

Appendix 3: Diagnosis, Tariff and Procedures Codes Used in the Study



Codes used in Chapter 2

Appendix Table 3.1: Codes Used to Identify Diverticulosis, Inflammatory Bowel Disease, and Colectomy

Complication	Codes
Diverticulosis	ICD-10-CA: K57, K61
IBD	ICD-9-CM: 555, 556 ICD-10-CA: K50, K51
Colectomy	ICD-9-CM: 457, 4571, 4572, 4573, 4574, 4575, 4576, 4579, 458, 4581, 4582, 4583, 4604, 484, 485, 4850, 4851, 4852, 4859, 486, 4861, 4862, 4863, 4864, 4865, 4869, 173, 1731, 1732, 1733, 1734, 1735, 1736, 1739 CCI: 1NM87, 1NM87DA, 1NM87LA, 1NM87DF, 1NM87RN, 1NM87DE, 1NM87RD, 1NM87DN, 1NM87RE, 1NQ87, 1NQ87LA, 1NQ87DA, 1NQ87RD, 1NQ87DE, 1NM89, 1NM89DF, 1NM89RN, 1NM91, 1NM91DF, 1NM91RN, 1NM91DE, 1NM91RD, 1NM91DN, 1NM91RE, 1NQ89, 1NQ89KZ, 1NQ89GV, 1NQ89SF, 1NM87DX, 1NM87TF, 1NM87DY, 1NM87TG, 1NQ87TF, 1NQ87DX, 1NM89DX, 1NM89TF, 1NM91DX, 1NM91TF, 1NM91DY, 1NM91TG, 1NQ89AB, 1NQ89RS, 1NQ89LH

Appendix Table 3.2. Tariff Codes Used to Identify Study Cohorts

Tariff Code	Description
Lower Gastrointestinal Endoscopy Procedure Tariff Codes	
3185	Intestines (except rectum), colonoscopy
3186	Intestines (except rectum), colonoscopy with biopsy
3187	Intestines (except rectum), colonoscopy with polypectomy
3189	Colonoscopy with polypectomy using electro-cautery device
3320	Rectum, flexible sigmoidoscopy beyond 25 cm to 65 cm, with or without biopsy
3323	Rectum, flexible sigmoid beyond 25 cm to 65 cm with or without biopsy, with removal of one polyp
Upper Gastrointestinal Endoscopy Procedure Tariff Codes	
3055	Oesophagus, oesophagoscopy, diagnostic, with biopsy if necessary
3063	Oesophagus, oesophagoscopy, diagnostic, subsequent, i.e., same hospital admission
3057	Oesophagus, oesophagoscopy, therapeutic, with removal of foreign body
3065	Oesophagus, oesophagoscopy, therapeutic, with injection of varices (2000)
3121	Stomach, gastroscopy, diagnostic, with or without biopsy (independent procedure)
3122	Stomach, gastroscopy, with polypectomy
3123	Stomach, gastroscopy with bronchoscopy or oesophagoscopy, with or without biopsy
Small Bowel Endoscopy Procedure Tariff Codes	
3190	Small bowel enteroscopy by mouth using designated enteroscope or colonoscope
3192	Capsule endoscopy—includes the review of imaging of the small bowel and report to the referring physician

Appendix Table 3.3: Diagnosis Codes to Identify Colorectal Cancer and Upper Gastrointestinal Cancer Sub-Groups

Description	ICD-9-CM	ICD-10-CA
Colorectal Cancer		
Caecum	153.4	C18.0
Ascending colon	153.6	C18.2
Hepatic flexure	153.0	C18.3
Transverse colon	153.1	C18.4
Splenic flexure	153.7	C18.5
Descending colon	153.2	C18.6
Sigmoid colon	153.3	C18.7
Rectosigmoid	154.0	C19
Rectum	154.1	C20
Colon, Unspecified	153.9	C18.9
Other specified sites	153.8	
Overlapping lesion of colon		C18.8
Intestinal tract, part unspecified	159.0	C26.0
Upper Gastrointestinal Cancer		
Gastric	151.x, except 151.0	C16.x, except C16.0
Esophageal	150.0	C15
Gastroesophageal	151.0	C16.0

Note: x references all subsequent codes for that specific code identification number.

