscopy QBP has identified standards that will be put in place until the Quality Management Partnership standards are finalized and ready for implementation in Ontario.

4.3 GI endoscopy provider best-practice standards

The GI Endoscopy QBP is relying on the colonoscopy standards that were recommended in the *Guideline for Colonoscopy Quality Assurance in Ontario*³ to provide the evidence for the quality component of the QBP. This guideline was developed by CCO and the Program in Evidence-Based Care (PEBC), an internationally recognized guideline development program, which worked with an expert panel that included gastroenterologists and general surgeons. The guideline summarizes the available evidence on colonoscopy quality assurance and makes evidence-based recommendations on standards for three key aspects of colonoscopy: training and maintenance of competency for physician endoscopists, institutional quality assurance parameters and performance indicators for colonoscopy.

Through implementation of the GI Endoscopy QBP, additional standards and measures will be developed for colonoscopy as well as other areas of endoscopy, beginning with the development of gastroscopy standards and indicators. These standards and indicators are currently under development and will be available in future iterations of the clinical handbook.

4.4 GI endoscopy facility best-practice standards

Facility best-practice standards identify minimum requirements related to the environment in which GI endoscopy procedures are conducted including equipment, staffing and structural space. The facility best-practice standards originally developed by the Ontario Colonoscopy Expert Panel have been revised to leverage recommendations in CCO's *Guideline for Colonoscopy Quality Assurance in Ontario*³ as well as the *Out-of-Hospital Premises Inspection Program, Program Standards*⁴. These interim standards, endorsed by the Quality Management Partnership Colonoscopy / Endoscopy Expert Advisory Panel are:

- Facilities must adhere to professional and/or institutional standards for granting and renewing privileges.
- Facilities must establish and implement a standard pre-procedural assessment process.
- Facility must offer sedation for all procedures unless the endoscopist judges this to be contraindicated, and have necessary infrastructure for safe sedation (i.e., recovery room and monitoring). Patient must be aware that they have the right to refuse sedation if they so desire.
- During endoscopy under moderate sedation, the nurse may perform interruptible tasks, such as assisting with biopsy or polypectomy while continuing to actively monitor the patient, provided the patient is stable. For deep sedation, an individual trained to monitor patients must also be present in the room with no other responsibilities.
 - *Caveat for QBP as it relates to nursing care: all nurses must have BCLS training, and each facility must have either 1) a hospital code team or 2) within a community based setting, ≥ 2 ACLS certified persons on location, when clinical care with sedation is provided*
- Facilities must ensure continuous and appropriate monitoring of patients receiving conscious or deep sedation before, during and after administration of sedation.
- Facilities must establish and implement a general plan for resuscitation, including the identification of properly trained personnel.
- Facilities must determine readiness for discharge using an acceptable scoring system (e.g., Aldrete score, PADS, etc.).
- Facilities must establish and implement a clear discharge process, including but not limited to, when to discharge patients, follow up on results and provide instructions in the event of complications.
- Facilities must provide all patients with a post-procedure follow-up plan.

- Facilities must establish a quality assurance program in which complications and important quality metrics are monitored, reported to providers and remediated when necessary (examples of quality metrics include cecal intubation rate, bowel preparation quality and polyp detection rate).
- All scope technicians (anyone who regularly cleans or maintains scopes) must participate in a formalized training program beyond that which is provided by the manufacturers.
- Only equipment of a high standard that conforms to current safety and work practice standards/guidelines and provides for optimal individual procedures is used.⁵ This is to be achieved by ensuring that:
 - *All equipment used performs at optimal level;*
 - *All equipment is subject to the manufacturers' recommended preventative maintenance programs and is tested according to technical specifications by qualified technicians;*
 - *All equipment is subject to compliance testing and certification where required by jurisdictional statutory regulations;*
 - *Industry norms in the selection or replacement of appropriate equipment are adhered to, including with technological advancement and replacing equipment where necessary to maintain an up-to-date and high standard of service;*
 - *All equipment is subject to a regular quality control program; and the equipment required for the performance of a particular procedure is readily accessible*
- Facilities must use automated endoscopic re-processors for all procedures.
- Facilities must have appropriate re-processing capacity (i.e., appropriate ratio of basins to procedure volume).
- Facilities must have appropriate supplies for providing safe endoscopy (e.g., IV fluid, setup, supplies and suction systems).
- Facilities must have resuscitation equipment immediately available, including but not limited to a defibrillator, endotracheal tubes, airways, laryngoscope, oxygen sources with positive-pressure capabilities, emergency drugs and oxygen tanks.
- Facilities must have available the appropriate equipment to remove polyps and to manage related complications (e.g., post polypectomy bleeding) which must include at a minimum hemoclips, injectors, polypectomy snares, biopsy forceps, electrocautery equipment, and tattooing ink.
- Hospitals must be accredited and must meet comparable standards to IHF/OHPs where applicable.⁴

5.0 Implementation of best practices

Implementation of the Gastrointestinal (GI) Endoscopy Quality-Based Procedure (QBP) will impact the spectrum of health service delivery personnel from healthcare administrators to front-line clinicians. The following section outlines potential challenges GI endoscopy service providers may face as a result of the implementation and provides recommendations to assist in the delivery of GI Endoscopy QBP best practices.

Potential Challenges – Changes in Funding:

Changes in funding levels may drive providers to find cost efficiencies in order to support current activities and future increases in volumes, which providers may find challenging.

Recommended Mitigation Opportunities

Implementation of the GI Endoscopy QBP offers an opportunity to revisit processes to ensure the delivery of high-quality, cost-effective care. Review of the following areas can help to increase the efficiency of GI endoscopy processes:

- **Staffing levels:** Reviewing clinical staffing levels to better align with capacity needs can ensure patient flow is not interrupted by staff breaks and reduce the need for staff overtime. Efficiencies can also be achieved by re-examining the staffing complement of physicians, registered nurses (RNs) and registered practical nurses (RPNs) to better support pre-procedure, intra-procedure and post-procedure activities that align with QBP best practices.
- **Day of exam processes:** Process bottlenecks can be minimized through improvements to the physical layout of procedure areas. Ensuring that all necessary equipment is located in the right place and easily available can reduce delays. Departments can aim to maximize equipment use, to satisfy procedure demands. In addition, opportunities may exist to improve procedure room utilization by ensuring booked procedure times are aligned to actual procedure time requirements. As facilities work to improve processes, it is valuable to engage all staff in the identification of areas of opportunity and the development of solutions.
- **Standard processes that support best practice:** Opportunities to further enhance current practice may be realized by leveraging lessons learned from providers within a given region. Engaging in an open dialogue with providers in the area or third party quality audits can help to standardize processes that support best practices.

Cancer Care Ontario (CCO), in conjunction with the Centre for Research in Health Care Engineering, developed a toolkit to help hospitals increase the efficiency of the colonoscopy process for patients, from booking to discharge. The Colonoscopy Process Improvement Toolkit is available for download on CCO's website.

<https://www.cancercare.on.ca/pacs/screening/coloscreening/ccresources/cpitolkit/>

Potential Challenges – Implementation of best practices standards:

The GI Endoscopy QBP has adopted recommendations for colonoscopy provider best-practice standards from CCO's *Guideline for Colonoscopy Quality Assurance in Ontario*³. Clinicians and facility administrators must work to uphold provider and facility level best practices that include, but are not limited to, new technology/equipment standards and patient preparation expectations. This also includes the ability to meet operational indicators operational indicators (e.g. minimum annual volume requirements) and quality indicators (e.g. Outpatient Cecal Intubation). For hospitals without patient preparation processes, effort will be needed to establish new workflow and processes to accommodate for GI Endoscopy QBP best practice.

Recommended Mitigation Strategies

- **Support from Regional Vice Presidents:** Through the Regional Cancer Programs (RCPs), Regional Vice Presidents (RVPs) will play a pivotal role in the implementation of performance management monitoring and evaluation, Hospitals should work closely with RVPs to discuss performance results and opportunities for improvement within their hospitals, as RVPs will have insights into practices and lessons learned from across the province.
- **Support from Regional Colorectal Screening / GI Endoscopy Leads:** As of the spring of fiscal year 2014/15, 13 Regional Colorectal Screening/GI Endoscopy Leads were positioned across Ontario. They will fill a critical role in improving the quality, safety and accessibility of colorectal cancer screening and GI endoscopy services. These individuals are clinical leaders who can provide advice and support for the implementation of both the ColonCancerCheck program and GI Endoscopy QBP. Endoscopists are encouraged to work with their regional lead to improve the quality of GI endoscopy in their region.
- **Leverage endoscopy unit leadership:** Leadership at each individual GI endoscopy unit should be leveraged to provide guidance and strategies to ensure implementation of best-practice procedures.
- **Ongoing training:** To ensure maintenance of skills or develop additional areas of endoscopy clinical competency, endoscopists should attend continuing medical education (CME) sessions and train-the-trainer or up-skilling courses. For instance, the Canadian Association of Gastroenterology provides a “*Skills Enhancement for Endoscopy*” program for clinicians to continue their skill development. (<http://www.cag-acg.org/skills-enhancement-for-endoscopy>)
- **Leverage the quality assurance framework from the Quality Management Partnership initiative:** The objective of the Quality Management Partnership initiative is to develop a comprehensive quality management program for Ontario. As the program is developed, all clinicians within GI endoscopy units should work to execute recommendations to promote high quality care.

Potential Challenges – Implementation of Performance Management Framework:

Hospitals will be required to participate in the QBP performance management framework, which involves working with their RCP on a quarterly basis to monitor and evaluate indicators while also building quality improvement plans. The implementation of the performance management framework will be a new responsibility for hospitals.

Recommended Mitigation Strategy

In anticipation of the implementation of the GI Endoscopy QBP performance management framework, facilities are encouraged to engage GI endoscopy leadership to work with their respective RCPs and strengthen the culture of continuous improvement at their sites through data collection, process review and performance monitoring. GI endoscopy programs without robust quality assurance and improvement frameworks must work to develop and implement associated processes to ensure sustainability of improvements. Facilities are encouraged to leverage the Global Rating Scale (GRS) to assist with the quality improvement effort and initiatives. The GRS is a web-based endoscopy service evaluation tool that evaluates multiple components of endoscopy service from a patient-focused perspective. Results highlight opportunities for quality improvement to enhance the patient experience.

6.0 Impact on multi-disciplinary teams

6.1 Multi-disciplinary teams affected

Implementation of the Gastrointestinal (GI) Endoscopy Quality-Based Procedure (QBP) will encourage administrative, nursing and clinical staff to work in collaboration and ensure best-practice standards are adhered to at their facilities. The recommended clinical pathways and standards leverage current standards and policies endorsed by Cancer Care Ontario (CCO), the College of Physicians and Surgeons of Ontario (CPSO), and other professional organizations.

6.2 Alignment with current clinical practice

During the implementation of the GI Endoscopy QBP, health service providers across the system will be encouraged to ensure their practice is aligned with best-practice standards. Clinicians and staff must collaborate with hospital administration to identify opportunities for improvement and ways to address potential challenges in maintaining these best practices.

6.3 Implications on current clinical practice

For many clinicians, the implementation of the GI Endoscopy QBP will have minimal impact on their current clinical practices. However, some changes may be required to align with best-practice standards such as implementation of performance monitoring or participation in endoscopy training.

In addition, facilities may need to alter current data collection and reporting practices and processes for quality improvement/assurance, to adhere to QBP reporting requirements, which will be critical for monitoring and measuring system-wide quality improvements.

