

STRICTLY CONFIDENTIAL REPORT

ASSESSMENT OF DIAGNOSITC & TREATMENT TIMES FOR ENDOSCOPIC CASES

FOR SOUTHERN DISTRICT HEALTH BOARD

10th MAY 2019

AUDITORS

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Introductory Statement by Auditors

'We the authors of the report undertook this audit in good faith because of specific concerns expressed about the healthcare of the patients and public residing in the Southern District Health Board (SDHB) region. We understood from the initial letter of request the audit process and the consequent report were to be strictly confidential to the Commissioner, senior management and relevant clinical staff of SDHB.^{Appx A} In all our dealings with staff and third parties, for the acquisition or checking of data and opinions, we endeavoured throughout to be balanced, and to ensure the strict confidentiality of the process and the resulting report were maintained.'

Philip Bagshaw
Steven Ding

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List of Abbreviations

A1 & A2	Auditor 1 & Auditor 2
AA	Administrative Assistant
AF	Atrial Fibrillation
CRC	Colorectal Cancer
CRP	C-Reactive Protein
CTC	CT Colonography
DHB	District Health Board
EUG	Endoscopy User Group
FSA	First Specialist Assessment
[G]	Unnamed Person
GD	Gastroenterology Department
GI	Gastrointestinal
GP	General Practitioner
Grey Zone	Includes patients who failed to meet the LGs but might benefit from a colonoscopy
HALS	Hand Assisted Laparoscopic Surgery
Hb	Haemoglobin Level
<i>H. pylori</i>	<i>Helicobacter pylori</i>
HQSCNZ	Health Quality & Safety Commission of New Zealand
KPI	Key Performance Indicator
LGs	Local Guidelines
MRI	Magnetic Resonance Imaging
NBSP	National Bowel Screening Programme
NGs	National Guidelines
NMDS	National Minimum Data Set
NNPAC	National Non-Admitted Patient Collection
NZCR	New Zealand Cancer Registry
OP	Organisational Plan
PR	Per Rectum
SDHB	Southern District Health Board
SMO	Senior Medical Officer

EXECUTIVE SUMMARY

New Zealand national data from the Ministry of Health, the Cancer Registry and the Health Quality and Safety Commission show the Southern DHB (SDHB), covering the Otago and Southland constituencies, has in recent years: one of the highest incidences of colorectal cancer (CRC) in the country, one of the highest rates of CRC spread beyond the bowel at the time of treatment, one of the highest rate of emergency surgery for CRC, and one of the lowest colonoscopy rates. Poor performance against these four important benchmarking standards for the management of CRC necessitates the urgent provision of an overall organisational plan (OP) by the SDHB. This OP should be based on the objectives of achieving the lowest possible incidence of CRC, the earliest diagnoses of the disease and the best possible outcomes for established cases.

The OP would need to be organised and coordinated between the local community, local General Practitioners and community health workers, and relevant hospital clinical services and university departments, with each knowing how they are expected to function in the plan in an integrated way. In order to succeed such a plan would be likely to require increased resources for improvements, such as greater access to elective operating theatre time and the fully resourcing of another endoscopy room. Advocacy might be required to secure such investments. The approach would, however, be likely to receive wholehearted public support.

The Gastroenterology Department (GD) would have an important part to play in such a plan. Participation in the National Bowel Screening Programme is one element; the efficient and effective management of symptomatic patients is another. For the GD to play its part some issues that were raised repeatedly during this audit, would need to be addressed.

Unfortunately, the current competitive service model operating in the GD would not fit into the OP, where all departments would be required to work cooperatively and collaboratively to achieve the overall objectives. First, evidence presented to this audit indicated dysfunctional relationships between the GD and some other hospital service departments. Communication has sometimes been poor, and dissatisfaction with performance of medical staff has been relayed to them through the issuing of incident reports, rather than by direct communication. Relations with the Departments of Surgery and Medicine at Southland Hospital have been particularly strained, and there is urgent need for the offer of counselling for some of the affected staff. Second, there was evidence for dysfunctional relationships within the GD itself. For example, there have been serious staff disputes, which might impact on the ability to recruit suitable senior specialist staff in future. Also, there have been no senior medical staff meetings for years. Some of these cultural and interpersonal issues within the GD, and with staff in other departments, have been known to SDHB management for years and were thought by some clinical staff to have impacted on patient care.

