

## **SUPPLEMENTARY MATERIAL**

### **Methods**

Hospital Episode Statistics (HES) data are provided by the Health and Social Care Information Centre (HSCIC) via a commercial reuse licence. Each HES record in this dataset contains a unique reference number that enables individual anonymised HES records to be tracked through the healthcare system (including inpatient and outpatient departments) over time.

The Office of Population Censuses and Surveys (OPCS) Classification of Interventions and Procedures version 4 (OPCS-4) is a procedural classification for the coding of operations, procedures and interventions performed during inpatient stays, day case surgery and some outpatient attendances in the National Health Service.

Prescribing analysis and cost tabulation (PACT) is a national dataset published by the HSCIC that records primary-care prescribing data in terms of cost and number of items (volume).

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**Supplementary Tables**

**Supplementary Table 1** Primary gastrointestinal ICD-10 diagnosis codes excluded from the data collection

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<b>Malignant neoplasms of stomach</b>	
C16.0 Malignant neoplasm of cardia of stomach	C16.1 Malignant neoplasm of fundus of stomach
C16.2 Malignant neoplasm of body of stomach	C16.3 Malignant neoplasm of pyloric antrum
C16.4 Malignant neoplasm of pylorus	C16.5 Malignant neoplasm of lesser curvature of stomach, unspecified
C16.6 Malignant neoplasm of greater curvature of stomach, unspecified	C16.8 Malignant neoplasm overlapping sites of stomach
<b>Diverticular disease</b>	
K57.0 Diverticular disease of small intestine with perforation and abscess	K57.1 Diverticular disease of small intestine without perforation or abscess
K57.2 Diverticular disease of large intestine with perforation and abscess	K57.3 Diverticular disease of large intestine without perforation or abscess
K57.8 Diverticular disease of intestine, partly unspecified with perforation and abscess	K90.0 Coeliac disease
<b>Inflammatory bowel disease</b>	
K50.0 Crohn's disease of small intestine	K50.1 Crohn's disease of large intestine
K50.8 Other Crohn's disease	K50.9 Crohn's disease, unspecified
K51.0 Ulcerative (chronic) enterocolitis	K51.1 Ulcerative (chronic) ileocolitis
K51.2 Ulcerative (chronic) proctitis	K51.3 Ulcerative (chronic) rectosigmoiditis
K51.8 Other ulcerative colitis	K51.9 Ulcerative colitis, unspecified

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**Supplementary Table 2** OPCS-4 codes

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H22	Diagnostic endoscopic examination of colon
H25	Diagnostic endoscopic examination of lower bowel using fibre optic sigmoidoscope
H28	Diagnostic endoscopic examination of sigmoid colon using rigid sigmoidoscope

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