7.0 Service capacity planning

Cancer Care Ontario (CCO) has increased its scope of responsibility from the ColonCancerCheck (CCC) program to include the Gastrointestinal (GI) Endoscopy Quality-Based Procedure (QBP). While the CCC program focuses on colonoscopies for follow-up of abnormal fecal occult blood tests and screening those at increased risk of colorectal cancer, the QBP involves the development of a funding model and provision of oversight for the quantity and quality of GI endoscopy services across Ontario.

CCO is committed to supporting providers through this change and will leverage the current infrastructure of the Regional Cancer Programs (RCPs) to support the implementation of the GI Endoscopy QBP. The RCPs will provide oversight through annual allocation forecasts, quality improvement and regular performance management. In addition to the RCP infrastructure, predictive modeling work within CCO's Prevention and Cancer Control portfolio will support future capacity planning.

8.0 Performance evaluation and feedback

8.1 Quality assurance program

All providers will be expected to meet quality standards and ensure gastrointestinal (GI) endoscopy procedures are completed safely.

At the request of the Ministry of Health and Long-Term Care (referred to as “the ministry”), Cancer Care Ontario (CCO) and the College of Physicians and Surgeons of Ontario (CPSO) have formed the Quality Management Partnership to develop comprehensive quality management programs for identified healthcare services, including colonoscopy. The Quality Management Partnership established the Quality Management Partnership Colonoscopy/Endoscopy Expert Advisory Panel that was responsible for developing plans for colonoscopy quality management programs, including recommendations for:

1. A quality framework that sets out an integrated set of performance standards and quality measures at the provider, facility and regional/system levels.
2. An integrated data gathering infrastructure, generating performance reports linked to evidence-informed quality improvement opportunities and based on rigorous health analytics to review data.
3. Organized, peer-led approaches to performance improvement programs, and processes.
4. Quality assurance processes for providers, facilities and regions.
5. Changes to health care system design in Ontario that may be required to support comprehensive quality management.

The GI Endoscopy Quality-Based Procedure (QBP) will leverage the Quality Management Partnership deliverables, such as the best practice and quality indicators identified in the quality framework as they are completed and ready for implementation in Ontario. In the interim, the GI Endoscopy QBP has identified standards as outlined in section 4.2 – 4.4. In addition, quality assurance elements in the ColonCancerCheck (CCC)* program, including wait time indicators, will continue to be used for hospitals participating in the colonoscopy component of the CCC program, and will be expanded to all QBP hospitals in the future.

* ColonCancerCheck (CCC) is Ontario's population-based colorectal cancer screening program. Management of the CCC program includes performance reporting and evaluation of key indicators for CCC program indication screening colonoscopies performed at all participating hospitals. Indications for colonoscopies included in the CCC program are: follow-up of abnormal fecal occult blood test results and screening colonoscopy for individuals at increased risk of colorectal cancer due to a first degree relative who has had the disease.

8.2 Performance management framework overview

Key long-term objectives of the GI Endoscopy QBP are to improve the quality and cost-effectiveness of GI endoscopy services in Ontario through a reduction in practice variation and improved patient outcomes. Ensuring that these objectives are met is central to the implementation of the QBP. The new funding framework will provide payment for procedures in a way that supports best-practice standards, appropriate provider reimbursement and improved accountability for outcomes.

CCO has initiated a multi-year indicator development and performance management plan to ensure regular monitoring and evaluation of these objectives. Quality indicators for fiscal year 2014/15 were selected based on evidence and for which high quality data are available and data collection infrastructure is in place. Initially, performance management and evaluation will focus on colonoscopy procedures given the current availability of guidelines on colonoscopy quality assurance and processes established through the ColonCancerCheck (CCC) program. However, the framework will expand to include other endoscopy procedures as best-practice standards, quality indicators and data infrastructure are developed.

CCO will leverage existing CCC infrastructure (i.e., reporting processes and relationships with the RCPs) to develop QBP reporting processes. Implementation of this performance reporting will ensure communication of key indicators and that accountability for best practices and outcomes improves over time across the system. Regional Vice Presidents (RVPs), Regional Colorectal Screening / GI Endoscopy Leads and CCO GI Endoscopy QBP leadership will work together with institutions across Ontario to identify opportunities for improvement specific to each region and facility. In addition, GI Endoscopy QBP quality indicators will be reported in the ministry's Integrated QBP Scorecard along with indicators from Ontario's other QBPs. The Integrated QBP Scorecard provides a framework for measuring and reporting QBP indicators at both a provincial and regional (by Local Health Integration Network or LHIN) level. The Integrated QBP Scorecard framework is further described in section 8.4.

8.3 Multi-year performance management and indicator development plan

Fiscal Year 2014/15 QBP Implementation (Year 1)

Year 1 Indicators

Performance management in Year 1 of the GI Endoscopy QBP will focus on the quality of colonoscopy procedures given the current availability of guidelines on colonoscopy quality assurance, clinical practice algorithms, and performance reporting infrastructure at CCO. A list of potential colonoscopy quality indicators were selected based on a review of existing guidelines.^{3, 5, 6, 7} Members of the Quality Management Partnership Colonoscopy / Endoscopy Expert Advisory Panel were surveyed to determine whether there was agreement that each of the identified indicators is a strong measure of quality. A quality indicator was shortlisted if at least 75% of the respondents strongly agreed with the indicator as a measure of quality. From this list, two quality indicators were identified as feasible to measure and report by fiscal year 2014/15 based on provincial data currently available to CCO.

Tables 1 and 2 below provide information on the methodologies of the two selected facility level quality indicators for colonoscopy: percentage of colonoscopies performed by endoscopists meeting the volume standard, and outpatient cecal intubation. These indicators align with the effectiveness domain in the ministry's QBP Scorecard which is further described in section 8.4.

In addition to these quality indicators, the members of the Quality Management Partnership Colonoscopy / Endoscopy Expert Advisory Panel also endorsed the inclusion of three colonoscopy wait time indicators. Two indicators are collected as part of the ColonCancerCheck (CCC) performance management framework: the percentage of colonoscopies within the 26 week wait time benchmark for individuals with family history of colorectal cancer (CRC) and the percentage of individuals who had a colonoscopy within eight weeks of a positive fecal occult blood test (FOBT) referral. The third indicator measures the percentage of individuals who had a colonoscopy within eight weeks of a positive fecal occult blood test (FOBT) lab result. Due to data availability, this positive FOBT wait time indicator will be reported by all hospitals; whereas, the CCC FOBT+ wait time indicator will be reported only by hospitals currently entering data into Colonoscopy Interim Reporting Tool (CIRT). This is also true for the CCC Family History wait time indicator. All wait time indicators align with the access domain in the ministry's QBP Scorecard.

Tables 3,4 and 5 below provide information on the methodologies for the three wait time indicators. The stated benchmarks (eight weeks for positive FOBT indication and 26 weeks for family history indication) have been adapted from the Canadian Association of Gastroenterology benchmarks for colonoscopy wait times. These benchmarks

entitled, “Canadian consensus on medically acceptable wait times for digestive health care¹⁴,” were published in the Canadian Journal of Gastroenterology in 2006.

Effectiveness Indicators

Table 1

Indicator	Percentage of colonoscopies performed by endoscopists meeting volume standard
Rationale	<p>There is evidence that low volume endoscopists may be more likely to have higher rates of colonoscopy complications. CCO’s ‘Guideline for Colonoscopy Quality Assurance in Ontario³’ recommends that endoscopists perform a minimum of 200 colonoscopies per year. Despite the stated volume threshold, individual endoscopists may require more or fewer procedures to maintain competency. As a result, it is recommended that the volumes are considered in conjunction with other quality measures such as cecal intubation rate in cases where the minimum volume is not met.</p> <p>The relationship between procedural volumes and outcomes is well described across a number of specialties and diseases (e.g. in thoracic surgery).^{8,9} In endoscopy, annual endoscopist volumes has been associated with important quality indicators such as post-procedure complication rates and cecal intubation rate. Supporting evidence includes:</p> <ul style="list-style-type: none"> • Low annual colonoscopy volumes (fewer than 200 procedures) are associated with lower cecal intubation rates for endoscopists with less than 5 years of experience.^{10,11} Low cecal intubation rates have been associated with a statistically significant increased risk of the development of post-colonoscopy colorectal cancer.¹² • Low volume endoscopists (median, 63 procedures annually) had three-fold higher odds of bleeding or perforation within 30 days of outpatient colonoscopy when compared to endoscopists with the highest annual volumes in the study (median, 417 procedures annually).¹³
Definition	Percentage of hospital colonoscopy procedures completed by endoscopists who have performed 200 or more colonoscopies.*
Denominator	<p>Number of inpatient and outpatient colonoscopies performed in the reporting period</p> <p>Data Sources:</p> <p><i>OHIP’s CHDB (Claims History Database) – colonoscopy claims</i></p>

	<i>RPDB (Registered Persons Database) - demographics</i> <i>CIHI DAD/NACRS – facility location</i>
Numerator	Number of inpatient and outpatient colonoscopy procedures performed at the facility by endoscopists who have performed 200 or more colonoscopies in total in the reporting period.* Data Source: <i>OHIP CHDB (Claims History Database) – Colonoscopy Claims</i>
Analysis	Results are presented for a 12-month rolling period Results are presented by Facility, Region/LHIN and Province <ul style="list-style-type: none"> • Facility is determined by linkage between OHIP colonoscopy records with CIHI DAD/NACRS • LHIN is determined by LHIN of practice where the procedure was performed

*Colonoscopies performed outside of the facility in question are included when determining if the endoscopist meets the volume threshold

Table 2

Indicator	Outpatient Cecal Intubation
Rationale	Reaching the cecum indicates adequate insertion of the colonoscope and completeness of the procedure. Procedures performed by endoscopists with low cecal intubation rate have been associated with a statistically significant increased risk of the development of post-colonoscopy colorectal cancer ³ .
Definition	Percentage of outpatient colonoscopy procedures performed at the facility where the cecum or terminal ileum was reached
Denominator	Number of outpatient colonoscopies performed at the facility in the reporting period Data Sources: <i>OHIP CHDB (Claims History Database) – Colonoscopy Claims</i> <i>RPDB (Registered Persons Database) – Demographics</i> <i>CIHI DAD/NACRS – Facility Location</i>
Numerator	Number of outpatient colonoscopies performed at the facility where the cecum or terminal ileum was reached Data Source:

	<i>OHIP CHDB (Claims History Database) – Colonoscopy Claims</i>
Analysis	<p>Results are presented for a 12-month rolling period</p> <p>Results are presented by Facility, Region/LHIN and Province</p> <ul style="list-style-type: none"> • Facility is determined by linkage between OHIP colonoscopy records with CIHI DAD/NACRS • LHIN is determined by LHIN of practice where the procedure was performed

Access Indicators

Table 3

Indicator	Percentage of individuals who had a colonoscopy within 8 weeks of positive FOBT (Timeliness: FOBT+ result to colonoscopy)
Rationale	Cancer Care Ontario uses an 8 week wait time benchmark as an indicator of the timeliness of colonoscopy after abnormal FOBTs. This indicator measures follow-up within eight weeks, among all individuals who had an abnormal FOBT and colonoscopy within six months. A 6 month window is used as colonoscopies performed more than six months after a positive FOBT test may have been performed for a different indication.
Definition	Percentage of Ontario screen-eligible individuals, 50-74 years old, who had an abnormal FOBT result and follow-up colonoscopy within 6 months, who underwent colonoscopy within 8 weeks*
Denominator	<p>Total number of Ontario screen-eligible individuals, 50-74 years old, with a positive CCC program FOBT result in the reporting period, and follow-up colonoscopy within 6 months of a positive FOBT result</p> <p><i>(Positive FOBT date is defined as the date that the FOBT kit is received by the laboratory)</i></p> <p>Data Sources:</p> <p><i>LRT (Laboratory Reporting Tool) – CCC FOBTs</i></p> <p><i>OHIP’s CHDB (Claims History Database) – Colonoscopy claims</i></p> <p><i>CIRT (Colonoscopy Interim Reporting Tool) – CCC program colonoscopy records</i></p> <p><i>OCR (Ontario Cancer Registry) - Resolved invasive colorectal cancers</i></p>

	<i>RPDB (Registered Persons Database) – Demographics</i> <i>CIHI DAD/NACRS – Facility location</i>
Numerator	Total number of Ontario screen-eligible individuals, 50–74 years old, with a positive program FOBT result in the reporting period and a follow-up colonoscopy within 6 months, who underwent colonoscopy within 8 weeks of the positive FOBT result Data Sources: <i>OHIP’s CHDB (Claims History Database) – Colonoscopy claims</i> <i>CIRT (Colonoscopy Interim Reporting Tool) – CCC program colonoscopy records</i>
Analysis	Results are presented quarterly Results are presented by facility, region/LHIN and province <ul style="list-style-type: none"> • Facility is determined by linkage between OHIP colonoscopy records with CIHI DAD/NACRS • LHIN is determined by LHIN of practice where the colonoscopy procedure was performed

*QBP methodology for this indicator differs from methodology used in the CCC regional monthly reporting packages in that it measures the time between abnormal FOBT test date to colonoscopy, while the CCC methodology measures the time between colonoscopy referral date to colonoscopy. The abnormal FOBT test date is defined as the date that the FOBT kit is received by the laboratory and is measurable for all hospitals.

