



Endoscopy Unit Standards for Performing Bowel Cancer Screening in New Zealand

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Introduction

The Endoscopy Governance Group New Zealand (EGGNZ) was established by a number of colleges, specialist societies and other stakeholders with an interest in endoscopy to provide strategic oversight for the Endoscopy Services in New Zealand from a Clinical, Operational and Patient-centred perspective. EGGNZ is hosted by the Northern Cancer Network.

The New Zealand Bowel Cancer Screening Programme (BSP) commenced in 2013 as a pilot programme. The role of EGGNZ in the BSP is to:

- Provide strategic support to National Endoscopy Quality Improvement Programme (NEQIP) and the implementation of the New Zealand Global Rating Scale (NZGRS).
- Advise on colonoscopy competence standards to perform Bowel Cancer Screening (BCS).
- Advise on endoscopy unit standards to provide BCS

The EGGNZ Standards take into account the substantial documents on endoscopy unit standards produced by the Gastroenterological Society of Australia (GESA) (Gastroenterological Society of Australia, 3rd Edition 2006: Reprinted 2011) and the Ministry of Health (MOH) guidance for the BCS Pilot. (Bowel Screening Pilot, 2015) (Bowel Screening Pilot, 2013)

While the latter will be expanded for the roll out of the full BSP, this document focusses in more detail on the exact standard of clinical practice expected in endoscopy units.

We have referenced the NZGRS which is newly re-launched. We recognise the differing standards of practice around New Zealand and have indicated, in the related NZGRS Domains, which standards we feel are 'Essential' for a BSP to commence, which are 'Achievable' with the help of NZGRS in the next 12 months and those that may have more taxing delivery and so will be 'Aspirational' at this point.

In a number of places we have also referenced the AUS/NZ Standard 4187:2014. (Standards of New Zealand , 2014)

It is anticipated that these Standards will be reviewed by EGGNZ every 2 years.

This work was compiled by the Unit Standards Working group of EGGNZ, with representatives from Royal Australasian College of Surgeons (RACS), Royal Australasian College of Physicians (RACP), New Zealand Society of Gastroenterologists (NZSG), NZ Paediatric Gastroenterologists, NEQIP, New Zealand Nurses Organisation (NZNO) and NZ Society of Anaesthetists together with input from the Clinical Lead of the BCS Pilot, and has been ratified by the full EGGNZ steering group.

Standards are described as Essential, Achievable or Aspirational, as per the definition in the Appendix.

Basic principles

- The introduction of screening must not compromise endoscopy services for symptomatic patients.
- Screening and symptomatic (diagnostic) services should achieve the same minimum levels of quality and safety.
- Wherever possible the quality assurance required for screening should have an enhancing effect on the quality of endoscopy performed for symptomatic patients and for other reasons.
- Screening and diagnosis of appropriate quality requires a multidisciplinary approach to diagnosis and management of lesions detected during endoscopy.

EGGNZ Standard 1: Endoscopic facilities

Essential

Any Endoscopy Unit should physically comprise the following:

- 1.1 Reception area
- 1.2 Waiting area
- 1.3 Procedure room should contain:
 - a. A minimum of 2 Suction ports (for patient and instrument)
 - b. Oxygen and accessory equipment
 - c. Hand-washing facilities
 - d. Intercom or emergency call system
 - e. Access to intranet
 - f. Permanent Bench tops
 - g. Cupboard storage space
- 1.4 Consulting / Interview room
- 1.5 Nurses station
- 1.6 Storage area
- 1.7 Separate reprocessing area
- 1.8 Staff room
- 1.9 Staff toilet & changing rooms
- 1.10 Patient toilet and changing area (including disability access facility)
- 1.11 Waste disposal area
- 1.12 Recovery room with separated 2 stage facilities; 1st stage to have:
 - a. Suction,
 - b. Oxygen and
 - c. Call facilities

Achievable

- 1.13 Procedure room – minimum dimensions of 4 x 5 metres

EGGNZ Standard 2: Personnel / List composition

Essential

- 2.1 Minimum number of colonoscopists with documented appropriate standards to perform BCS in New Zealand to ensure achievement of expected waiting times.
- 2.2 Where conscious sedation is given there shall be a minimum of 3 appropriately trained staff present;
 - a. The proceduralist,
 - b. A nurse to monitor airway etc. and
 - c. An assistant
 - d. **N.B.** where Nitrous Oxide is used alone the minimum staff consists of the proceduralist and a nurse assistant
- 2.3 Maximum 5 cases per 4 hour list (i.e. Sufficient for each case to ensure safe, high quality examination and intervention as appropriate)