To address these issues within the GD, management would need to insist on adherence to the OP and external expert help from an appropriate organisation would be needed to: normalise interpersonal working relationships; restore trusting and cooperative relationships with other services; civilise communications and make them more informative; democratise the GD with, for example, regular staff meetings; make the Endoscopy User Group open to all SDHB staff with a Gastrointestinal (GI) interest and widen its focus to include research, training and other aspects of endoscopy; make the membership of the Review Panel, that arbitrates on all declined endoscopy

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requests, rotate around all GI specialist gastroenterologists and surgeons in Otago and Southland. For good governance to be restored, and some of the objectives listed here to be achieved, the appointment of a part-time senior medical mentor for the staff of the GD would be highly recommended.

The local guidelines for access to outpatient colonoscopy and CT colonography are very similar to the current National Guidelines. The GD has produced retrospective data indicating that the application of the local guidelines has been successful in correctly diagnosing almost all subsequently nationally registered cases of CRC referred to them and has done so at an early stage of the disease process. Evidence from the clinical cases reviewed by the auditors of this report, however, has found cases which appear to have met the local guidelines and yet been refused access and/or in which access has been unduly delayed by the process. Certain access criteria appear to have been applied too rigorously and to have denied access to colonoscopy or CT colonography for cases that might well have been accepted on the grounds of specialist clinical judgement.

The National Guidelines were designed to prioritise endoscopy referrals by GPs and non-GI specialists. Two of the authors of these guidelines have confirmed that this is still their intended purpose. With the SDHB, as with some other DHBs, their guidelines have become a solitary route of acceptance for all referrals and are now functioning as rationing tools. This change of purpose is based on the claim that the approach produces better equity (without specifying whether this relate to access or outcomes), when in fact it is a pragmatic solution to the dilemma of how to manage a needed but underfunded resource. This approach, however, raises national clinical, ethical and medico-legal issues.

The auditors propose that, in the first instance, the declared purpose of the National Guideline be reinstated. In this way, patients who are refused a colonoscopy on the basis that they do not meet the local guidelines can, if they and their medical attendants concur, seek a First Specialist Assessment with a GI specialist who can arrange for, or perform, a colonoscopy or CT colonography if they consider either to be clinically indicated. This approach restores one option for patients who cannot afford private healthcare, and would otherwise go without investigation; it also allows GI specialist physicians and surgeons to exercise the clinical judgement and endoscopic expertise, for which they were trained and employed. The SDHB should raise the national issues outlined in this report at their regular national Chair's and CEO's meetings.

As far as the other aspects of the SDHB access guidelines are concerned, the audit raised concerns about the ability of some specific factors to predict accurately whether or not a colonoscopy or CT colonography is needed. This was particularly so with: (i) ferritin levels as absolute indicators of the presence or absence of iron deficiency anaemia; (ii) recurrent or persistent rectal bleeding of unknown cause; (iii) any disturbance of bowel habit for over six weeks; and, (iv) the lower age limit of 50 years. The appropriateness of these and other specific access criteria should be referred back to the authors of the National Guidelines for their consideration. The use of national guidelines is being currently monitored in terms of total numbers of colonoscopies and waiting times for differing levels of urgency. They should, however, also be the subject of an ongoing health safety and cost-effectiveness review.

Finally the auditors recommend that a local review be done in one year to assess what progress has been made in achieving the recommendations of this audit report.