Table 4

Indicator	Percentage of individuals who had a colonoscopy within 8 weeks of positive FOBT (Timeliness: FOBT+ referral to colonoscopy)
Rationale	Cancer Care Ontario uses an 8 week wait time benchmark as an indicator of the timeliness of colonoscopy after abnormal FOBTs. This indicator represents a wait time that is most relevant to endoscopists and will help provide insights into issues on the endoscopy scheduling side of patient waits.
Definition	Percentage of colonoscopies completed within 8 weeks of referral for patients with a positive FOBT indication
Denominator	Total number of individuals who had a colonoscopy with a positive FOBT indication during the reporting period <ul style="list-style-type: none"> • Only outpatient and non-scheduled colonoscopies were included • Colonoscopy procedure date should be after the referral date

	<ul style="list-style-type: none"> • Positive FOBT indication was determined using the indication data element in CIRT: patient who was referred after a positive FOBT test • LHIN was determined by LHIN of practice where the colonoscopy procedure was performed <p>Data Source: <i>CIRT(Colonoscopy Interim Reporting tool)</i></p>
Numerator	<p>Total number of individuals who completed colonoscopies within 8 weeks benchmark</p> <ul style="list-style-type: none"> • 8 weeks (60days) benchmark is calculated based on the days between date of receipt of referral and date of colonoscopy performed <p>Data Source: <i>CIRT(Colonoscopy Interim Reporting tool)</i></p>
Analysis	<p>Results are presented quarterly</p> <p>Results are presented by LHIN and facility</p>

Table 5

Indicator	Percent of colonoscopies within the 26 week wait time benchmark for family history (Timeliness: Family History referral to colonoscopy)
Rationale	Cancer Care Ontario uses a 26 week wait time benchmark as an indicator of the timeliness of colonoscopy among individuals referred because of a family history of colorectal cancer. This indicator measures follow-up within 26 weeks for these individuals.
Definition	Percentage of colonoscopies within the 26 week benchmark for individuals with family history of colorectal cancer defined by the family history colonoscopy indication in the Colonoscopy Interim Reporting Tool*
Denominator	<p>Total number of individuals who had a colonoscopy with a family history indication during the reporting period</p> <ul style="list-style-type: none"> • Only outpatient and non-scheduled colonoscopies are included • Colonoscopy procedure date should be after the referral date • Family history indication is determined using the indication data element in CIRT: <ul style="list-style-type: none"> ○ Patient who was referred because a first-degree relative

	<p>had colorectal cancer;</p> <ul style="list-style-type: none"> ○ First-degree relatives include biological mother, father, sister, brother, daughter or son. Extended family members (e.g. aunt, grandparents, in-laws) are not counted. • LHIN is determined by LHIN of practice where the colonoscopy procedure was performed <p>Data Source: <i>CIRT(Colonoscopy Interim Reporting tool)</i></p>
Numerator	<p>Total number of individuals who completed colonoscopies within 26 weeks benchmark</p> <ul style="list-style-type: none"> • 26 weeks (182days) benchmark is calculated based on the days between date of receipt of referral and date of colonoscopy performed <p>Data Source: <i>CIRT(Colonoscopy Interim Reporting tool)</i></p>
Analysis	<p>Results are presented quarterly Results are presented by facility, region/LHIN and province</p>

*Data for this indicator are collected as part of the ColonCancerCheck performance management framework through the Colonoscopy Interim Reporting Tool (CIRT), and is only available for procedures performed at hospitals participating in the ColonCancerCheck program. The available data account for approximately 50% of hospitals providing GI endoscopy services (small and large) and is not necessarily applicable to non-participating hospitals.

These quality indicators represent the beginning of a more comprehensive suite of quality indicators that were developed for Year 2 of implementation in collaboration with the Quality Management Partnership initiative throughout fiscal year 2014/15.

Year 1 Performance Management Plan

CCO has a performance reporting system in place with hospitals participating in programs such as the ColonCancerCheck and the Ontario Breast Screening Program. In the current system, performance indicators are reported on a regular basis to each of the 14 Regional Cancer Programs (RCPs). The indicators are reviewed with RCPs on a quarterly basis, and each RCP is accountable for communicating and building a culture of improvement with participating hospitals.

Given the maturity of the performance management process, CCO will leverage existing processes and tools from the program to report QBP indicators to RCPs. RCPs will be accountable for sharing QBP performance data with relevant hospitals within their region. While RCPs have established relationships with hospitals through existing

programs, they may be required to build new relationships with additional hospitals in their region to support implementation. In addition, Regional Colorectal Screening / GI Endoscopy Leads will review performance with hospitals in their regions to assist in the development of robust quality management programs within institutions if none currently exist and the execution of opportunities for improvement.

Year 1 of the QBP will begin to set the foundation for measurement. As a result, indicator results will not impact funding in the first year of implementation. The QBP performance management program has not set targets for year 1 implementation; however targets for the indicators are available in existing literature and it is recommended these targets be used as a mechanism to monitor and motivate enhanced quality.

In addition to reporting quality indicators to RCPs, these indicators will also appear on the ministry's Integrated QBP Scorecard, which will facilitate province-wide evaluation of all QBPs (refer to section 8.4).

Fiscal Year 2015/16 QBP Implementation (Year 2)

Year 2 Indicators

The QBP will continue to leverage the work developed by the Quality Management Partnership Colonoscopy / Endoscopy Expert Advisory Panel during fiscal year 2014/15 to expand the quality framework and suite of indicators.

In addition, in fiscal year 2014/15 CCO convened working groups with clinical experts to review the current state of gastroscopy in Ontario and gather existing literature to develop gastroscopy indicators for fiscal year 2015/16. These indicators will be finalized by an external expert review process and the GI Endoscopy Advisory Committee, and any approved indicators will be included in the QBP performance management framework and the ministry's Integrated QBP Scorecard. 2 (refer to section 8.4).

Year 2 Performance Management Plan

A detailed performance management and evaluation plan for Year 2 will be developed based on the requirements of selected Year 2 indicators. Quality assurance programs are expected to be in place at all hospitals, to monitor and improve the quality of GI endoscopy services.

8.4 Integrated QBP Scorecard

In introducing the QBPs, the ministry has a strong interest in:

1. Supporting monitoring and evaluation of the impact (intended and unintended) of the introduction of QBPs

2. Providing benchmark information for clinicians and administrators that will enable mutual learning and promote on-going quality improvement
3. Providing performance-based information back to expert panels to evaluate the impact of their work and update as required in real time

There was recognition that reporting on a few system-level indicators alone would not be sufficient to meet the ministry's aim of informing and enabling quality improvement initiatives at the provider-level. Therefore measures meaningful to hospitals and clinicians that are interpretable and have demonstrable value in improving the quality of care provided to patients are also of utmost importance.

To guide the selection and development of relevant indicators for each QBP, the ministry, in consultation with experts in evaluation and performance measurement, developed an approach based on the policy objectives of the QBPs and a set of guiding principles. This resulted in the creation of an integrated scorecard with the following six quality domains:

- Effectiveness (including safety)
- Appropriateness
- Integration
- Efficiency
- Access
- Patient-centeredness

The scorecard is based on the following guiding principles:

- **Relevance** – the scorecard should accurately measure the response of the system to introducing QBPs
- **Importance** – to facilitate improvement, the indicators should be meaningful for all potential stakeholders (patients, clinicians, administrators, LHINs and the ministry)
- **Alignment** – the scorecard should align with other indicator-related initiatives where appropriate
- **Evidence** – the indicators in the integrated scorecard need to be scientifically sound or at least measure what is intended and accepted by the respective community (clinicians, administrators and/or policy-decision makers)

A set of evaluation questions was identified for each of the QBP policy objectives outlining what the ministry would need to know in order to understand the intended and unintended impacts of the introduction of QBPs. These questions were translated into key provincial indicators resulting in a QBP scorecard (see table below).

Quality Domain	What is being measured?	Key provincial indicators
Effectiveness	What are the results of care received by patients and do the results vary across providers that cannot be explained by population characteristics as well as is care provided without harm?	<ol style="list-style-type: none"> 1. Proportion of QBPs that improved outcomes 2. Proportion of QBPs that reduced variation in outcome 3. Proportion of (relevant) QBPs that reduced rates of adverse events and infections
Appropriateness	Is patient care being provided according to scientific knowledge and in a way that avoids overuse, underuse or misuse?	<ol style="list-style-type: none"> 4. Proportion of QBPs that reduced variation in utilization 5. Proportion of (relevant) QBPs that saw a substitution from inpatient to outpatient/day surgery 6. Proportion of (relevant) QBPs that saw a substitution to less invasive procedures 7. Increased rate of patients being involved in treatment decision 8. Proportion of (relevant) QBPs that saw an increase in discharge dispositions into the community
Integration	Are all parts of the health system organized, connected and work with another to provide high quality care?	<ol style="list-style-type: none"> 9. Reduction in 30-day readmissions rate (if relevant) 10. Improved access to appropriate primary and community care including for example psychosocial support (e.g. personal, family, financial, employment and/or social needs) 11. Coordination of care (TBD) 12. Involvement of family (TBD)
Efficiency	Does the system make best use of available resources to yield maximum benefit ensuring that the system is sustainable for the long term?	<ol style="list-style-type: none"> 13. Actual costs vs. QBP price
Access	Are those in need of care able to access services when needed?	<ol style="list-style-type: none"> 14. Increase in wait times for QBPs / for specific populations for QBP 15. Increase in wait times for other procedures 16. Increase in distance patients have to travel to receive the appropriate care related to the QBP 17. Proportion of providers with a significant change in resource intensity weights (RIW)

Quality Domain	What is being measured?	Key provincial indicators
<p>Patient-Centeredness <i>(to be further developed)</i></p>	<p>Is the patient/user at the center of the care delivery and is there respect for and involvement of patients' values, preferences and expressed needs in the care they receive? (TBC)</p>	<p>18. Increased rate of patients being involved in treatment decision 19. Coordination of care (TBD) 20. Involvement of family (TBD)</p>

It should be noted that although not explicitly mentioned as a separate domain, the equity component of quality of care is reflected across the six domains of the scorecard and will be assessed by stratifying the indicator results by key demographic variables and assessing comparability of findings across sub-groups. Where appropriate, the indicators will be risk-adjusted for important markers of patient complexity so that they will provide an accurate representation of the quality of care being provided to patients.

