

Appendix 1 (as supplied by the authors): Supplementary tables

Supplementary Table A1. Description of OHIP codes used in the current study.

OHIP Billing Code	OHIP Billing Code Description
Colonoscopy and related codes	
Z555A	INTESTINES-ENDOSCOPY-COLONOSCOPY INTO DESCENDING COLON
E740A	INTESTINE ENDO SIGMOID TO SPLENIC FLEXURE ADD
E741A	INTESTINE END SIGMOID TO HEPATIC FLEXURE ADD
E747A	INTESTINE-ENDOSCOPY-SIGMOID.TO CAECUM ADD TO Z512/Z555
E705A	DIGEST.SYST.INTEST.ENDOSC.INTO TERMINAL ILEUM,ADD.
E749A	DIGEST SYST.-WHEN Z512,555,580 PERFORMED OUT HOSP...ADD
Z570A	INTESTINES-EXCISION-FULGURATION OF POLYPS THRO.COLONOSCOPE
Z571A	INTESTINES-EXC.-POLYPS THRO. COLONOSCOPE
E685A	INTESTINES,ENDOSCOPY TOTAL EXCISION >3CM SESSILE POLYPS
Gastroscopy and flexible sigmoidoscopy codes	
Z399A	OESOPHAGUS-OESOPHAGO/GASTRO. WITH/OUT DUODENOSCOPY
Z515A	DIGEST.SYST.OESOPHAGOSCOPY WITH/OUT BIOPSY(S)
Z523A	OESOPHAGUS-DILATION OF OESOPHAGUS-GUIDED(STRING,WIRE)
Z525A	OESOPHAGUS-DILATION-OESOPH.-PNEUMATIC
Z527A	STOMACH-ENDOSCOPY-GASTROSCOPY
Z528A	STOMACH-ENDOSCOPY-GASTROSCOPY-SUBSEQ.
Z532A	PERCUT ENDOSCOPC GASTROSTMY-REV Z CD & INCR FEE TO 1/2 S118
Z547A	STOMACH-ENDOSCOPY GASTROSCOPY WITH REMOVAL FOREIGN BODY
Z580A	INTESTINE-ENDOSCOPY-USING 60C.M. FLEXIBLE ENDOSCOPE.
Colectomy codes	
S166A	INTESTINE-EXC.-SML+LGE INTESTINE-TERM.ILEUM-CAECUM ASC.COLON
S168A	INTESTINE-EXC.-ILEOSTOMY.SUBTOTAL COLECTOMY
S169A	INTESTINE-EXC.-TOTAL COLECTOMY W/ILEO-RECTAL ANASTOMOSIS.
S170A	INTESTINE-EXC.-ILEOSTOMY+TTLCOLECTOMY+ABDOM-PERIN.RESECTION
S172A	INTESTINE-EXC.-TOTAL COLECTOMY WITH LOOP ILEOSTOMY.

S214A	RECTUM-EXC.-PROCTECTOMY-ABDOMINO-PERINEAL RESEC/PULL THRU
S215A	RECTUM-EXC.PROCTECTOMY-2 SURG. TEAM ABDOMINAL SURGEON
S216A	RECTUM-EXC.-PROCTECTOMY-2 SURG. TEAM PERINEAL SURGEON

Supplementary Table A2. OHIP billing codes used in analysis to identify anaesthesia assistance. This list was empirically derived from Ontario health administrative data by identifying endoscopy-related and anesthesia codes with “C” suffix billed +/- 1 day of a colonoscopy from 1993-2005.*