Achievable

- 2.4 Access to a timely anaesthetic-assisted sedation list for difficult cases

EGGNZ Standard 3: Equipment

Essential

- 3.1 The volume of equipment should match the demand put upon it to maximise efficiency, avoid patient delays and ensure patient safety at all times.
 - 3.2 High Definition White Light Endoscopes with appropriate HiDef video screens
 - 3.3 There should be an adequate supply of accessories suited to the endoscopic interventions undertaken within the unit including:
 - a. Forceps
 - b. Snares [range of sizes, braided and single filament]
 - c. Injection needles
 - d. Dilators and guidewires
 - e. Loops
 - f. Clips
 - g. Coagulation device(s) – e.g. Heater probe, Coag-Grasper forceps
 - h. Spray catheters (and appropriate chromoendoscopy chemicals)
 - i. Other devices appropriate to achieve haemostasis
 - 3.4 Carbon dioxide insufflation
 - 3.5 Integrated Endo-Cautery Unit
 - 3.6 Patient monitoring system for oxygen saturation and automated blood pressure measurement
 - 3.7 A range of endoscope sizes to cope with anticipated difficulties , to include a paediatric diameter colonoscope, a long colonoscope [adult or paediatric]
 - 3.8 Ancillary Equipment
 - a. Procedural Trolleys which:
 - i. Allow head tilt, (Trendelenburg and reverse Trendelenburg)
 - ii. Have brakes,
 - iii. Have safety rails
 - b. Stethoscope
 - c. Access to ECG tracing
 - d. Glucometer
 - e. Transportable oxygen cylinder
 - f. Portable suction
 - 3.9 Permanent Resuscitation Equipment
 - a. A range of equipment for advanced airway management (for example, masks, oropharyngeal airways, laryngeal mask airways, laryngoscopes and endotracheal tubes).
 - b. A means of inflating the lungs with oxygen (for example, a self-inflating bag and mask)
 - c. Adequate intravenous access equipment
 - d. Intravenous fluids including normal saline, dextrose etc.
 - e. Full range of emergency drugs
 - f. Portable oxygen [with equipment for delivery to the patient e.g. Hudson Mask/Nasal Prong's
 - g. Portable suction
 - h. Defibrillator
2. The reprocessing of Endoscopic Equipment should comply with standard AS/NZS 4187:2014

Achievable

- 3.10 Narrow Band Imaging / Blue Light imaging capability
- 3.11 Magnetic Positioning Device
- 3.12 Electronic Reporting System, with capacity to provide auditable outcome data including
 - a. Number of cases by individuals
 - b. Identification of specific endoscopic equipment used in each case (in case of infection tracking), and
 - c. Photographic image capture and storage facility
- 3.13 There should be access to devices for measuring expired carbon dioxide. [note this is in PS09]

Aspirational

- 3.14 Variable stiffness endoscopes
- 3.15 Electronic or optical zoom capability Colonoscopes
- 3.16 Nitrous oxide analgesia
- 3.17 Video integration to separate (conference) room

EGGNZ Standard 4: Quality of Care

Essential

- 4.1 The Unit should be engaged in a Quality Improvement Programme. We recommend the use of NEQIP and the New Zealand Global Rating Scale (NZGRS).

The NZGRS contains 4 Domains of Clinical Quality, Quality of Patient Experience, Workforce and Training. It is not the remit of this document to comment on Workforce or Training of Units, and aspects of Appropriateness, Communicating with the Referrer, Equality of Access, Timelines and Booking which are found in the NZGRS Quality Domains and standards specifically laid out in the Ministry of Health BSP contract. These will not be commented on further.

Level 'A', 'B' and 'C' refer to the standards in the NZGRS. From NZGRS standard 4

EGGNZ Standard 5: Administration of Medication

Essential

- 5.1 Practitioners prescribing, dispensing and administering medications should refer to the following for guidance:
- a. NZNO Guidelines on the administration of Medicines, 2014;
 - b. ANZCA Professional Standard 51 Guidelines for the Safe Management and Use of Medications in Anaesthesia, 2017;
 - c. and any institutional guidelines or policies regarding medication prescribing, dispensing and administration of medications

EGGNZ Standards 6 - 12

Standards for the remaining areas are reproduced from the NZGRS standards and have been designated Essential, Achievable or Aspirational for the EGGNZ standards, as per the given definitions Glossary of Terms.