Codes used in Chapter 3

Appendix Table 3.4: Diagnosis and procedure codes for complications of a GIE procedure

ICD-9-CM Code	Description	ICD-10-CA Code	Description
Gastrointestinal Perforation			
569.83	Perforation of intestine	K63.1	Non-traumatic perforation of intestine
998.2	Accidental puncture and laceration during a procedure, not elsewhere classified	T81.2	Accidental puncture and laceration during a procedure, not elsewhere classified
E870.8	Accidental cut or hemorrhage during medical care - Other specified	Y60.8	Accidental cut - Other specified medical care
E870.9	Accidental cut or hemorrhage during medical care - unspecified	Y60.9	Accidental cut - Unspecified medical care
E870.8	Accidental Cut, Hemorrhage during medical care	Y60.8	Accidental cut - Other specified medical care
E870.4	Accidental Cut, Hemorrhage during medical care	Y60.4	Accidental cut - Endoscopic examination
Cardiac			
410	Acute myocardial infarction	I21.*	Acute myocardial infarction
411	Other acute and subacute forms of IHD	I25.1	Atherosclerotic heart disease
412	Old myocardial infarction	I25.2	Old myocardial infarction
413	Angina Pectoris	I20.*	Angina pectoris
414	Other forms of chronic IHD	Z95.1	Presence of aortocoronary bypass graft
429.2	Cardiovascular disease unspec	Z95.5	Presence of coronary angioplasty implant and graft
V45.81	Aortocoronary bypass status	1.IJ.50	Dilation, coronary arteries (a CCI procedure code)
V45.82	Percutaneous transluminal coronary angioplasty status	I09.9	Rheumatic heart disease, unspecified
398.91	Rheumatic heart failure (congestive)	I50.*	Heart failure
428	Heart Failure	I10.1	Malignant hypertension
428	Heart Failure	I10.0	Benign hypertension
428.1	Left heart failure	I11	Hypertensive heart disease
428.2	Systolic heart failure	I13	Hypertensive heart and renal disease

*Includes all sub-codes

Appendix Table 3.4 Continued: Diagnosis and procedure codes for complications of a GIE procedure

ICD-9-CM Code	Description	ICD-10-CA Code	Description
Cardiac			
428.3	Diastolic heart failure	I26.0	Pulmonary embolism with mention of acute cor pulmonale
428.4	Combined systolic and diastolic heart failure	I45.*	Other conduction disorders
428.9	Heart failure, unspecified	I44.*	Atrioventricular and left bundle-branch block
402.01	Hypertensive HD malignant with congestive heart failure	I47.*	Paroxysmal tachycardia
402.11	Hypertensive HD benign with congestive heart failure	I46.*	Cardiac arrest
402.91	Hypertensive HD unspec with congestive heart failure	I48.*	Atrial fibrillation and flutter
404.11	Hypertensive heart and renal disease, Benign, CKD stages I through IV	I49.*	Other cardiac arrhythmias
404.91	Hypertensive heart and renal disease, Unspecified, CKD stages I through IV	R00.0	Tachycardia, unspecified
404.03	Hypertensive heart and renal disease, Malignant, CKD stage V or end stage	R00.2	Palpitations
404.13	Hypertensive heart and renal disease, Benign, CKD stage V or end stage	I97.8	Cardiac complications (Post procedural disorders of circulatory system, not elsewhere classified)
404.93	Hypertensive heart and renal disease, Unspecified, CKD stage V or end stage	I97.9	Postprocedural disorder of circulatory system, unspecified
415	Acute Pulmonary heart disease - acute cor pulmonale	Z86.7	Personal history of diseases of the circulatory system
426.4	Right bundle branch block	I05	Rheumatic mitral valve diseases
426.1	Atrioventricular block, other and unspecified	I34	Nonrheumatic mitral valve disorders
426	Atrioventricular block, complete	I35	Nonrheumatic aortic valve disorders
427.x	Cardiac dysrhythmias	I06	Rheumatic aortic valve diseases
427.5	Cardiac arrest	I08	Multiple valve diseases
427.3	Atrial fibrillation and flutter	I37	Pulmonary valve disorders
427.9	Cardiac dysrhythmia, unspecified	I38	Endocarditis, valve unspecified