In developing the integrated scorecard approach, the ministry recognized the different users of the indicators and envisioned each distinct set of measures as an inter-related cascade of information. That is, the sets of indicators each contain a number of system or provincial level measures that are impacted by other indicators or driving factors that are most relevant at the LHINs, hospital or individual clinician level. The indicators will enable the province and its partners to monitor and evaluate the quality of care and allow for benchmarking across organizations and clinicians. This will, in turn, support quality improvement and enable target setting for each QBP to ensure that the focus is on providing high quality care, as opposed to solely reducing costs.

It is important to note that process-related indicators selected by the expert panels will be most relevant at the provider level. The full list of these measures is intended to function as a “menu” of information that can assist administrators and clinicians in identifying areas for quality improvement. For example, individual providers can review patient-level results in conjunction with supplementary demographic, financial and other statistical information to help target care processes that might be re-engineered to help ensure that high-quality care is provided to patients.

Reports will be supplemented with technical information outlining how results were calculated along with LHIN and provincial-level results that contextualize relative performance. Baseline reports will also be accompanied by facility-level information that will facilitate sharing of best practices and target setting at the provider-level.

The ministry recognizes that the evaluation process will be on-going and will require extensive collaboration with researchers, clinicians, administrators and other relevant stakeholders to develop, measure, report, evaluate and, if required, revise and/or include additional indicators to ensure that the information needs of its users are met.

8.5 Alignment of GI Endoscopy QBP indicators to Integrated QBP Scorecard

The indicators selected for Year 1 of the GI Endoscopy QBP (see section 8.3), align to the Effectiveness and Access domains of the Integrated QBP Scorecard to enable the measurement of improved outcomes and reduced variation across providers. Remaining domains not measured in Year 1 (Appropriateness, Integration, Efficiency, Patient-Centeredness) will be evaluated by QBP indicators in future years.

9.0 Support for change

Cancer Care Ontario (CCO) will provide input on the overarching Health System Funding Reform (HSFR) strategy for system change, and specifically, manage the changes related to gastrointestinal (GI) endoscopy service delivery.

The Ministry of Health and Long-Term Care (referred to as “the ministry”), in collaboration with its partners, will deploy a number of field supports to foster adoption of the funding policy. These supports include:

- Committed clinical engagement with representation from cross-sectoral health sector leadership and clinicians to champion change through the development of standards of care and the development of evidence-informed patient clinical pathways for the Quality-Based Procedures (QBPs).
- A dedicated multidisciplinary clinical expert group that seek clearly defined purposes, structures, processes and tools that are fundamental for helping to navigate the course of change.
- Strengthened relationships with ministry partners and supporting agencies to seek input on the development and implementation of QBP policy, disseminate quality improvement tools and support service capacity planning.
- Alignment with quality levers such as the Quality Improvement Plans (QIPs). QIPs strengthen the linkage between quality and funding, and facilitate communication between the hospital board, administration, providers and public on the hospitals’ plans for quality improvement and enhancement of patient-centered care.
- Deployment of a Provincial Scale Applied Learning Strategy known as IDEAS (Improving the Delivery of Excellence Across Sectors). IDEAS is Ontario’s investment in field-driven capacity-building for improvement. Its mission is to help build a high-performing health system by training a cadre of health system change agents that can support an approach to improvement of quality and value in Ontario.

We hope that these supports, including this Clinical Handbook, will help facilitate a sustainable dialogue between hospital administration, clinicians and staff on the underlying evidence guiding QBP implementation. The field supports are intended to complement the quality improvement processes currently underway in your organization.

10.0 Frequently asked questions (FAQs)

The Gastrointestinal (GI) Endoscopy Quality-Based Procedure (QBP) team has responded to a number of inquiries throughout the QBP development. The most frequently asked and relevant questions (FAQs) have been documented below and are categorized into the following sections:

- Cancer Care Ontario and Scope of the GI Endoscopy QBP
- QBP Funding Model and Methodology
- Cancer Screening Programs in Relation to the QBP

Cancer Care Ontario and Scope of the GI Endoscopy QBP

What is Cancer Care Ontario's role in funding reform?

Cancer Care Ontario has an advisory role to the Ministry of Health and Long-Term Care (referred to as “the ministry”) pertaining to cancer and renal related matters. CCO has a successful history in performance improvement, infrastructure planning and the management of large-scale funding models as well as strong working relationships with healthcare professionals and access to information and knowledge. For these reasons, the ministry has tasked CCO with advancing Health System Funding Reform (HSFR) by researching, developing and implementing new funding models for:

- Chronic Kidney Disease (CKD) – Ontario Renal Network (ORN)
- Systemic Treatment – Regional Systemic Treatment Program (RSTP)
- GI Endoscopy – Cancer Screening Program
- Colposcopy – Cancer Screening Program
- Cancer Surgery – Cancer Surgery Program

Is anesthesia in-scope for the GI Endoscopy QBP?

In the FY 14/15 GI Endoscopy QBP funding model, direct costs associated with anesthesia were part of the costing exercises using the 2011/12 Ontario Case Costing Initiative database to determine weighted cases for each procedure combination and are thereby incorporated into the funding of procedures. This includes the cost of nursing, medical supplies, etc., however does not include physician related costs.

CCO has recognized that the use of anesthesia in GI endoscopy is a complex issue with various cost implications for both hospitals and the health care system, depending on whether a nurse versus anesthetist staffing model is implemented.

The fiscal year 2015/16 GI Endoscopy QBP work plan includes the development of best practice for sedation within GI endoscopy procedures. This will include reviewing the overall use of anesthesia for procedures, and the associated staffing complement.

Can you explain and provide examples of procedures that are out-of-scope for this QBP?

The GI Endoscopy QBP only funds procedures that are endoscopic in nature, regardless of where these procedures are performed. Procedures that are not gastrointestinal in nature are out of scope; this includes procedures related to the bladder, lungs, urethra, prostate and kidneys that may occur in the endoscopy suite. Any procedure code that is not included in the in-scope procedure list is considered out-of-scope for this QBP (please see Appendix A).

QBP Funding

How does the GI Endoscopy QBP fund cases performed in different locations (e.g., endoscopy suite, day surgery, OR and ER, etc.)?

a) All Discharge Abstract Database (DAD) and National Ambulatory Care Reporting System (NACRS) reported cases are included, irrespective of the location on the record.

For GI endoscopy cases transferred in from other hospitals, there is a process that allows the receiving hospital that performs the procedure to bill the hospital where the patient was initially admitted. Does this system for inter-hospital billing no longer apply as a result of the GI Endoscopy QBP?

The GI Endoscopy QBP will fund the hospital that performs the procedure as patient-based funding ensures that funding follows the patient. Therefore, there will no longer be the need for invoicing between hospitals.

The QBP requires complex use of NARCS and DAD data. Will CCO continue to use these data sets going forward?

DAD and NACRS data will continue to play an important role in this QBP as it is used to trigger funding. However these data sets do not account for the quality agenda that is the foundation of the QBP. As additional quality standards, indicators and best practice is developed for endoscopy, CCO will determine how to implement performance tracking and monitoring across the province.

What is the process for making funding recommendations?

CCO has regular consultations with clinical experts and advisory panels, to capture knowledge and insights from across the province. Throughout QBP development, feedback is reviewed and incorporated as applicable to funding model refinements.

As costing analysis is completed using Ontario Case Costing databases, CCO will work closely with case costing hospitals to review and analyze the GI endoscopy data to ensure appropriate costs are embedded into the funding model as it continues to be further developed.

What costs are included in the GI endoscopy funding model?

The costs for procedures in the GI Endoscopy QBP funding model are associated to **direct costs** only, and can include the following direct cost components (please note direct/indirect costs are based on MIS/OHRS Standards):

- **Staffing:** Resources, activities and associated workload associated with the procedure
 - Clinical Staff: e.g. nursing
 - Managerial/ Clerical Staff: e.g., management (functioning of unit, scheduling, etc.) and clerical (registration, ordering tests, other)
- **Medical/Surgical Supplies:** Supplies, other admin/clinic costs (forms, etc.)
- **Drugs:** Miscellaneous drugs used in the treatment of the patient
- **Equipment:** Includes probes, and depreciation, maintenance of equipment but excludes cleaning of equipment (reprocessing is currently an indirect cost)
- **Administrative/Sundry Costs:** Other administrative costs including forms, office supplies, etc.
- **Gases/Anesthesia:** Appropriate use of anesthesia (when, type) and staffing model associated with anesthesia use

Indirect costs are excluded from this QBP as well as, physician and pathology costs. In addition, as is standard across QBPs, teaching costs are captured within HBAM funding.

Cancer Screening Programs in Relation to the QBP

How will ColonCancerCheck (CCC) volumes be affected by the QBP?

CCO remains committed to improving colorectal cancer screening in Ontario through the CCC and Registered Nurse Flexible Sigmoidoscopy (RNFS) programs. As part of the QBP implementation, CCO will no longer fund QBP hospitals separately for RNFS volumes or incremental colonoscopy volumes for CCC program indications, rather will fund any in-scope CCC or RNFS procedures through the QBP funding envelop based on the current QBP funding model. Volumes and wait times for CCC program indication

colonoscopies will continue to be monitored through the pre-established CCC performance management framework.

Will the process to submit data for the CCC program continue separately from the GI endoscopy QBP process?

CCO will continue to require data submissions via the Colonoscopy Interim Reporting Tool (CIRT) for CCC sites because the data are currently used for cancer screening performance management. Stakeholders will be kept apprised of any changes to data submission requirements as they occur.

Will non-CCC hospitals be expected to report into CIRT as of April 1, 2015?

As the QBP performance management framework is further developed, a standardized data collection tool will be used to gather GI endoscopy data from all GI endoscopy hospitals. Planning is underway to enhance the Colonoscopy Interim Reporting Tool (CIRT) data collection system and to initiate deployment. CCO will be communicating updates regarding data collection processes to stakeholders as they are confirmed.

11.0 Membership for GI Endoscopy QBP Advisory Committee and Expert Advisory Panels

Supporting the development of GI endoscopy clinical pathways, best-practice standards and in-scope procedure selections are the following main panels: GI Endoscopy Advisory Committee, and the Ontario Colonoscopy Expert Panel, which was disbanded as of spring of 2013 and replaced with the Quality Management Partnership Colonoscopy / Endoscopy Expert Advisory Panel which was then disbanded in December 2014. As of January 2015, the GI Endoscopy Advisory Committee is the primary panel overseeing GI Endoscopy QBP development.

The GI Endoscopy Advisory Committee is comprised of clinical and administrative experts who provide expertise to improve the quality of GI Endoscopy care for Ontarians through the adoption of evidence-informed best practices and clinical process redesign to streamline the delivery of care and improve patients' experience and outcomes. Table 5 below provides the list of individuals who have participated in the GI Endoscopy Advisory Committee. Table 6 reflects membership of the Quality Management Partnership Colonoscopy / Endoscopy Expert Advisory Panel. Membership of the governance bodies may evolve and enhance, as CCO identifies additional expertise and representation required in the development of the GI Endoscopy QBP.