EGGNZ standard 6: Clinical Quality

From NZGRS standard 1

Clinical Quality		
Consent Process Including Patient Information		EGGNZ Standard
1.1	There is a published patient information sheet for all diagnostic procedures performed in the unit	Essential
1.2	The hospital policy for consent is available in the unit in written and/or electronic form	Essential
1.3	There is a published patient information sheet for all endoscopy procedures performed in the unit	Essential
1.4	All patients are given an opportunity to ask questions about the procedure prior to the endoscopy by a professional trained in the consent process	Essential
1.5	Signatures are obtained on a consent form for all patients who are able to sign the form and there are procedures in place for those who cannot sign	Essential
1.6	All patients are given sufficient time to ask questions about the procedure before entering the procedure room on the day	Essential
1.7	All consent signatures are obtained outside the procedure room	Achievable
1.8	There is written guidance within the unit for withdrawal of consent during an endoscopic procedure	Essential
1.9	All published patient information sheets are reviewed annually and changed as necessary	Achievable
1.10	Patients' frequently asked questions are incorporated into the patient information sheets	Achievable
1.11	There is at least one annual survey of patients' experience of consent for endoscopic procedures	Achievable
1.12	Findings of the survey are acted upon within three months of completion	Achievable
1.13	Failure to comply with withdrawal of consent guidance is registered as an adverse clinical incident	Achievable

EGGNZ standard 7: Safety

From NZGRS standard 2

Safety		
		EGGNZ Standard
2.1	There is a system for recording adverse events in the endoscopy unit	Essential
2.2	The endoscopy unit adheres to the local hospital process for acting on adverse events	Essential
2.3	Adverse events are reviewed by the endoscopy unit team on a regular basis (at least 2x/year)	Essential
2.4	There are local policies or protocols for management of diabetes, anticoagulation and antibiotic use in patients undergoing endoscopy	Essential
2.5	Guidelines for endoscope reprocessing are available in the department in written and electronic form	Essential
2.6	There is a Reprocessing Lead appointed by the DHB and private/other who has overall responsibility for endoscopy reprocessing practice	Essential
2.7	There is an established pathway for the provision of anaesthetic support to lists when required	Essential
2.8	A process is in place for identifying and reviewing all in hospital deaths within 30 days of an endoscopic procedure.	Essential
2.9	Actions on adverse events (expected and unexpected) are implemented within three months of review	Achievable
2.10	There is regular provision of anaesthetic supported lists	Achievable
2.11	Action is taken within a three month period if auditable outcomes for actions on adverse events are not achieved	Achievable
2.12	If there are resource constraints for responding to adverse events (e.g. 24/7 on-call bleed rotas) these are identified and the adverse event is placed on the hospital 'risk register'	Achievable
2.13	If there are resource constraints for responding to adverse events (e.g. 24/7 on-call bleed rotas) these are identified and the adverse event reported to appropriate senior management	Achievable

EGGNZ standard 8: Comfort

From NZGRS standard 3

Comfort		
		EGGNZ Standard
3.1	There is basic monitoring of the patient's comfort to ensure care needs are met (e.g. temperature of environment, suitability of bed/chair)	Essential
3.2	Patients are given a realistic expectation of discomfort and pain prior to the procedure	Essential
3.3	All endoscopy nurses have been taught to recognise and help to control patient anxiety during endoscopic procedures	Essential
3.4	Nurses monitor and record patient pain and discomfort during and after the endoscopy procedure	Essential
3.5	Patient feedback of comfort is to be undertaken at least once a year	Essential
3.6	Monitoring of patient comfort (surveys and nurse records) is reviewed at least 2x/year	Essential
3.7	Anonymised data on patient comfort levels is fed back to individual endoscopists and to the team at least twice per year	Essential
3.8	Action is taken if patient comfort levels fall below agreed levels (If no action was needed, this measure should be a yes)	Essential
3.9	Action on patient comfort is reviewed within six months to ensure it has been effective (If no action was needed, this measure should be a yes)	Achievable
3.10	If patient comfort levels do not reach acceptable levels after a period of three months following review of an individual's safe sedation practice and technique, that individual's practice is reviewed by the unit's clinical lead endoscopists and/or chair of governance (as appropriate)	Achievable