1. THE AUDIT PROCESS

1.1 BACKGROUND

Auditors A1 and A2 were asked to review complaints about the endoscopy services in Southern District Health Board (SDHB), which had been raised by the surgeons in Southland for about 5 years. These are specifically related to restricted access to colonoscopy services and continually deteriorating relationships between the senior clinicians at Southland Hospital and the staff of the Gastroenterology Department (GD) at Dunedin Hospital. The two auditors were asked to undertake the audit in a letter from the CEO and CMO of SDHB dated 25th September 2018.^{Appx A} Terms of reference for the audit were revised several times. The last version was received on 27th November 2018, after the audit interview process had started, and were at variance with the requests outlined in the CEO and CMO letter.^{Appx A} They were never finally agreed to by either of the auditors.

There is some public concern about the difficulties in accessing colonoscopies and, as evidenced by media reports, this concern is not localised to the SDHB region.^{1,2} A1 and A2 are concerned about the recent leaking of a letter of complaint from some of the surgeons at Southland Hospital to the CEO of SDHB,³ the motivation for such activity and the implication this might have for whether the strict confidentiality of this report will be respected.^{Appx L1}

1.2 ROLES OF AUDITORS A1 & A2

A1 was involved in all aspects of the audit. A2 evaluated the 20 audited cases, contributed to the audit of the SDHB's 'Colonoscopy & CT Colonography Indications of Symptomatic Patients & Surveillance of Groups at Increased Risk' Local Guidelines (LGs)^{Appx B} and to editing of the draft version of the report. An Administrative Assistant (AA) was employed by SDHB to help the auditors with all the administrative work. In view of the potentially large subject to be covered, the short timeframe for the audit and the limited resources available for the work, the auditors decided at an early stage that they would focus on the problems associated with the colonoscopy service.

1.3 EARLEY PROGRESS OF THE AUDIT

All aspects of the audit took unreasonably large amounts of time to complete. The reasons for the multiple delays in obtaining information and fact checking could not be ascertained with any degree of certainty but were a source for increasing concern to A1 and A2.

A1 was initially approached and asked for his help by some of the surgeons at Southland Hospital in August 2016. At that stage, there were supposed to be 20 cases that had been referred for colonoscopy, which had been declined or delayed and reputedly had adverse clinical outcomes. By the start of the audit process, in September 2018, the number of disputed cases had risen to a starting list 78. Then, during the audit in November, a further 23 new cases of reportedly high concern were added by the Southland surgeons.

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Getting complete clinical records for the audited cases of the required standard for a comprehensive evaluation was very slow, in spite of extensive efforts on the part of the AA. A1 and A2 therefore decided on 26th November to limit the number of audited cases to 20 (6 from the starting list of 78 and 14 from the 23 new cases added). Although A1's attention was drawn to some other cases of concern during the subsequent interview process, these were not included in the audit in order to avoid further frustrating delays.

While the clinical cases were being compiled for analysis, two other parts of the audit were undertaken: (i) letters were supposed to be sent out to the other 19 DHBs asking about their colonoscopy processes: and (ii) interviews of relevant staff were undertaken.

1.4 LETTERS TO THE OTHER 19 DHBS (Appx C)

On 11th October 2018, a letter was sent from the Executive Director of Specialist Services, SDHB. This was supposed to go to his counterparts in the other 19 DHBs asking the following questions:

- What triage or guideline tool (processes) do you use for elective outpatient colonoscopy access?
- Are there different tools (processes) used for GP and specialist referrals; please describe and provide a copy of the relevant forms used for each process?
- Is clinical overriding of processes acceptable in specific cases and how is this applied?
- Please can you let us know the numbers of referrals that are declined and accepted monthly from July 2016 to June 2018?

Unfortunately, for reasons that are inexplicable to the auditors, SDHB management staff only sent the letter to South Island DHBs. A1 was informed of that fact by email on 15th January 2019. It transpires, however, that a letter dated the 11th January 2019 was sent to all the North Island DHBs asking them to answer the four questions.