Table 5: Membership for the GI Endoscopy Advisory Committee (July 2013 – Present)

Name	Title	Timeframe
Clinical Leads		
Dr. Nancy Baxter	Provincial Lead, GI Endoscopy	Oct 2014 - Present
Dr. Catherine Dubé	Clinical Lead, ColonCancerCheck	Oct 2014 - Present
Dr. Jill Tinmouth	Lead Scientist, ColonCancerCheck	Jul 2013 - Present
Dr. David Morgan	Clinical Lead, Quality Management Partnership	Jul 2013 - Present
Dr. Michael Gould	Provincial GI Endoscopy Lead, CCO ColonCanceCheck program	Jul 2013 – May 2014

Regional Colorectal Screening/GI Endoscopy Leads		
Dr. David Baron	Central	Oct 2014 - Present
Dr. Hugh Kendall	Central East	Jul 2013 - Present
Dr. Alaa Rostom	Champlain	Oct 2014 - Present
Dr. Rahman Bacchus	Erie St Clair	Oct 2014 - Present
Dr. Barry Lumb	HNHB	Oct 2014 - Present
Dr. Douglas Bair	Mississauga Halton/ Central West	Oct 2014 - Present
Dr. Doug Hemphill	North Simcoe Muskoka	Oct 2014 - Present
Dr. Bill Harris	North West	Oct 2014 - Present
Dr. Scott Shulman	North East	Oct 2014 - Present
Dr Lawrence Hookey	South East	Oct 2014 - Present
Dr. Brian Yan	South West	Oct 2014 - Present
Dr. Ian Bookman	Toronto Central	Oct 2014 - Present
Dr. Naoki Chiba	Waterloo Wellington	Oct 2014 – May 2015
Clinicians and Hospital Administrators		
Dr. Stan Feinberg	Chief Surgery, NYGH	Jul 2013 - Present
Kay Rhodes	Clinical Director, Kensington Screening Clinic	Jul 2013 - Present
Leslie Gillies	Director of Perioperative Services, Critical Care Program and Ambulatory Care, Norfolk General Hospital	Jun 2014 - Present
Karen Orescanin	Senior Corporate Reporting Officer	Jul 2013 - Present
Dianne Pletz	Program Manager Endoscopy, St. Mary's General Hospital	Oct 2014 - Present
Linda Jussaume	Program Director, Surgery, North York General Hospital	Jul 2013 - Present
Joyce Fenuta	Program Director for Specialized Complex Care, St. Michael's Hospital	Jul 2013 - Present
College of Physician and Surgeons of Ontario		
Wade Hillier	Director at College of Physicians and Surgeons of Ontario	Jul 2013 - Present
Regional Cancer Programs		
Tom McHugh	Regional Vice President, Central East	Jul 2013 - Present
Brenda Fleming	Director, Southwest	Oct 2014 - Present

Jeff Booth	Director, Erie St Clair	Oct 2014 – Dec 2014
Elizabeth Dulmage	Director, Erie St. Clair	Jan 2015 - Present
Ministry of Health and Long-Term Care		
Michael Stewart	Health System Funding Reform Team	Jul 2013 – Apr 2014
Thomas Smith	Provincial Programs	Jul 2013 – Apr 2014

Table 6: Membership for the Quality Management Partnership Colonoscopy / Endoscopy Expert Advisory Panel (April 2013 – December 2014)

Name	Title/Affiliations	Timeframe
LHIN/Region: Central		
Dr. David Baron	<p>CLINICAL PRACTICE Gastroenterologist Chief of Medicine and Program Medical Director</p> <ul style="list-style-type: none"> • North York General Hospital <p>AFFILIATIONS</p> <ul style="list-style-type: none"> • Assistant Professor, Department of Medicine, University of Toronto 	Apr 2013 – Dec 2014
Dr. Stan Feinberg	<p>CLINICAL PRACTICE General Surgeon Chief of Surgery and Program Medical Director</p> <ul style="list-style-type: none"> • North York General Hospital <p>AFFILIATIONS</p> <ul style="list-style-type: none"> • Assistant Professor, Department of Surgery, University of Toronto • Associate Program Director, General Surgery, University of Toronto • Exam Board, Royal College of Physicians and Surgeons of Canada, General Surgery • Exam Board, Royal College of Physicians and Surgeons of Canada, Colon and Rectal Surgery • Colo-Rectal Cancer Surgical Lead, Central LHIN 	Apr 2013 – Dec 2014

Name	Title/Affiliations	Timeframe
Dr. Jeff Habert	<p>CLINICAL PRACTICE Family physician</p> <p>AFFILIATIONS</p> <ul style="list-style-type: none"> • Lecturer, Department of Family and Community Medicine, University of Toronto • Investigating Coroner for the City of Toronto 	Apr 2013 – Dec 2014
Dr. Hugh Kendall	<p>CLINICAL PRACTICE General Surgeon</p> <ul style="list-style-type: none"> • Durham Endosurgery Centre <p>AFFILIATIONS</p> <ul style="list-style-type: none"> • President, Medical Director- Durham Endosurgery Centre • Member, CPSO Premises Inspection Committee • Peer Assessor, General Surgery, CPSO 	Apr 2013 – Dec 2014
LHIN/Region: Toronto Central		
Dr. Nancy Baxter	<p>CLINICAL PRACTICE General Surgeon</p> <ul style="list-style-type: none"> • St. Michael's Hospital <p>AFFILIATIONS</p> <ul style="list-style-type: none"> • Provincial GI Endoscopy Lead, CCO • Associate Professor, Department of Surgery-St. Michael's Hospital and the Department of Health Policy Management and Evaluation, University of Toronto • Scientist-Keenan Research Centre of the Li KaShing Knowledge Institute, St. Michael's Hospital • Staff Surgeon and Division Chief, Department of Surgery, Division of General Surgery, St. Michael's Hospital • Adjunct Scientist, Cancer Theme Group, Institute for Clinical Evaluative Sciences 	Apr 2013 – Dec 2014

Name	Title/Affiliations	Timeframe
Dr. Peter Rossos	<p>CLINICAL PRACTICE Gastroenterologist</p> <ul style="list-style-type: none"> • Mount Sinai Hospital • Princess Margaret Hospital • Toronto General Hospital • Toronto Western Hospital <p>AFFILIATIONS</p> <ul style="list-style-type: none"> • Director of Health Informatics, Centre for Innovation in Complex Care • Associate Professor of Medicine, University of Toronto Chief Medical Information Officer, University Health Network (UHN) and SIMS 	Apr 2013 – Dec 2014
Dr. Jill Tinmouth	<p>CLINICAL PRACTICE Lead Scientist, ColonCancerCheck Gastroenterologist</p> <ul style="list-style-type: none"> • Sunnybrook Health Sciences Centre <p>AFFILIATIONS</p> <ul style="list-style-type: none"> • Lead Scientist, ColonCancerCheck program, Cancer Care Ontario • Scientist, Sunnybrook Research Institute, Inc. • Adjunct Scientist, Institute for Clinical Evaluative Sciences • Assistant Professor, Department of Medicine and Department of Health Policy Management and Evaluation, University of Toronto 	Apr 2013 – Dec 2014
Kay Rhodes	<p>CLINICAL PRACTICE? Non-Physician OHP Administrator Clinical Director</p> <ul style="list-style-type: none"> • Kensington Health Clinic <p>AFFILIATIONS</p> <ul style="list-style-type: none"> • Research Associate, Administrative Data Specialist 	Apr 2013 – Nov 2014
LHIN/Region: Central East		
Tom McHugh	VP - Clinical Programs and Regional VP Cancer Services at Lakeridge Health/Cancer Care Ontario	Apr 2013 – Dec 2014

Name	Title/Affiliations	Timeframe
Dr. Matt Kurrek	<p>CLINICAL PRACTICE Anesthetist</p> <p>AFFILIATIONS</p> <ul style="list-style-type: none"> • Associate Professor, University of Toronto, Department of Anesthesia • Staff Anesthetist, The Scarborough Hospital • Lead, Provincial Peer Assessor Network Anesthesia, CPSO • Vice Chair, Standards Committee, Canadian Anesthesiologists' Society (CAS) • Vice Chair, Patient Safety Committee, Canadian Anesthesiologists' Society (CAS) • Past Vice Chair, Canadian Advisory Committee TC121, International Standards Organization (ISO) 	Apr 2013 – Dec 2014
LHIN/Region: Central (Markham)		
Dr. Iain Murray	<p>CLINICAL PRACTICE Gastroenterologist OHP Clinician</p> <ul style="list-style-type: none"> • Markham Stouffville Hospital <p>AFFILIATIONS</p> <ul style="list-style-type: none"> • Director - Intestinal Health Institute • VP - Ontario Association of Gastroenterology • Peer Assessor - Gastroenterology - CPSO 	Apr 2013 – Dec 2014
LHIN/Region: Champlain		
Dr. Catherine Dubé	<p>CLINICAL PRACTICE Gastroenterologist</p> <ul style="list-style-type: none"> • Ottawa Hospital <p>AFFILIATIONS</p> <ul style="list-style-type: none"> • Clinical Lead, ColonCancerCheck • Associate Professor, Department of Medicine, Division of Gastroenterology, University of Ottawa 	May 2014 – Dec 2014

Name	Title/Affiliations	Timeframe
LHIN/Region: Hamilton Niagara Haldimand Brant		
Dr. David Morgan	<p>CLINICAL PRACTICE Gastroenterologist</p> <ul style="list-style-type: none"> • Hamilton Health Sciences Centre • St. Joseph's Hospital <p>AFFILIATIONS</p> <ul style="list-style-type: none"> • Quality Management Partnership Colonoscopy Clinical Lead (Chair) • Professor, Division of Gastroenterology, Department of Medicine at McMaster University • Head, Service of Gastroenterology, St. Joseph's Hospital • President, Canadian Association of Gastroenterology (CAG) 	Apr 2013 – Dec 2014
Dr. David Armstrong	<p>CLINICAL PRACTICE Gastroenterologist</p> <ul style="list-style-type: none"> • Hamilton Health Sciences Centre <p>AFFILIATIONS</p> <ul style="list-style-type: none"> • Professor, Department of Medicine, McMaster University • Chair, CAG Endoscopy Committee (1996–2004) • Member, CCO Colonoscopy Expert Panel (2007) • Chief, Clinical Service for Gastroenterology (2000–2007) 	Apr 2013 – Dec 2014
LHIN/Region: Mississauga-Halton		
Dr. Michael Gould	<p>CLINICAL PRACTICE Gastroenterologist OHP Clinician</p> <ul style="list-style-type: none"> • William Osler Health Centre; Women's College Hospital <p>AFFILIATIONS</p> <ul style="list-style-type: none"> • Provincial Colonoscopy Lead, ColonCancerCheck program, Cancer Care Ontario • Medical Director and President of Vaughan Endoscopy Clinic • VP, The Toronto Digestive Disease Associates Research Group • Board Member, Canadian Digestive Health Foundation 	Apr 2013 – May 2014

Name	Title/Affiliations	Timeframe
Dr. Jeffrey Kolbasnik	<p>CLINICAL PRACTICE General Surgeon</p> <ul style="list-style-type: none"> • Halton Healthcare Services- Milton District Hospital • Hamilton Health Sciences Centre St. Joseph's Hospital <p>AFFILIATIONS</p> <ul style="list-style-type: none"> • President, Ontario Association of General Surgeons (OAG) • VP, Professional Staff Association • Board Member, Halton Healthcare Services • Member, Ontario Medical Council (OMC) • Member, OMA Surgical Assembly • Member, OMA General Surgery Tariff Chair • Board Member, Canadian Association of General Surgeons 	Apr 2013 – Dec 2014
Dr. Roger Hollingworth	<p>CLINICAL PRACTICE Gastroenterologist Division Head, Gastroenterology Programme</p> <ul style="list-style-type: none"> • The Credit Valley Hospital 	Apr 2013 – Sept 2014
Johanne Lin	<p>CLINICAL PRACTICE Nurse representative Nurse Manager</p> <ul style="list-style-type: none"> • Oakville Endoscopy Centre 	Apr 2013 – Dec 2014