EGGNZ standard 9: Quality of the Procedure

From NZGRS standard 4

Quality of the Procedure		
		EGGNZ Standard
4.1	Key quality performance indicators and auditable outcomes for the procedures performed in the unit are available in the department in written and electronic form	Essential
4.2	Systems are in place for monitoring level 'C' auditable outcomes and quality standards	Essential
4.3	The outcomes and standards are reviewed on a regular basis (at least 2x/year)	Essential
4.4	Individual endoscopists are given feedback on their immediate outcomes and standards at least 2x/year and audits of their late outcomes at least once/year	Essential
4.5	Action is agreed with an individual if performance falls below acceptable levels	Essential
4.6	Auditable goals and timescales for the above action are agreed and monitored	Achievable
4.7	There is an IT system in place to capture immediate auditable outcomes and quality standards	Achievable
4.8	Systems are in place for monitoring level 'B' key performance indicators	Achievable
4.9	Systems are in place for monitoring level 'A' key performance indicators	Achievable
4.10	Actions taken in response to poor performance are reviewed within agreed timescale	Achievable
4.11	Endoscopists that fail to achieve agreed standards, after an agreed implementation plan, have their practice reviewed by the appropriate hospital process (If agreed standards are acceptable for all endoscopists, this measure should be a yes)	Achievable
4.12	A unit that fails to achieve agreed standards, after review of an agreed implementation plan, is reviewed by the appropriate hospital process (If agreed standards are acceptable for all endoscopists, this measure should be a yes)	Achievable

EGGNZ standard 10: Quality of Patient Experience

From NZGRS standard 10

Quality of Patient Experience		
Privacy and Dignity		EGGNZ Standard
10.1	There is a facility for conversation before and after the procedure	Essential
10.2	The unit offers a safe environment for patient care	Essential
10.3	The unit has screens and/or curtains to provide privacy pre and post procedure	Essential
10.4	The unit has access to a quiet area which provides sufficient privacy to allow a conversation beyond the hearing of other patients	Essential
10.5	Privacy and dignity standards are in place and understood by all staff	Essential
10.6	There are processes in place to ensure patient confidentiality is maintained	Essential
10.7	There is clear separation between pre and post procedure patients for all out-patients	Achievable
10.8	Patient-identifiable material is not openly displayed in areas accessible to patients or relatives	Essential
10.9	Patients' privacy is adequately protected in the procedure room (e.g. by shorts or screens) and there are processes in place to ensure that the room is not entered during the procedure	Essential
10.10	Patient feedback on privacy and dignity is sought by at least two methods each year (see patient feedback section)	Essential
10.11	The unit has access to a separate room reserved for private discussions with patients	Essential
10.12	Presence of relatives in clinical areas is discouraged where it affects the privacy of other patients	Achievable
10.13	Patients participate in the reviews of privacy and dignity standards	Achievable
10.14	All patients are asked whether they wish to have their clinical care discussed in private	Essential
10.15	There is comprehensive separation between pre and post procedure patients, including in-patients	Aspirational
10.16	Privacy and dignity standards are reviewed (in response to patient feedback) at least annually	Essential
10.17	Changes suggested by the privacy and dignity review are implemented within three months	Aspirational

EGGNZ standard 11: Aftercare

From NZGRS standard 11

Aftercare		
		EGGNZ Standard
11.1	There is a general aftercare patient information sheet.	Essential
11.2	There is a contact number for patients who have questions and experience problems	Essential
11.3	There are procedure specific aftercare patient information sheets for all procedures performed in the unit	Essential
11.4	There is a 24 hour contact availability for patients who have questions and experience problems	Essential
11.5	All patients are told if they are suspected of having a malignancy on the same day as the procedure unless it is considered to be inappropriate to do so	Essential
11.6	If it is considered inappropriate to tell the patient malignancy is suspected, a note is made in the file of the reason	Essential
11.7	All patients are discharged with verbal and written information about the next steps appropriate for their care	Essential
11.8	All patients are told the outcome of the endoscopic procedure prior to discharge	Essential
11.9	All patients are told if further information from pathological specimens will be available, from whom and when	Essential
11.10	Patients' views on aftercare processes are sought at least annually	Essential
11.11	All patients are offered a copy of the endoscopy report or an interpreted version or written information about the outcome of the procedure (If this is deemed inappropriate, the reason is recorded in the file)	Essential
11.12	All patients that require a follow-up appointment agree one prior to discharge	Aspirational
11.13	All patients are sent any updated results if they have been told further information will be available and do not have an outpatient appointment	Essential
11.14	Patients, family and support person participate in review of aftercare processes	Aspirational
11.15	Changes suggested by the aftercare process review are implemented within three months	Aspirational
11.16	If a patient experiences problems post-procedure and needs further advice there is available, via a 24 hour contact number, an adequately trained health professional supported by agreed protocols	Aspirational