OHIP Billing Code	OHIP Billing Code Description
E003C	ASST./ANAES. ATTEND. - MONITORING/CARE
E747C	ENDOSC SIGMOID TO CAECUM, ADD TO Z512/Z555
S119C	PERCUTANEOUS ENDOSCOPIC GASTROSTOMY
S236C	ESOPHAGUS - ENDOSCOPIC ULTRASOUND USING LINEAR OR RADIAL ECHO-ENDOSCOPE - EXCLUDING BILIARY OR PANCREATIC EXAM.
S237C	ESOPHAGUS - ENDOSCOPIC ULTRASOUND USING LINEAR OR RADIAL ECHO-ENDOSCOPE - INCLUDING BILIARY AND/OR PANCREATIC EXAM.
Z399C	OESOPHAGOSCOPY-GASTROSCOPY W/OUT DUDENOSCOPY - ELECTIVE
Z400C	OESOPHAGUS - FOR ACTIVE BLEEDING
Z512C	INTESTINES - ENDOSCOPY ILEOSTOMY OR COLOSTOMY
Z514C	INTESTINES - ENDOSCOPY ILEOSTOMY OR COLOSTOMY WITH BIOPSY
Z515C	OESOPHAGOSCOPY WITH/OUT BIOPSY
Z527C	STOMACH - ENDOSCOP - GASTROSCOPY (W/OUT BIOPSY/PHOTO)
Z528C	SUBSEQ (WITHIN 3 MONTHS FOLLOWING PREV GASTROSCOPY)
Z535C	RECTUM - SIGMOIDOSCOPY W/OUT ANOSCOPY (NOT WITH Z555/Z580)
Z536C	RECTUM - SIGMOIDOSCOPY W/OUT ANOSCOPY - W/BIOPSY
Z544C	ANUS - INC. BIOPSY
Z547C	STOMACH - GASTROSCOPY WITH REMOVAL OF FOREIGN BODY
Z551C	LIVER - INC - BIOPSY, NEEDLE
Z555C	ENDOSCOPY - SIGMOID/DESCENDING COLON
Z558C	BILIARY TRACT - ENDO MANIP &/OR REM DUCT STONES W/OUT SPHINCTEROTOMY
Z560C	INTESTINES - ENDOSCOPY - DUODENOSCOPY (NOT WITH Z399/Z400)
Z561C	INTESTINES - DUODENOSCOPY - CANN. PANCR. DUCT
Z567C	SUBSEQ PROC (WITHIN 3 MON. FOLL PREV ENDOSCOPIC PROC)
Z568C	SUBSEQ PROC SAME PHYS (WITHIN 3 MON. PREV ENDOSCOPIC PROC)
Z570C	FULG POLYP THROUGH COLONOSCOPE
Z571C	EXC POLYP, THROUGH COLONSCOPE
Z576C	INTRO - INJECTIONS ANAL FISSURE

Z580C	ENDOSCOPY (USING 60CM. FLEX SCOPE)
Z592C	RECTUM - SIGMOIDOSCOPY - DECOMPRESSION/VOLVULUS
Z749C	INTEST - ENDOSCOPY - SUBSEQ PROC (WITHIN 3 MONTHS)
Z753C	RECTUM - POLYPS/TUMOURS ELECTROCOAG - UNDER 2 CMS
Z754C	RECTUM - POLYPS/TUMOURS EXC - UNDER 2 CMS
Z755C	RECTUM - POLYPS/TUMOURS ELECTROCOAG/EXC - OVER 2 CMS
Z757C	EXC BENIGN ANAL LESION(S)
Z761C	RECTUM POLYPS WITH ELECTROCOAGULATION OR EXCISION BASE 5 CM.+

* Alharbi O, Rabeneck L, Sutradhar R, et al. A population-based analysis of outpatient colonoscopy in adults assisted by an anesthesiologist. *Anesthesiology* 2009;111:734-740.

Supplementary Table A3. Changes to OHIP codes relevant for colonoscopy since 2008/9

New OHIP code	Definition	How to use new codes	Year introduced
Z491A	Colonoscopy, incomplete polyp resection – to descending colon	These are “base” codes for colonoscopy and can be used interchangeably with Z555A, depending on the indication, e.g., Z49XA + E740A + E741A + E747A to indicate colonoscopy to cecum	2013
Z492A	Colonoscopy, 5 year follow-up after normal colonoscopy (Z499) – to descending colon		2013
Z493A	Colonoscopy, 10 year follow-up after normal colonoscopy (Z497, Z555) – to descending colon		2013
Z494A	Colonoscopy, Hereditary (e.g. Familial adenomatous Polyposis or Hereditary Non-Polyposis Colorectal Cancer) or other bowel disorders (e.g. inflammatory bowel disease) associated with increased risk of malignancy – to descending colon		2013
Z495A	Colonoscopy, follow-up of unsatisfactory (poor bowel preparation, incomplete) colonoscopy – to descending colon		2013
Z496A	Colonoscopy – presence of signs and symptoms – to descending colon		2011
Z497A	Colonoscopy after positive FOBT, sigmoidoscopy, barium enema or CT scan – to descending colon		2011
Z498A	Colonoscopy, follow-up of abnormal colonoscopy: tubular adenomas, advanced adenomas, sessile serrated adenomas – to descending colon		2011
Z499A	Colonoscopy, family		2011

	history associated with increased risk – to descending colon		
Z555A	Absence of signs or symptoms or risk factors, 50 years of age or older - to descending colon*	As described in main text, e.g., Z555A + E740A + E741A + E747A to indicate colonoscopy to cecum	1991
E023C	Anesthesia for ocular surgery, examination under anesthesia, colonoscopy, sigmoidoscopy and cystoscopy	Add to the list of codes in Supplementary Table 2 in order to define anesthesiologist-assistance	2011

*Note that Z555A is retained however, definition is changed