Name	Title/Affiliations	Timeframe
Subi Bhandari	Patient/Caregiver representative AFFILIATIONS <ul style="list-style-type: none"> • Member, CCO Patient Family Advisory Council • Panel Member, CCO Integrated Care Advisory Panel • Member, CCO Palliative Care Steering Committee • Member, Steering Committee for Improving Patient Experience & Health Outcomes Collaborative (iPEHOC). • Member, eHealth Ontario Patient Advisory Panel • Board Member, Patients Canada 	Apr 2013 – Dec 2014
LHIN/Region: London		
Dr. Chris Vinden	CLINICAL PRACTICE General surgeon AFFILIATIONS <ul style="list-style-type: none"> • OAGS President • Assistant Professor of Surgery, University of Western Ontario • Adjunct Scientist, Institute for Clinical Evaluative Sciences 	Apr 2013 – Dec 2014
LHIN/Region: North Simcoe Muskoka		
Dr. Doug Hemphill	CLINICAL PRACTICE Gastroenterologist <ul style="list-style-type: none"> • Victoria Hospital • Stevenson Memorial Hospital • Medical Director, Barrie Endoscopy 	Apr 2013 – Dec 2014
LHIN/Region: Southwest		
Dr. Angus Maciver	CLINICAL PRACTICE General Surgeon and Endoscopist	Apr 2013 – Dec 2014
LHIN/Region: Other		
Jennifer Stretton	CLINICAL PRACTICE Nursing practitioner representative	Apr 2013 – Dec 2014
Jacques Lupien	CLINICAL PRACTICE Patient/Caregiver representative	Apr 2013 – Dec 2014
Judy Knighton	OHP Inspector	Apr 2013 – Dec 2014

Appendix A – GI Endoscopy QBP Fiscal Year 2015/16 Funding Model Summary and In-Scope Procedure List

In-scope procedures for the fiscal year 2015/16 funding model for the GI Endoscopy QBP fall into one of two groupings:

Group 1: Index Category Procedures:

- Index category is defined as a unique/identifiable episode of care where best practice, standards or guidelines exist or can be developed, and where costs are predictable or defined. 14 Index Categories were developed to categorize a patient encounter based on the types of GI endoscopy procedures completed during the patient experience. Each index category is mutually exclusive and a given patient experience will be aligned to only one index category. Each index category has a specific weighted unit reflecting the cost of the procedures within the category. Some index categories can be paired with additional pricing adjustments for interventions.

Group 2: Intervention Procedures:

- Adjunct procedures that are added to colonoscopy or gastroscopy index category procedures resulting in additional funding
- Interventions can also be added to remaining index category procedures, however will not impact the funding rate

The following table outlines the Index Category procedures and Interventions and the associated weighted unit/funding rate.

Index Category Procedures	Weighted Unit
1. Colonoscopy	1.00
2. Gastroscopy	0.90
3. Colonoscopy + Gastroscopy	1.20
4. Endoscopic retrograde cholangiopancreatography (ERCP) alone	3.45
5. Endoscopic retrograde cholangiopancreatography (ERCP) with intervention	7.79

6. Endoscopic Ultrasound (EUS)	4.70
7. Capsule Endoscopy	0.15
8. Sigmoidoscopy	0.80
9. Balloon Enteroscopy	6.70
10. Feeding Tube	2.05
11. Control of Bleeding - Elective	1.41
12. Control of Bleeding - Non-elective	4.02
13. Stent*	3.53
14. Laser/Argon	4.00

**Non-ERCP, weighted unit excludes costs of stents that are funded separately*

Intervention Procedures	Weighted Unit
1. Biopsy and Destruction	0.11
2. Excision (excluding hemorrhoidal bands)	0.43
3. Dilation without balloon	0.22
4. Dilation with balloon	1.35
5. Implantation/Removal/Drainage/ Management (includes hemorrhoidal bands)	0.30
6. Pharmacotherapy	0.41

The following list outlines fiscal year 2015/16 in-scope procedure codes and groupings for the GI Endoscopy QBP.

Table A. Colonoscopy Inspection: In-scope procedure codes	
CCI Code	Procedure Description
2NM70BABJ	Inspection, large intestine using endoscopic per orifice approach (or via stoma) and colonoscope
2NK70BABJ	Inspection, small intestine using endoscopic per orifice approach (or via stoma) and colonoscope

Table B. Gastroscopy	
CCI Code	Procedure Description
2NA70BA	Inspection, esophagus using endoscopic per orifice approach
2NF70BA	Inspection, stomach using endoscopic per orifice approach (or via stoma)
2NK70BABL	Inspection, small intestine using endoscopic per orifice approach (or via stoma) and gastroscope

Table C. ERCP Alone	
CCI Code	Procedure Description
2OE70BA	Inspection, bile ducts using endoscopic per orifice approach
3OE10WZ	Xray, bile ducts following endoscopic (retrograde) injection of contrast
3OG10WZ	Xray, biliary ducts with pancreas following endoscopic (retrograde) injection of contrast [ERCP]

Table D. ERCP with Intervention*	
CCI Code	Procedure Description
1OE13BAE3	Control of bleeding, bile ducts using endoscopic per orifice approach and cardiac stimulant (e.g. epinephrine)
1OE13BAFF	Control of bleeding, bile ducts using endoscopic per orifice approach and clips
1OE50BABD	Dilation, bile ducts endoscopic [retrograde] per orifice approach [e.g. ERC] using balloon dilator [with or without stent]
1OE50BANR	Dilation, bile ducts endoscopic [retrograde] per orifice approach [e.g. ERC] using rigid dilator [e.g. stent]
1OE52BATS	Drainage, bile ducts using endoscopic [retrograde] per orifice approach [e.g. ERC or

Table D. ERCP with Intervention*	
CCI Code	Procedure Description
	ERCP] leaving catheter (tube) in situ
1OE54BATS	Management of internal device, bile ducts of drainage device using endoscopic [retrograde] per orifice [e.g. ERC or ERCP] approach
1OE55BANR	Removal of device, bile ducts of stent using endoscopic per orifice approach
1OE57BAAM	Extraction, bile ducts endoscopic [retrograde]per orifice approach [ERC] using basket [dormia] device
1OE57BABD	Extraction, bile ducts endoscopic [retrograde]per orifice approach [ERC] using balloon device
1OE57BAGX	Extraction, bile ducts endoscopic [retrograde]per orifice approach [ERC] using other device NEC [e.g. forceps, meatome]
1OE59BAAS	Destruction, bile ducts using endoscopic [retrograde cholangiography] per orifice approach [ERC] electrohydraulic device [probe]
1OE59BAAZ	Destruction, bile ducts using endoscopic [retrograde cholangiography] per orifice approach [ERC] ultrasonic device [probe]
1OE59KQAS	Destruction, bile ducts using extracorporeal approach [Shock wave lithotripsy] [ESWL] and electrohydraulic device
1OE87BA	Excision partial, bile ducts using endoscopic [retrograde: ERC] per orifice approach
1OJ52BA	Drainage, pancreas without leaving drainage tube in situ using endoscopic per orifice [e.g. ERCP] approach
1OJ52BATS	Drainage, pancreas leaving drainage tube in situ using endoscopic per orifice [e.g. ERCP] approach
1OJ76BX	Bypass, pancreas endoscopic [retrograde] per orifice approach using pancreaticogastrostomy diversion
2OD71BA	Biopsy, gall bladder using endoscopic [retrograde] per orifice approach
2OE71BA	Biopsy, bile ducts using endoscopic per orifice (retrograde)[ERC] approach
2OJ71BA	Biopsy, pancreas using endoscopic [retrograde] per orifice approach
2OJ71HA	Biopsy, pancreas using percutaneous (needle) approach
1OE50BT	Dilation, bile ducts endoscopic [retrograde] per orifice approach [ERC] with incision using incisional technique only
1OE50BTBD	Dilation, bile ducts endoscopic [retrograde] per orifice approach [ERC] with incision using balloon dilator (with or without stent)
1OE50BTNR	Dilation, bile ducts endoscopic [retrograde] per orifice approach [ERC] with incision using rigid dilator [e.g. stent]

*Note: As of April 2015, the CCI code 1OE50BA has been disabled.

Table E. EUS	
CCI Code	Procedure Description
2ME71BP	Biopsy, mediastinal lymph nodes endoscopic per orifice, with needle aspiration
2ME71DA	Biopsy, mediastinal lymph nodes using endoscopic approach
2MF71DA	Biopsy, intrathoracic lymph nodes using endoscopic approach
2MG71DA	Biopsy, intraabdominal lymph nodes using endoscopic approach
2NA71BP	Biopsy, esophagus using endoscopic per orifice needle aspiration
2NF71BP	Biopsy, stomach using endoscopic per orifice with needle (aspiration) biopsy
3GY30HJ	Ultrasound, thoracic cavity NEC using transesophageal approach
3OT30HA	Ultrasound, abdominal cavity endoscopic [EUS] NEC

Table F. Capsule Endoscopy	
CCI Code	Procedure Description
3OZ94AY	Imaging intervention NEC, digestive system NEC with cine/video recording (camera transmitter)

Table G. Sigmoidoscopy	
CCI Code	Procedure Description
2NM70BABG	Inspection, large intestine using endoscopic per orifice approach (or via stoma) and rigid sigmoidoscope
2NM70BABH	Inspection, large intestine using endoscopic per orifice approach (or via stoma) and flexible sigmoidoscope
2NM71BABG	Biopsy, large intestine using endoscopic per orifice approach (or via stoma) and rigid sigmoidoscope
2NM71BABH	Biopsy, large intestine using endoscopic per orifice approach (or via stoma) and flexible sigmoidoscope

Table G. Sigmoidoscopy	
CCI Code	Procedure Description
2NM71BRBG	Biopsy, large intestine using endoscopic per orifice approach brush biopsy or washing and rigid sigmoidoscope
2NM71BRBH	Biopsy, large intestine using endoscopic per orifice approach brush biopsy or washing and flexible sigmoidoscope

Table H. Balloon Enteroscopy	
CCI Code	Procedure Description
2NK70BCBK	Inspection, small intestine using antegrade (via mouth) endoscopic per orifice approach and (double) balloon enteroscope
2NK70DBBK	Inspection, small intestine using retrograde (via rectum) endoscopic per orifice approach and (double) balloon enteroscope

2NK71BCBK	Biopsy, small intestine using antegrade (via mouth) endoscopic per orifice approach and double balloon enteroscope
2NK71BDBK	Biopsy, small intestine using retrograde (via rectum) endoscopic per orifice approach and (double) balloon enteroscope

Table I. Feeding Tube	
CCI Code	Procedure Description
1NF53BTQB	Implantation of internal device, stomach of (gastric) valved tube using per orifice endoscopic approach with percutaneous incision
1NF53BTTS	Implantation of internal device, stomach of (gastric) tube using per orifice endoscopic approach with percutaneous incision
1NF53DATS	Implantation of internal device, stomach of (gastric) tube using endoscopic (laparoscopic) approach
1NK53BTTS	Implantation of internal device, small intestine of feeding tube [jejunal] using endoscopic per orifice approach with percutaneous incision
1NK53CATS	Implantation of internal device, small intestine of feeding tube [jejunal] using per orifice approach [e.g. naso intestinal]
1NK53HATS	Implantation of internal device, small intestine of feeding tube (jejunal) using percutaneous approach
1NK53LATS	Implantation of internal device, small intestine of feeding tube [jejunal] using open approach