EGGNZ standard 12: Ability to Provide Feedback to the Service

From NZGRS standard 12

Ability to Provide Feedback to the Service		
		EGGNZ Standard
12.1	The hospital policy for patient complaints is available within the unit in written and electronic form	Essential
12.2	Action is planned (with auditable outcomes) in response to patient complaints	Essential
12.3	Patient feedback is measured on an ad hoc basis	Essential
12.4	Action for patient complaints is reviewed within three months to ensure it has dealt with the issues	Essential
12.5	Patient feedback is sought via at least one method annually (e.g. discovery interviews, focus groups, patient forums, questionnaires or invited comments)	Essential
12.6	Action is planned (with auditable outcomes) in response to patient feedback that is obtained by at least two methods annually	Achievable
12.7	Action for patient feedback is reviewed within six months to ensure it has dealt with the problems identified	Achievable
12.8	Patients participate in planning and evaluating services	Achievable
12.9	Details of changes made in response to patient feedback are offered to patients who have participated in feedback surveys	Aspirational

EGGNZ standard 13: Audit

Essential

The Unit should have an active audit programme to include:

- 13.1 Patient comfort, using Gloucester Comfort Scale
- 13.2 Dosages of sedation drugs administered
- 13.3 Reversal agent administered
- 13.4 Adverse Outcomes (e.g. need for airway intervention)
- 13.5 Serious Incident Reporting (e.g. equipment failure, fire etc.)
- 13.6 Quality of bowel prep using the Boston Bowel Prep Score;
 - a. KPI target; excellent/adequate in $\geq 90\%$ or
 - b. Boston Bowel Prep Score (BBPS) on withdrawal of ≥ 6 , with no single segment score < 2 , in $\geq 90\%$
- 13.7 Withdrawal of consent

EGGNZ standard 14: Education

Education of proceduralists is covered in the EGGNZ document; Endoscopy Standards for Individual Colonoscopists Performing Bowel Cancer Screening in New Zealand. Standards for non-proceduralist staff are referenced here.

Essential

- 14.1 Nurses assisting in BCS colonoscopy should be competent in colonoscopy direct observational procedural skills (DOPS). (New Zealand Nurses Organisation, Gastroenterology Nurses College, 2000)
- 14.2 The unit should recognise the training requirements for endoscopy nurses as laid out in the Knowledge and Skills Framework of the NZNO Gastroenterology Nurses College
- 14.3 The unit has formal training for technicians.

Glossary of Terms

Credentialing	The process of review and verification of fitness to practise typically performed by an organisation to grant specific clinical privileges such as performing procedures at that institution.
Certification	The action or process of providing someone with an official document attesting to a status or level of achievement. For EGGNZ this should attest to a level of competence in an endoscopic procedure.
Accreditation	The process of officially recognizing a person or body as being qualified to perform a particular activity. In the context of Endoscopy, this would be recognizing a Unit as being up to a particular standard to perform Endoscopy.
Essential	Standards essential for the BSP to commence
Achievable	Standards achievable within the next 12 months
Aspirational	More difficult standards to achieve and therefore aim for achieving within the next 2 years.

Abbreviations

BCS	Bowel Cancer Screening
BSP	New Zealand Bowel Screening Programme
CME-E	Continuing Endoscopic Medical Education
DOPS	Direct Observation Procedural Skills
EGGNZ	Endoscopy Governance Group New Zealand
FOBT	Faecal Occult Blood Test
FS	Flexible Sigmoidoscopy
GESA	Gastroenterological Society of Australia
KPI	Key Performance Indicators
NCN	Northern Cancer Network
NEQIP	National Endoscopy Quality Improvement Programme
NZGRS	New Zealand Global Rating Scale
NZNO	New Zealand Nurses Organisation
NZSG	New Zealand Society of Gastroenterology
RACP	Royal Australasian College of Physicians
RACS	Royal Australasian College of Surgeons

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