*Includes all sub-codes

Appendix Table 3.4 Continued: Diagnosis and procedure codes for complications of a GIE procedure

ICD-9-CM Code	Description	ICD-10-CA Code	Description
Cardiac			
785	Tachycardia unspec	I36	Nonrheumatic tricuspid valve disorders
785.1	Palpitations	I07	Rheumatic tricuspid valve diseases
997.1	Cardiac complications during/resulting from a procedure	I39*	Endocarditis and heart valve disorders in diseases classified elsewhere
V12.53	Personal history of diseases of the circulatory system	T82.*	Complications of cardiac and vascular prosthetic devices, implants and grafts
394.x	Diseases of the mitral valve	I05	Rheumatic mitral valve diseases
395.x	Diseases of the aortic valve	I06	Rheumatic aortic valve diseases
396.x	Diseases of the mitral and aortic valves	I08.0	Rheumatic disorders of both mitral and aortic valves
397.x	Diseases of other endocardial structures	I07	Rheumatic tricuspid valve diseases
424.x	Other diseases of the endocardium	I34-I39	Nonrheumatic mitral, aortic, tricuspid, and pulmonary valve disorders, endocarditis - valve unspecified, and endocarditis and hearth valve diseases elsewhere classified
996.71	Other complications due to heart valve prosthesis	T82.8	Other specified complications of cardiac and vascular prosthetic devices, implants and grafts
996.74	Other complications due to other vascular device	T82.9	Unspecified complication of cardiac and vascular prosthetic device, implant and grafts
Cerebrovascular			
346.0x	Classical Migraine	G43	Migraine
346.6x	Common migraine	I65	Occlusion and stenosis of precerebral arteries, not resulting in cerebral infarction
433.x	Occlusion and stenosis of precerebral arteries	I63	Cerebral infarction
434	Occlusion of cerebral arteries	I66	Occlusion and stenosis of cerebral arteries, not resulting in cerebral infarction
436	Acute but ill-defined cerebrovascular disease	I67	Other cerebrovascular diseases
437.x	Other and ill-defined cerebrovascular disease	I68	Cerebrovascular disorders in diseases classified elsewhere
438.x	Late effects of cerebrovascular disease	I69	Sequelae of cerebrovascular disease

*Includes all sub-codes

Appendix Table 3.4 Continued: Diagnosis and procedure codes for complications of a GIE procedure

ICD-9-CM Code	Description	ICD-10-CA Code	Description
Cerebrovascular			
430	Subarachnoid hemorrhage	I60	Subarachnoid haemorrhage
431	Intracerebral hemorrhage	I61	Intracerebral haemorrhage
432	Other and unspec intracranial hemorrhage - nontraumatic extradural	I62.1	Nontraumatic extradural haemorrhage
432.1	Other and unspec intracranial hemorrhage - subdural	I62.0	Subdural haemorrhage (acute)(nontraumatic)
432.9	Other and unspec intracranial hemorrhage - unspecified	I62.9	Intracranial haemorrhage (nontraumatic), unspecified
435.x	Transient cerebral ischemia	I64	Stroke, not specified as haemorrhage or infarction
V12.54	Personal history of diseases of the circulatory system	G45	Transient cerebral ischaemic attacks and related syndromes
780.6	Pyrexia of unknown origin	Z86.7	Personal history of diseases of the circulatory system
780.62	Fever and other physiologic disturbances of temperature regulation	R50.8	Other specified fever
389	Unspecified septicemia	R50.9	Fever, unspecified
		A41.9	Septicaemia unspecified
Pulmonary			
507	Pneumonitis due to solids and liquids	J69	Pneumonitis due to solids and liquids
507	Pneumonitis due to inhalation of food or vomitus	J69.0	Pneumonitis due to food and vomit
997.32	Respiratory complications	J95.88	Other postprocedural respiratory disorders
997.39	Respiratory complications	J95.9	Postprocedural respiratory disorder, unspecified
486	Pneumonia, organism unspecified	J18	Pneumonia, organism unspecified
485	Bronchopneumonia, organism unspecified	J69	Pneumonitis due to solids and liquids
466	Acute bronchitis and bronchiolitis	J69.0	Pneumonitis due to food and vomit
490	Bronchitis, not specified as acute or chronic	J95.88	Other postprocedural respiratory disorders
491.21	Obstructive chronic bronchitis, with acute exacerbation	J95.9	Postprocedural respiratory disorder, unspecified