Table J. Control of Bleeding (same CCI codes for Elective vs. Non-Elective)	
CCI Code	Procedure Description
1NA13BA	Control of bleeding, esophagus using endoscopic per orifice approach
1NA13BABD	Control of bleeding, esophagus using endoscopic per orifice approach and balloon (or Sengstaken) tube tamponade
1NA13BAFA	Control of bleeding, esophagus using endoscopic per orifice approach and banding (varices)
1NA13BAGX	Control of bleeding, esophagus using endoscopic per orifice approach and device NEC (e.g. electrocautery, endoclips)
1NA13BAX7	Control of bleeding, esophagus using endoscopic per orifice approach and chemical agent [e.g. ethanolamine, murrhate sodium, polidocanol, sclerosants, tetradecyl sulfate]
1NA13DAE3	Control of bleeding, esophagus using endoscopic [VATS] approach and cardiac stimulant (e.g. epinephrine)

Table J. Control of Bleeding (same CCI codes for Elective vs. Non-Elective)	
CCI Code	Procedure Description
1NF13BA	Control of bleeding, stomach using endoscopic per orifice approach
1NF13BAC2	Control of bleeding, stomach using endoscopic per orifice approach and antihemorrhagic agent
1NF13BAFA	Control of bleeding, stomach using endoscopic per orifice approach and banding (varices)
1NF13BAGX	Control of bleeding, stomach using endoscopic per orifice approach and device NEC [e.g. electrocautery, endoclips]
1NF13BAW4	Control of bleeding, stomach using endoscopic per orifice approach and glue [e.g. superglue, Histoacryl]
1NF13BAX7	Control of bleeding, stomach using endoscopic per orifice approach and chemical agent [e.g. ethanol, adrenaline, hypertonic solution, Scleromate, ethanolamine, murrhate sodium, polidocanol, sclerosants, tetradecyl sulfate]
1NP13BAC2	Control of bleeding, small with large intestine using endoscopic per orifice approach and antihemorrhagic agent
1NP13BAGN	Control of bleeding, small with large intestine using endoscopic per orifice approach and compression device [e.g. gastric balloon or bubble]
1NP13BAGX	Control of bleeding, small and large intestine using endoscopic per orifice approach and device NEC [e.g. endoclips]
1NP13BAX7	Control of bleeding, small and large intestine using endoscopic per orifice approach and chemical agent
1NQ13BAGX	Control of bleeding, rectum using endoscopic per orifice approach and device NEC [e.g. endoclips]
1NQ13CAC2	Control of bleeding, rectum using per orifice approach and antihemorrhagic agent
1NQ13CAGN	Control of bleeding, rectum using per orifice approach and compression device [e.g. gastric balloon or bubble]

Table K. Stent (Non-ERCP)	
CCI Code	Procedure Description
1NA50BANR	Dilation, esophagus using endoscopic per orifice approach and stent
1NA52CANR	Drainage, esophagus using per orifice approach and stent (for dilation and drainage)
1NK50BANR	Dilation, small intestine using endoscopic per orifice (colonoscopy) approach and stent insertion
1NM50BANR	Dilation, large intestine using endoscopic per orifice (colonoscopy) approach and stent insertion
1NQ50BANR	Dilation, rectum using endoscopic per orifice (colonoscopy) approach and stent insertion
1NQ50CANR	Dilation, rectum using per orifice approach and stent insertion
1NA50BTNR	Dilation, esophagus endoscopic per orifice approach with incision using stent

Table L. Laser/Argon	
CCI Code	Procedure Description
1NA13BAKK	Control of bleeding, esophagus using endoscopic per orifice approach and special electrical heat device [e.g. argon beam coagulator, gold probe]
1NA59BAAG	Destruction, esophagus using endoscopic per orifice approach and laser
1NF13BAAG	Control of bleeding, stomach using endoscopic per orifice approach and laser
1NF13BAKK	Control of bleeding, stomach using endoscopic per orifice approach and special electrical heat device [e.g. argon beam coagulator, gold probe]
1NK59BAKK	Destruction, small intestine using endoscopic per orifice approach and electrical heat device (e.g. argon beam)
1NM59BAAG	Destruction, large intestine using endoscopic per orifice approach and laser
1NP13BAKK	Control of bleeding, small and large intestine using endoscopic per orifice approach and special electrical heat device [e.g. argon beam coagulator, gold probe]
1NQ13BAKK	Control of bleeding, rectum using endoscopic per orifice approach and special electrical heat device [e.g. argon plasma coagulator]
1NQ59BAAG	Destruction, rectum endoscopic per orifice approach using laser
1OE50BAAG	Dilation, bile ducts endoscopic [retrograde] per orifice approach [e.g. ERC] using laser [with or without stent]
1OE59BAAG	Destruction, bile ducts using endoscopic [retrograde cholangiography] per orifice approach [ERC] laser

1OW80BAAG	Repair, surgically constructed sites in digestive & biliary tract using endoscopic per orifice approach (e.g. through stoma) and laser
2NK70BNBL	Inspection, small intestine using endoscopic per orifice approach with laser assisted optical "biopsy" and gastroscopy
2NM70BNBG	Inspection, large intestine using endoscopic per orifice approach and laser assisted optical "biopsy" and rigid sigmoidoscopy
2NM70BNBH	Inspection, large intestine using endoscopic per orifice approach and laser assisted optical "biopsy" and flexible sigmoidoscopy
1OE50BTAG	Dilation, bile ducts endoscopic [retrograde] per orifice approach [ERC] with incision using laser (with or without stent)

Table M. Biopsy and Destruction	
CCI Code	Procedure Description
2NA71BA	Biopsy, esophagus using endoscopic per orifice approach
2NA71BR	Biopsy, esophagus using endoscopic per orifice brushing/washing
2NF71BA	Biopsy, stomach using endoscopic per orifice approach (or via stoma)
2NF71BR	Biopsy, stomach using endoscopic per orifice with brush biopsy or gastric washing
2NK71BABJ	Biopsy, small intestine using endoscopic per orifice approach (or via stoma) and colonoscopy
2NK71BABL	Biopsy, small intestine using endoscopic per orifice approach (or via stoma) and gastroscopy
2NK71BRBJ	Biopsy, small intestine using endoscopic per orifice approach (or via stoma) brush biopsy or washing and colonoscopy
2NM71BABJ	Biopsy, large intestine using endoscopic per orifice approach (or via stoma) and colonoscopy
2NM71BRBJ	Biopsy, large intestine endoscopic per orifice, with brushing/washing/scraping and colonoscopy
2NQ71BA	Biopsy, rectum using endoscopic per orifice approach
2NQ71BR	Biopsy, rectum using endoscopic per orifice with brush biopsy or washing
2NQ71CA	Biopsy, rectum per orifice approach NOS
2NT71BA	Biopsy anus using endoscopic per orifice (e.g. anoscopy) approach
2OW71BA	Biopsy surgically constructed sites in digestive & biliary tract using endoscopic per orifice approach

Table M. Biopsy and Destruction	
CCI Code	Procedure Description
1NA59BAAD	Destruction, esophagus using endoscopic per orifice approach and cryoprobe
1NA59BAGX	Destruction, esophagus using endoscopic per orifice approach and device NEC
1NF59BAGX	Destruction, stomach using endoscopic per orifice approach and device NEC
1NK59BAGX	Destruction, small intestine using endoscopic per orifice approach and device NEC
1NM59BAGX	Destruction, large intestine using endoscopic per orifice approach and device NEC [e.g. electrocautery]
1NM59BAHB	Destruction, large intestine using endoscopic per orifice approach and heat probe
1NQ59BAAD	Destruction, rectum endoscopic per orifice approach using cryoprobe
1NQ59BAGX	Destruction, rectum endoscopic per orifice approach using device NEC
1NQ59BAX7	Destruction, rectum using endoscopic per orifice approach and chemical cautery agent
1NQ59HAX7	Destruction, rectum percutaneous (injection) approach using chemical cautery agent
1NT59CADU	Destruction, anus using per orifice approach and infrared probe

Table N. Excision	
CCI Code	Procedure Description
1NA87BA	Excision partial, esophagus using apposition technique [e.g. suturing] or no closure required for tissue regeneration [e.g. polyp] using endoscopic per orifice (pull through) approach
1NF87BA	Excision partial, stomach without vagotomy endoscopic per orifice approach and simple apposition technique or no closure needed for tissue regeneration [e.g. for polypectomy]
1NK87BA	Excision partial, small intestine endoscopic per orifice approach simple excisional technique
1NM87BA	Excision partial, large intestine endoscopic per orifice approach simple excisional technique
1NQ87BA	Excision partial, rectum endoscopic per orifice approach closure by apposition technique [e.g. suturing, stapling] or no closure required (for tissue regeneration)

Table O. Dilation without Balloon	
CCI Code	Procedure Description
1NA50BABJ	Dilation, esophagus using endoscopic per orifice approach and flexible dilator
1NA50BABP	Dilation, esophagus using endoscopic per orifice approach and rigid dilator
1NA50CABJ	Dilation, esophagus using per orifice approach and (unguided) flexible dilator
1NE50BA	Dilation, pylorus endoscopic per orifice approach without concomitant vagotomy
1NF50BABP	Dilation, stomach using endoscopic per orifice approach and rigid dilator
1NP73BA	Reduction, small and large intestine using endoscopic per orifice approach
1NP73BAPK	Reduction, small and large intestine endoscopic per orifice approach and pneumatic [air pressure] device
1NP73CC	Reduction, small and large intestine using per orifice [rectal] approach and [water] pressure
1NQ50CABP	Dilation, rectum using per orifice approach and rigid dilator
1NT50CABP	Dilation, anus using per orifice approach and rigid dilator
1NT50CJ	Dilation, anus using per orifice manual technique [e.g. digital dilation]
1OW50CABP	Dilation, surgically constructed sites in digestive & biliary tract using per orifice approach and rigid dilator
1OW50CJ	Dilation, surgically constructed sites in digestive & biliary tract using per orifice approach and manual technique
1NA50BTBJ	Dilation, esophagus endoscopic per orifice approach with incision using flexible dilator
1NA50BTBP	Dilation, esophagus endoscopic per orifice approach with incision using rigid dilator
1NA50CRBJ	Dilation, esophagus per orifice approach with incision using flexible dilator
1OW50CRBP	Dilation, surgically constructed sites in digestive and biliary tract per orifice approach with incision using rigid dilator
1OW50BTBP	Dilation, surgically constructed sites in digestive and biliary tract endoscopic per orifice approach with incision using rigid dilator

Table P. Dilation with Balloon	
CCI Code	Procedure Description
1NA50BABD	Dilation, esophagus using endoscopic per orifice approach and balloon dilator

Table P. Dilation with Balloon	
CCI Code	Procedure Description
1NA50BABL	Dilation, esophagus using endoscopic per orifice approach and hydrostatic balloon [or bag]
1NF50BABL	Dilation, stomach using endoscopic per orifice approach and balloon (hydrostatic)
1NK50BABD	Dilation, small intestine using endoscopic per orifice approach with balloon dilator
1NM50BABD	Dilation, large intestine using endoscopic per orifice (colonoscopy) approach with balloon dilator
1NQ50BABD	Dilation, rectum using endoscopic per orifice approach and balloon dilator
1NT50CABD	Dilation, anus using per orifice approach and balloon dilator
1OW50BABD	Dilation, surgically constructed sites in digestive & biliary tract using endoscopic per orifice approach and balloon dilator
1NA50BTBD	Dilation, esophagus endoscopic per orifice approach with incision using balloon dilator
1NA50BTBL	Dilation, esophagus endoscopic per orifice approach with incision using hydrostatic balloon [or bag]
1OW50BTBD	Dilation, surgically constructed sites in digestive and biliary tract endoscopic per orifice approach with incision using balloon dilator
1OW50CRBD	Dilation, surgically constructed sites in digestive and biliary tract per orifice approach with incision using balloon dilator

