

# National Endoscopy Data Standardisation Framework for Colonoscopy

National Endoscopy Data Standardisation Group of New Zealand

05.12.2023 version .4

# Revision History

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<b>Date</b>	<b>Version</b>	<b>Description</b>	<b>Author</b>
18.11.2019	0.1	Document creation	Marius van Rijnsoever
02.11.2021	0.2	Review and iteration	James Irwin, Marius van Rijnsoever
13.03.2022	0.3	Review and iteration	NEDS zoom meeting
05.12.2023	0.4	Updated with ethnicity	James Irwin

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# Introduction

The purpose of this document is to define variables and data types that need to be collected as a minimum standard for colonoscopy in New Zealand. This will allow any endoscopy documentation platform to be able to provide minimum audit data to the Endoscopy Guidance Group for New Zealand (EGGNZ), the National Bowel Screening Programme (BSP), and the Conjoint Committee (the body that credentials endoscopy training in New Zealand). Where possible this document conforms to terms as they are defined in the Minimal Standard Terminology (MST-3) as published by the World Endoscopy Organization.<sup>1</sup>

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<sup>1</sup> <https://www.worldendo.org/resources/minimal-standard-terminology-mst/> [visited 22/03/2022]

# Acronyms and Abbreviations

## *NEDS*

National Endoscopy Data Standardisation

## *KPI*

Key Performance Indicators

## *BSP*

National Bowel Screening Programme

## *EGGNZ*

Endoscopy Guidance Group for New Zealand

## *CPN*

Common Person Number. This is a unique number that the Ministry of Health uses to identify each health practitioner in New Zealand. It is a consistent 6-digit number of 2 numbers (1-9) and 4 letters (A-Z)

## *EUS*

Endoscopic Ultrasound

## *ERCP*

Endoscopic Retrograde Cholangiopancreatography

# Point of Contact

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# Minimum required dataset

## Field name

Data type

Levels or format

Description

## databaseid

String.

Unique identifier for the database. A list of these identifiers will be held by a central entity. It is used to distinguish between possible cases where the 'examid' field is identical in two cases, in separate databases.

## examid

String.

Unique examination identifier. This identifier needs to be unique at the level of the database that generates the number.

## examdate

Date.

The date of the examination.

## examtype

Factor.

Levels: 'colonoscopy', 'gastroscopy', 'flexible sigmoidoscopy', 'upper EUS', 'lower EUS', 'ERCP', 'enteroscopy', 'capsule endoscopy', 'colonoscopy/ileoscopy via stoma'

Examination type. This is requested to confirm that the endoscopic procedure is indeed a colonoscopy and not a different procedure.

## examsite

String.

Identifier of endoscopy site or hospital.

## nhi

String.

Format: [A-Z][A-Z][A-Z][0-9] [0-9] [0-9] [0-9]

Unique patient identifier [National Health Index number].

## patientgender

Factor.

Levels: male, female, non-binary

The gender of the patient



### **patientethnicity**

Factor.

Levels: NZ european, Maori, Pasifika, Asian, Other

The ethnicity of the patient.

### **patientdob**

Date.

The date of birth of the patient.

### **admitstatus**

Integer.

Format: 0='inpatient', 1='outpatient'

Is the patient a current hospital inpatient?

### **examinername**

String.

Format: Two comma separated strings: lastname, firstname

This identity is the responsible endoscopist for the procedure.

### **examinercpn**

String.

Format: [0-9][0-9][A-Z] [A-Z] [A-Z] [A-Z]

Common Person Number (CPN) of the responsible endoscopist.

### **previousresection**

Integer.

Format: 0=intact colon, 1=any previous bowel resection.

Any resection of colon (e.g., limited right hemicolectomy, anterior resection), but not ileum.

### **indication**

Factor.

Factor with levels: Symptomatic, Surveillance, BSP, Other.

This is the primary indication for the colonoscopy. [These levels are defined in the appendix].

### **completeexam**

Integer.

Factor: 0 = incomplete, 1 = complete

Was the colonoscopy complete? [The definition of a complete exam is defined in the appendix].

### **ileumintubated**

Integer.

Factor: 0 = no, 1 = yes

What was the ileum intubated?

### **retroflexionrectum**

Integer.

Format: 0= no, 1= yes

Was retroflexion performed in the rectum?

### **polypdetectionalgorithm**

Integer.

Format: 0=no, 1=yes

Was an AI (artificial intelligence) polyp detection algorithm used during this colonoscopy?

### **sedationused**

Integer.

Format: 0 = no, 1 = proceduralist sedation, 2 = anaesthetist administered sedation or anaesthetic

Was sedation used during this procedure?

### **fentanyldose**

Number.

Format: Dose in micrograms.

How much fentanyl was administered to the patient during this procedure? If fentanyl was not used, this field is filled with NA.

### **midazolamdose**

Number.

Format: Dose in milligrams.

How much midazolam was administered to the patient during this procedure? If midazolam was not used, this field is filled with NA.

### **flumazanildose**

Number.

Format: Dose in micrograms.

How much flumazaniil was administered to the patient during this procedure? If flumazaniil was not used, this field is filled with NA.

### **naloxonedose**

Number.

Format: Dose in micrograms.

How much naloxone was administered to the patient during this procedure? If naloxone was not used, this field is filled with NA.

**gcs**

Integer

Format: A single integer between 1 and 5.

The Gloucester Comfort Score, [see appendix] which assesses how comfortable the patient was during the colonoscopy.

**bbps**

string

Format: 3 comma separated integers between 0 - 3.

[0-3],[0-3],[0-3]

The Boston Bowel Preparation Score, [see appendix] which assesses adequacy of bowel preparation.

**manouvreperformed**

Integer.

Format: 0 = no manoeuvre, 1= manoeuvre performed.