*Includes all sub-codes

Appendix Table 3.4 Continued: Diagnosis and procedure codes for complications of a GIE procedure

ICD-9-CM Code	Description	ICD-10-CA Code	Description
Pulmonary			
491.22	Obstructive chronic bronchitis, with acute bronchitis	J18	Pneumonia, organism unspecified
494.1	Bronchiectasis with acute exacerbation	J47.1	Bronchiectasis with (acute) exacerbation
496	Chronic airway obstruction, not elsewhere classified	J44.9	Chronic obstructive pulmonary disease, unspecified
491	Simple chronic bronchitis	J41.0	Simple chronic bronchitis
491.1	Mucopurulent chronic bronchitis	J41.1	Mucopurulent chronic bronchitis
491.2	Obstructive chronic bronchitis	J44	Other chronic obstructive pulmonary disease
491.20	Obstructive chronic bronchitis Without exacerbation	J44.9	Chronic obstructive pulmonary disease, unspecified
491.8	Other chronic bronchitis	J41.8	Mixed simple and mucopurulent chronic bronchitis
491.9	Unspecified chronic bronchitis	J42	Unspecified chronic bronchitis
492.0	Emphysematous bleb	J43.9	Emphysema, unspecified
492.8	Other emphysema	J43.9	Emphysema, unspecified
494	Bronchiectasis	J47	Bronchiectasis

*Includes all sub-codes

Appendix Table 3.5: Large Bowel Resection Codes, Canadian Classification of Diagnostic, Therapeutic, and Surgical Procedures (CCP)

Code	Description
45.7	Other Open and other partial excision of large intestine
45.71	Segmental resection for multiple traumatic lesions of large intestine
45.72	Open and other cecectomy / Resection of cecum and terminal ileum
45.73	Open and other right hemicolectomy / Ileocollectomy / Right radical colectomy
45.74	Open and other resection of transverse colon
45.75	Open and other left hemicolectomy
45.76	Open and other sigmoidectomy
45.79	Other and unspecified partial excision of large intestine / Enterocollectomy NEC
45.8	Total intra-abdominal colectomy / Excision of cecum, colon, and sigmoid
45.81	Laparoscopic total intra-abdominal colectomy
45.82	Open total intra-abdominal colectomy
45.83	Other and unspecified total intra-abdominal colectomy
46.04	Resection of exteriorized segment of large intestine
48.4x	Rectal Pull-Through Operations
48.5	Abdominoperineal resection of rectum
48.5	Abdominoperineal resection of the rectum, not otherwise specified
48.51	Laparoscopic abdominoperineal resection of the rectum
48.52	Open abdominoperineal resection of the rectum
48.59	Other abdominoperineal resection of the rectum
48.6	Other resection of rectum
48.61	Transsacral rectosigmoidectomy
48.62	Anterior resection of rectum with synchronous colostomy
48.63	Other anterior resection of rectum
48.64	Posterior resection of rectum
48.65	Duhamel resection of rectum
48.69	Other
17.3	Laparoscopic partial excision of large intestine
17.31	Laparoscopic multiple segmental resection of large intestine
17.32	Laparoscopic cecectomy
17.33	Laparoscopic right hemicolectomy
17.34	Laparoscopic resection of transverse colon
17.35	Laparoscopic left hemicolectomy
17.36	Laparoscopic sigmoidectomy
17.39	Other laparoscopic partial excision of large intestine

Appendix Table 3.6: Large Bowel Resection Codes, Canadian Classification of Health Interventions (CCI)