Table Q. Implantation/Removal/Drain/Management	
CCI Code	Procedure Description
1NA55JANR	Removal of device, esophagus of stent (e.g. silicone)
1NA56BA	Removal of foreign body, esophagus using apposition technique [e.g. suturing] for closure or no closure required [for tissue regeneration] using endoscopic per orifice approach
1NF54HAQB	Management of internal device, stomach of percutaneously inserted valved tube
1NF54HATS	Management of internal device, stomach of percutaneously inserted gastric tube [PEG]
1NF55BATS	Removal of device, stomach of gastric tube [e.g. PEG feeding tube, gastrostomy tube] using endoscopic per orifice approach

Table Q. Implantation/Removal/Drain/Management	
CCI Code	Procedure Description
1NF55CATS	Removal of device, stomach of gastric tube [e.g. feeding or drainage] using per orifice approach
1NF55JATS	Removal of device, stomach of gastric tube [e.g. drainage] using external (manual) approach
1NF56BA	Removal of foreign body, stomach endoscopic per orifice approach removal with or without apposition [e.g. sutures]
1NK52BA	Drainage, small intestine endoscopic per orifice approach aspiration [suction] technique
1NK54HATS	Management of device, small intestine of tube (e.g. drainage, feeding, jejunal)
1NK55BATS	Removal of device, small intestine of jejunal tube [e.g. drainage, feeding] using endoscopic per orifice approach
1NK55DATS	Removal of device, small intestine of jejunal tube [e.g. drainage, feeding] using endoscopic approach
1NK56BA	Removal of foreign body, small intestine using endoscopic per orifice approach
1NM52CA	Drainage, large intestine per orifice approach using aspiration [suction] technique
1NM52CATS	Drainage, large intestine per orifice approach leaving drainage/decompression tube in situ
1NM54CATS	Management of internal device, large intestine of tube (e.g. intestinal drainage, colorectal) using per orifice approach
1NQ52BA	Drainage, rectum endoscopic per orifice approach simple drainage technique
1NQ52BATS	Drainage, rectum endoscopic per orifice approach with catheter left in situ
1NQ55JANP	Removal of device, rectum of packing using external approach
1NQ55JATS	Removal of device, rectum of rectal tube using external approach

Table Q. Implantation/Removal/Drain/Management	
CCI Code	Procedure Description
1NQ56BA	Removal of foreign body, rectum using endoscopic per orifice approach
1NQ56CJ	Removal of foreign body, rectum using per orifice approach with manual technique
1NQ57CJ	Extraction, rectum using per orifice approach and manual technique
1OE54JANR	Management of internal device, bile ducts of stent or tube (T-tube)
1OE55BATS	Removal of device, bile ducts of drainage device [e.g. tube, catheter, T-tube] using endoscopic per orifice approach
1NQ87BAFA	Excision partial, rectum endoscopic per orifice approach encirclage device
1NT87UR	Excision partial, anus using ligature dissection technique
1NT87URFA	Excision partial, anus using ligature dissection and encirclage device [e.g. rubber band ligature]

Table R. Pharmacotherapy	
CCI Code	Procedure Description
1NA35BAJ2	Pharmacotherapy (local), esophagus using endoscopic per orifice approach and corticosteroid agent
1NA35BAL7	Pharmacotherapy (local), esophagus using endoscopic per orifice injection of bacterial toxin (e.g. botulinum toxin or Botox)
1NE35BAL7	Pharmacotherapy (local), pylorus of bacterial toxin [e.g. botulinum toxin or Botox] using endoscopic per orifice approach
1NF35BAX4	Pharmacotherapy (local), stomach using endoscopic per orifice approach and tattooing dye (for tumor mapping)
1NP35BAX4	Pharmacotherapy (local), small and large intestine using endoscopic per orifice approach and tattooing dye (for tumor mapping)
1NP35CAX9	Pharmacotherapy (local), small and large intestine using per orifice approach and (purified) water
1NQ35BAX4	Pharmacotherapy (local), rectum using endoscopic per orifice approach and tattooing dye
1NQ35CAT9	Pharmacotherapy (local), rectum using per orifice approach and pharmacological agent NEC
1NT35HAL7	Pharmacotherapy (local), anus using percutaneous injection of bacterial toxin (e.g. botulinum toxin or Botox)
1NT35HAP1	Pharmacotherapy (local), anus using percutaneous (needle) injection and local anesthetic agent

Table S. Interventions with No Additional Fee	
CCI Code	Procedure Description
1NQ14CANP	Dressing, rectum using per orifice approach and packing
2NQ70BA	Inspection, rectum using endoscopic per orifice approach
2NT70BA	Inspection, anus using endoscopic per orifice approach (anoscopy)
2OW70BA	Inspection, surgically constructed sites in digestive & biliary tract using endoscopic per orifice (or via stoma) approach

Please note the following procedure codes were removed from the fiscal year 2015/16 GI Endoscopy QBP in-scope procedure code list as it was determined that these codes are not endoscopic in nature.

Table T. Procedures Removed from Fiscal Year 2015/16 Funding Model	
CCI Code	Procedure Description
1NA26BA	Brachytherapy, esophagus using endoscopic per orifice approach
1NA26CA	Brachytherapy, esophagus using per orifice approach
1NA53BAEM	Implantation of internal device, esophagus of brachytherapy applicator using endoscopic per orifice approach
1NM87LA	Excision partial, large intestine open approach simple excisional technique
1NQ26BA	Brachytherapy, rectum using endoscopic per orifice approach
1OE53BAEM	Implantation of internal device, bile ducts of brachytherapy applicator using endoscopic per orifice approach
2NT70JA	Inspection, anus using manual (digital exam) technique
2NA58TA	Function study, esophagus with pH measurements
2NA58TAJA	Function study, esophagus with pH measurements using intraluminal pH electrode probe (capsule, tube)
1NA74BA	Fixation, esophagus using endoscopic [per orifice] approach
1NF80BA	Repair, stomach using endoscopic per orifice approach using apposition technique [e.g. sutures]
1NQ53CATS	Implantation of internal device, rectum of rectal tube using per orifice approach
1NT59CAGX	Destruction, anus using per orifice approach and device NEC [e.g. electrocautery]
1NF53CATS	Implantation of internal device, stomach of gastric tube [e.g. nasogastric feeding tube] using per orifice approach
1NF35CAT9	Pharmacotherapy (local), stomach using per orifice (or nasogastric tube) approach and pharmacological agent NEC
1NF54JATS	Management of internal device, stomach of nasogastric tube (indwelling)
1NF52CATL	Drainage, stomach using per orifice approach and manual suction (e.g. syringe)
1OZ35CAT9	Pharmacotherapy (local), digestive system NEC, using per orifice approach, using pharmacological agent NEC
1NF53BABC	Implantation of internal device, stomach using endoscopic per orifice approach of pneumatic balloon

Appendix B – List of Abbreviations

CCC	ColonCancerCheck
CCO	Cancer Care Ontario
CIHI	Canadian Institute for Health Information
CIRT	Colonoscopy Interim Reporting Tool
CPSO	College of Physician and Surgeons of Ontario
CRC	colorectal cancer
CS	Cancer Screening
DAD	Discharge Abstract Database
ECFAA	Excellent Care for All Act
FIT	fecal immunochemical test
FOBT	fecal occult blood test
gFOBT	guaiac-based fecal occult blood test
HBAM	Health-Based Allocation Model
HIG	HBAM Inpatient Grouper
HQO	Health Quality Ontario
HSFR	Health System Funding Reform
ICES	Institute for Clinical Evaluation Services
IHF	independent health facility
LHIN	Local Health Integration Network
MINISTRY	Ministry of Health and Long-Term Care
NACRS	National Ambulatory Care Reporting System
NICE	National Institute for Health and Clinical Excellence
OCCI	Ontario Case Costing Initiative
OCFP	Ontario College of Family Physicians
OCR	Ontario Cancer Registry
OHIP	Ontario Health Insurance Plan
OHP	out-of-hospital procedures
OMA	Ontario Medical Association
PBF	patient-based funding
PCP	primary care provider
PEBC	Program in Evidence-Based Care
QBP	Quality-Based Procedure
RCP	Regional Cancer Program

References

1 Allard J, Cosby R, Del Giudice ME, Irvine EJ, Morgan D, Tinmouth J. Gastroscopy following a positive fecal occult blood test and negative colonoscopy. Toronto (ON): Cancer Care Ontario; 2009 Mar 30. Program in Evidence-based Care Evidence-based Series No.:15-6.

2 Winawer, SJ, Zauber AG, Fletcher RH, Stillman JS, O'Brien MJ, Levin B, et al. 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.

3 Tinmouth J, Kennedy E, Baron D, Burke M, Feinberg S, Gould M, et al. Guideline for Colonoscopy Quality Assurance in Ontario. Toronto (ON): Cancer Care Ontario; 2013 Sept 9. Program in Evidence-based Care Evidence-based Series No.: 15-5 Version 2.

4 College of Physicians and Surgeons of Ontario. Out-of-Hospital Premises Inspection Program, Program Standards. 2013.

5 The National Bowel Cancer Screening Program Quality Working Group. Improving colonoscopy services in Australia. Australian Government Department of Health and Ageing, Canberra; 2009.

6 Armstrong D, Barkum A, Bridges R, et al; on behalf of the Canadian Association of Gastroenterology Safety and Quality Indicators in Endoscopy Consensus Group. Canadian Association of Gastroenterology consensus guidelines on safety and quality indicators in endoscopy. Can J Gastroenterology 2012;26(1):17-31.

7 NHS BCSP Quality Assurance Endoscopy Group. Quality assurance guidelines for colonoscopy. NHS Cancer Screening Programmes; 2011.

8 Urschel JD, Urschel DM. The hospital volume-outcome relationship in general thoracic surgery. Is the surgeon the critical determinant? J Cardiovascular Surg 2000; 41:153-5.

9 Miller JD, Jain MK, de Gara CJ, Morgan D, Urschel JD. The effect of surgical experience on results of esophagectomy for esophageal carcinoma. J Surg Oncol 1997;65:20-1

10 Dominitz JA, Ikenberry SO, Anderson MA, Banerjee S, Baron TH, Cash BD, et al. Renewal of and proctoring for endoscopic privileges. Gastrointest Endosc. 2008 Jan;67(1):10-6.

11 Harewood GC. Relationship of colonoscopy completion rates and endoscopist features. *Dig Dis Sci* 2005; 50:47-51.

12 Baxter NN, Sutradhar R, Forbes SS, Paszat LF, Saskin R, Rabeneck L. Analysis of administrative data finds endoscopist quality measures associated with postcolonoscopy colorectal cancer. *Gastroenterology*. 2011 Jan; 140(1):65-72.

13 Rabeneck L, Paszat LF, Hilsden RJ, Saskin R, Leddin D, Grunfeld E, et al. Bleeding and perforation after outpatient colonoscopy and their risk factors in usual clinical practice. *Gastroenterology*. 2008 December; 135(6):1899-906.e1.

14 Paré P, Petrunia D, Switzer C, Veldhuyzen van Zanten SJ, et al. Canadian consensus on medically acceptable wait times for digestive health care. *Canadian Journal of Gastroenterology*. 2006;20:411–423