1.5 FINAL AUDIT REPORT FOR SDHB

The draft report was presented by A1 and A2 to the Acting Commissioner, Chief Executive Officer and Chief Medical Officer of SDHB at a meeting in Christchurch on 28th March 2019. The SDHB distributed the draft report to interviewees and other interested parties on or about the 4th April. These recipients were given three weeks to respond to the draft report; four interviewees did so. The response from [G] is attached.^{Appx E3} A1 and A2 were asked to take into account any indicated factual errors in the draft report in completing their final report. All information identifying individual was redacted from this final report. It was sent to SDHB on 10th May 2019.

2. CONCERNS ABOUT SDHB COLONOSCOPY SERVICE

2.1 INTERVIEWS OF RELEVANT STAFF IN SOUTHLAND AND DUNEDIN

These interviews were undertaken with the objectives of answering the following questions:

- What the problems are with the endoscopy service?
- When these problems started?
- How they developed?
- What has been done about them?
- What is needed to resolve the problems?
- How to ensure they don't recur?

Interviews were conducted by A1, with the AA present to assist with documentation. At the beginning of each interview the following points were explained to the interviewees: the purpose of the audit to listen and tease out the issues; to try to facilitate lasting solutions; the strict confidentiality of the process and the report; and that no names would be mentioned in the audit report. At the end of each interview it was explained that the interviewees could subsequently supply further information if they wished. Notes were taken of all face-to-face interviews by AA and retained by both AA and A1.

There were two exceptions to this standard interview format as follows:

- (i) For the three interviewees who either could not attend a scheduled face-to-face interview session, or from whom further information was proffered or sought, a telephone interview was conducted and written up by A1.
- (ii) One interview was interrupted when the A1 and AA noticed by accident that the interviewee was secretly recording the interview on an electronic Dictaphone. When challenged, the interviewee said they had the permission of the SDHB to make the recording. They then said they had erased the recording. There was no way for A1 to verify either of these claims, and the nature of the recording was considered by him to represent a breach of trust. The interview was therefore terminated. The interviewee subsequently give further evidence by email on 9th January 2019.^{Appx E1,2}

Notes from all the interviews were subjected to thematic analysis by A1 for the purpose of drawing general conclusions.

2.1.1 RESULTS OF INTERVIEWS AT SOUTHLAND HOSPITAL INVERCARGILL

On 27th November at Southland Hospital face-to-face interviews were done with one gastroenterologist, three surgeons, one physician, two service managers, and one local GP. On 7th December another Southland GP was interviewed by telephone. On 10th December a Southland physician was re-interviewed about some cases of concern.

THEMES IDENTIFIED IN SOUTHLAND INTERVIEWS

- **Steps taken to deal with previous colonoscopy waiting list backlog**

Most interviewees agreed it was necessary about five or six years ago to deal with the large backlog of cases that had accumulated under open access colonoscopy, and that this was done successfully. However, one clinician thought the backlog was more of a problem in Dunedin than in Southland.

Most thought since then there has been an increasing problem with the colonoscopy service in Southland and a progressive deterioration in relationships between specialists in Southland and those in the GD in Dunedin. [REDACTED]
[REDACTED]

- **Patients refused elective colonoscopies have had bad outcomes**

The original starting list of 78 cases submitted by the Southland surgeons for audit included claims of: cases with missed or delayed diagnoses; those with delayed colonoscopies that met guideline criteria; cases with specialist surgeon override; cases declined due to age; and with communication issues. A subsequent 23 new cases considered of high priority were added by the Southland surgeons during the course of the audit.

Some interviewees said cases refused colonoscopy sometimes manage to get into the system by another route, with resulting unnecessary delays, poorer outcomes and cost shifting to other services.

- **Guidelines for Access to Elective Colonoscopies**

(i) Nature of Guideline: The Southland surgeons contended that the national guidelines (NGs) were designed to cover open access referrals from GPs and hospital doctors without a GI specialty interest and not to cover GI specialist referrals. 'There should be a specialist referral override pathway to deal with clinical contingencies'. The surgeons presented emails from two of the authors of the NGs who agreed they were meant to relate to GP and non-GI specialist referrals only.^{Appx F}

(ii) Implementation of Guidelines: The local guidelines (LGs) for SDHB are different to the NGs in that they apply equally to referrals from all sources. Some interviewees thought the rationing process was being implemented too strictly in SDHB – 'they are guidelines not rules' and 'there are many case in the Grey Zone' (patients who failed to meet the LGs but still might benefit from a colonoscopy). The surgeons thought the triage process in Dunedin doesn't work well for them.