Was a manoeuvre performed? [The definition of what constitutes a manoeuvre is stated in the appendix].

**polypectomyperformed**

Integer.

Format: 0 = no, 1 = yes

Was a polypectomy performed?

**largepolyp**

Integer.

Format: 0 = no, 1 = yes

Was a polyp greater than or equal to 10mm resected?

**tattooplaced**

Integer.

Format: 0 = no, 1 = yes

Was a tattoo placed to mark a large polyp or suspicious pathology?

**withdrawtime**

Time object

Format: Withdrawal time in minutes and seconds.

[mm]:[ss]

The time taken to withdraw the colonoscope from the caecum to the anus. Please see appendix for a definition of withdrawal time.

### **traineeinvolved**

Integer.

Format: 0 = no, 1 = yes

Did a trainee perform some or all of this colonoscopy?

### **traineeename**

String.

Format of two comma separated strings: lastname, firstname.

The name of the trainee. If no trainee was involved this field is filled with NA.

### **traineecpn**

String.

Format: [0-9][0-9][A-Z] [A-Z] [A-Z] [A-Z]

The Common Person Number (CPN) of the trainee endoscopist. If no trainee was involved this field is filled with NA.

### **traineerole**

Factor.

Factor with levels: 'Gastroenterology Registrar', 'Gastroenterology Fellow', 'Surgical Registrar', 'Surgical Fellow', 'Nurse endoscopy trainee'

Describes the role of the trainee. If no trainee was involved this field is filled with NA.

### **completeexamtrainee**

Integer.

Factor: 0 = incomplete, 1 = complete

What was the colonoscopy completed by the trainee? [The definition of a complete exam is defined in the appendix].

### **ileumintubated**

Integer.

Factor: 0 = no, 1 = yes

What was the ileum intubated by the trainee?

If no trainee was involved this field is filled with NA.

### **traineepolypectomy**

Integer.

Format: 0=no, 1=yes.

Did the trainee perform an independent polypectomy? If no trainee was involved this field is filled with NA.

# Appendices

## Boston Bowel Preparation Score

This score is composed of three numbers between 0-3 representing the adequacy of bowel preparation in 3 segments of the colon: the right colon (includes caecum and ascending colon), the transverse colon (includes hepatic and splenic flexures) and the left colon (descending, sigmoid colon and rectum). Scoring is performed after washing or suctioning.

- 0. Unprepared colon segment with mucosa not seen because of solid stool that cannot be cleared.*
- 1. Portion of mucosa of the colon segment seen, but other areas of segment not well seen because of staining, residual stool, and/or opaque liquid.*
- 2. Minor amount of residual staining, small fragments of stool, and/or opaque liquid, but mucosa of colon segment is well seen.*
- 3. Entire mucosa of colon segment well seen, with no residual staining, small fragments of stool, or opaque liquid.*

## Gloucester Comfort Score.

A nurse assessed level of comfort represented by a single integer between 1 and 5.

- 1. None, talking comfortably throughout.*
- 2. One or 2 episodes of mild discomfort, well tolerated.*
- 3. More than 2 episodes of discomfort, adequately tolerated.*
- 4. Significant discomfort experienced several times during the procedure.*
- 5. Extreme discomfort frequently during the test.*

## Type of examination.

Levels are 'colonoscopy', 'gastroscopy', 'flexible sigmoidoscopy', 'upper EUS', 'lower EUS', 'ERCP', 'enteroscopy', 'capsule endoscopy', 'colonoscopy/ileoscopy via stoma'.

This field allows confirmation of type of procedure to be performed. The most important distinction is between colonoscopy and flexible sigmoidoscopy.

## Indication.

Symptomatic, Surveillance, BSP, Other.

Where multiple indications are recorded against a colonoscopy, one primary indication must be recorded in this field. The order of preference is Symptomatic, BSP, Other, Surveillance. For example, if there is both a surveillance indication and a symptomatic indication recorded against a colonoscopy, the indication in this field is 'symptomatic'.

*Symptomatic:*

*Includes all colonoscopy for which symptoms, triggered investigation. For example, per 'rectal bleeding', 'change in bowel habit towards diarrhoea'. This level also includes 'iron deficiency anaemia'.*

*BSP:*

*All national bowel screening colonoscopy procedures.*

*Other:*

*Include cases where an identified pathology is undergoing a procedure, for example resection of a previously identified polyp, or biopsy of a lesion identified on imaging, or resection of polyps identified on CTC. It includes procedures performed to assess activity of inflammatory bowel disease. It includes procedures performed for screening outside of the BSP – for e.g., a positive faecal occult blood test.*

*Surveillance:*

*Includes all colonoscopy performed where the indication is an increased risk of bowel cancer on the basis of a family or personal history of cancer or polyps. For example, 'sister developed bowel cancer at the age of 50', or 'personal history of 6 adenomatous polyps 5 years ago', or 'personal history of ulcerative colitis'.*

## Examination Extent.

An examination is considered complete if the caecum is intubated and the appendix is visualised. In patients who have had a caeectomy or right hemicolectomy, an examination is considered complete if the endoscope is advanced to the ileocolonic anastomosis.

## Manoeuvre.

A manoeuvre is considered to have been performed if a polypectomy was performed, or a biopsy was performed. This metric is measured to allow calculation of withdrawal rate in procedures where no withdrawal time is consumed performing manoeuvres.

## Withdrawal time.

This is defined as the time taken to inspect the colonic mucosa during withdrawal of the endoscope. This requires recording of a time-point when withdrawal is started, and a time-point when the examination is ended and calculating the difference between these two time-points. It is important that the time-point when withdrawal is started occurs after any attempt to intubate the terminal ileum, or any time taken to inspect the terminal ileum has been completed.