Code	Description
1.NM.87	Excision partial, large intestine
1.NM.87.DA	Simple excision, laparoscopic
1.NM.87.LA	Simple excision, open
1.NM.87.DF	Colocolostomy anastomosis, laparoscopic
1.NM.87.RN	Colocolostomy anastomosis, open
1.NM.87.DE	Colorectal anastomosis, laparoscopic
1.NM.87.RD	Colorectal anastomosis, open
1.NM.87.DN	Enterocolostomy anastomosis, laparoscopic
1.NM.87.RE	Enterocolostomy anastomosis, open
1.NQ.87	Excision partial, rectum (includes proctocolectomy, procto-sigmoidectomy, pull through, rectosigmoidectomy, anterior resection)
1.NQ.87.LA	Closure by apposition, open
1.NQ.87.DA	Closure by apposition, laparoscopic
1.NQ.87.RD	Colorectal anastomosis, open
1.NQ.87.DE	Colorectal anastomosis, laparoscopic
1.NM.89	Excision total, large intestine
1.NM.89.DF	Ileorectal anastomosis, laparoscopic
1.NM.89.RN	Ileorectal anastomosis, open
1.NM.91	Excision radical, large intestine (including en bloc resection)
1.NM.91.DF	Colocolostomy anastomosis, laparoscopic
1.NM.91.RN	Colocolostomy anastomosis, open
1.NM.91.DE	Colorectal anastomosis, laparoscopic
1.NM.91.RD	Colorectal anastomosis, open
1.NM.91.DN	Enterocolostomy anastomosis, laparoscopic
1.NM.91.RE	Enterocolostomy anastomosis, open
1.NQ.89	Excision total, rectum
1.NQ.89.SF	Coloanal anastomosis, abdominal anterior approach
1.NQ.89.KZ	Coloanal anastomosis, abdominoperineal approach
1.NQ.89.GV	Coloanal anastomosis, combined endoscopic approach
1.NQ.89.SF	Pouch formation, abdominal anterior approach
1.NQ.89.KZ	Pouch formation, abdominoperineal approach

Appendix Table 3.6: Continued

Code	Description
1.NM.87	Excision partial, large intestine
1.NM.87.DX	Stoma formation and distal closure, laparoscopic
1.NM.87.TF	Stoma formation and distal closure, open
1.NM.87.DY	Stoma formation with mucous fistula, laparoscopic
1.NM.87.TG	Stoma formation with mucous fistula, open
1.NQ.87	Excision partial, rectum (includes proctocolectomy, procto-sigmoidectomy, pull through, rectosigmoidectomy, anterior resection)
1.NQ.87.LA	Closure by apposition, open
1.NQ.87.DA	Closure by apposition, laparoscopic
1.NQ.87.RD	Colorectal anastomosis, open
1.NQ.87.DE	Colorectal anastomosis, laparoscopic
1.NQ.87.TF	Colostomy with Hartman or submucosal fistula, open
1.NQ.87.DX	Colostomy with Hartman or submucosal fistula, laparoscopic
1.NM.89	Excision total, large intestine
1.NM.89.DX	Stoma formation with distal closure, laparoscopic
1.NM.89.TF	Stoma formation with distal closure, open
1.NM.91	Excision radical, large intestine (including en bloc resection)
1.NM.91.DX	Stoma formation with distal closure, laparoscopic
1.NM.91.TF	Stoma formation with distal closure, open
1.NM.91.DY	Stoma formation with mucous fistula, laparoscopic
1.NM.91.TG	Stoma formation with mucous fistula, open
1.NQ.89	Excision total, rectum
1.NQ.89.RS	Stoma formation with distal closure, anterior approach
1.NQ.89.LH	Stoma formation with distal closure, abdominoperineal
1.NQ.89.AB	Stoma formation with distal closure, combined endoscopic
1.NQ.89.RS	Continent ileostomy formation, anterior approach
1.NQ.89.LH	Continent ileostomy formation, abdominoperineal approach
1.NQ.89	Excision total, rectum
1.NQ.89.SF	Pouch formation, abdominal anterior approach
1.NQ.89.KZ	Pouch formation, abdominoperineal approach