- **Plan to take over Southland endoscopy service by Dunedin Gastroenterologists**

[REDACTED]
[REDACTED]
[REDACTED]

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[REDACTED]

The Endoscopy User Group (EUG) is dysfunctional. Surgeons are allowed only one representative, meetings are arranged at inconvenient times, and Southland surgeons are not welcome at meetings.

Disparity in how surgeons and gastroenterologists train junior staff to do endoscopies causes difficulties.

- **Interference in management of Southland specialists' cases**

Some cases have of necessity been sent to other DHBs for endoscopies.

Sometimes surgeons have not been allowed to do preoperative colonoscopies on their patients.

[REDACTED]

Physicians described cases, which they believed needed endoscopies on clinical grounds but were refused.

- **Communications and inter-professional relationships**

There is a state of 'inter-service warfare'.

[REDACTED]

Gastroenterologists sometimes agreed to do a colonoscopy over the phone, then didn't. Gastroenterologists have raised community concerns about the need for colorectal cancer (CRC) population screening. This has had consequences for other clinical services. GPs are uneasy about numbers of cases refused colonoscopies and then the referrer is blamed when things go wrong.

- **Previous management Initiatives to resolve issues**

'Many services run from Dunedin are good. This one is different'.

There have been a least two serious attempts by management to resolve the problems.

All have been failures, for example the dysfunctional EUG.

As one interviewee said 'Another attempt to cosy up won't work'.

Opinion: Most of the interviewees showed signs of distress and some were on the verge of tears. A1 concluded that these people cannot be working to their full potential. The strength of feeling expressed in these interviews made the auditors aware that the underlying issues were much more serious than they had anticipated.

2.1.2 RESULTS OF INTERVIEWS AT DUNEDIN HOSPITAL

On 13th December at Dunedin Hospital face-to-face interviews were done with two surgeons, two service managers, two gastroenterologists, one local GP, one medical director, one physician, and one nurse specialist. On 11th December another Dunedin surgeon was interviewed by telephone.

THEMES IDENTIFIED IN THE DUNEDIN INTERVIEWS

- **Quality of Endoscopy Service**

‘There have been problems but Dunedin clinicians are more circumspect about them.’ The tensions have been less than in Southland because: (i) some local referral guidelines were in place in Dunedin before it happened in Southland; [REDACTED] (iii) colorectal surgeons have their own regular endoscopy lists and have some limited say on what cases they do; (iv) they have a representative on the Review Panel that deliberates on cases initially declined for colonoscopy. [REDACTED]

An example of failure of full cooperation is the introduction of the new rectal bleeding clinic. This uses flexible sigmoidoscopy and has not been allowed to be set up in the Endoscopy Unit. It is in the Day Surgery Unit, which is inconvenient.

The endoscopy service is adversely affected by:

- Inadequate resources – only 5 or 6 extra nurses would be needed to fully open another endoscopy room.
- A programme to train nurse endoscopists takes up a lot of limited resources.
- Access to colonoscopy services has declined since the National Bowel Screening Programme (NBSP) started.
- [REDACTED]
- Under-resourcing of other clinical services has flow on effects.

Management have been aware of the problems in the GD for years. A SurveyMonkey survey of endoscopy users’ views was mentioned by some interviewees.

- **Colonoscopy Referral Triage Process**

A referral for colonoscopy is allotted to the Triage Nurse. If it is initially declined, it goes to the Review Panel. Here it is first seen by a Dunedin gastroenterologist and if declined again it goes to another member of the panel. For Dunedin cases this is a local surgeon with a GI specialist interest; for Southland cases it is another Dunedin gastroenterologist.

Southland surgeons don’t have a representative on the Review Panel, which might put their patients at a disadvantage. Over the same period of time, on second review the acceptance rate was 20/76 for Dunedin cases but only 4/41 for Southland cases. Dunedin surgeons didn’t think it was appropriate to fill in for their Southland colleagues.

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Concerns about the process are: (i) It should be possible for the Review Panel to be overruled if a specialist has remaining concern; (ii) if cases were read separately, then any differences discussed, there might be more confidence in the process; (iii) there is concern over the possibility that some cases might be rejected before they are registered for triage and that this might happen quite frequently; and (iv) not all Dunedin gastroenterologists serve on the Review Panel.

- **Triage Guidelines**

Some thought they have brought greater equity, are working fairly well and research by a local registrar indicates that not many CRCs have been missed. They are, however, applied very rigidly and inflexibly. We need to introduce a 'less perfect set of criteria' but 'without opening the floodgates'. Future research might facilitate this balancing act.

Statistics from the GD indicates 86% initial acceptance of referrals for colonoscopy by the nurses, 4-5% accepted for an alternative procedure (*e.g.* CT scans), and the remainder going to a second review.

- **Management Style within the Department of Gastroenterology**

[REDACTED]

There are, however, problems:

- [REDACTED]
- [REDACTED]
- [REDACTED]
- 'Is a change agent not a person manager' and 'is focused on numbers not quality metrics'.
- Letters are 'blunt and rude' and need to be censored to ensure respect, but have been milder and more helpful recently.
- Uses management routines, including incident reports, as a communication channel. Justifies this as being perceived 'as not out to get them' but rather as 'getting alongside'.
- Some interpersonal relationships within the GD are very strained and a staff member recently resigned.^{Appx L2} There are concerns these strains could adversely affect staff recruitment.
- There have been no Senior Medical Officer (SMO) staff meetings for years.
- The specialist staffing levels and the rates of some GI procedures are both low by national standards.
- [REDACTED]
- There is a personal agenda. The Endoscopy Unit comes first but this is being achieved 'on the backs of others' and is not the organisational view. There is 'no joined up view of what we want'.

- [REDACTED]

[REDACTED] has been keeping a Key Performance Indicator (KPI) based performance table on endoscopists

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and some surgeons have been unaware of this fact. The feeling is that whilst some referral guidelines are needed, with the current documentation and processes, the surgeons must pick up the pieces. [REDACTED]

Furthermore the lack of trust and poor relationships cause delays to treatment.

A particular concern for the surgeons is the possibility of loss of training board accreditation for Dunedin General Surgery registrars in colonoscopy due to lack of training opportunities. This compares unfavourably with the good training opportunities available to local Gastroenterology trainees and nurses. The problem could be alleviated if another endoscopy room was brought into full service.

[REDACTED] they are not coordinating referrals properly; there is insufficient oversight of the junior staff making referrals; the on call roster handover is not done properly; and how the acute general surgery roster is organised in Southland makes arranging an endoscopy roster difficult.

- **Solutions**

The organisation's overall agenda needs to be defined and the agendas of the different services brought together to achieve the overall agenda. The agenda for the GD should be part of the plan and the LGs also tailored to fit the overall agenda. No one service should be working at the expense of any other, and entrenched positions result in the system failing some patients.

There are various ways the LGs could be altered:

- They need to restrict access but define who would benefit *i.e.* not missing those in the 'Grey Zone'.
- Relaxation for GI specialists who need access to colonoscopy for their work.
- Perhaps different guidelines are needed for inpatients.
- Could control of the peripheral site be staffed separately?
- Some specific aspects of the current guideline practice could be evaluated *e.g.* the absolute dependence on a low ferritin level to define iron deficiency anaemia.
- If the Review Panel is retained, the Dunedin surgeons could support a new Southland representative.
- Perhaps Safety First (Incident Management System) could be used as an audit tool to log patients declined or of concern.

All involved services need their resourcing reviewed. Fully resourcing another endoscopy room, better access to elective operating theatres, and increase time for endoscopy training should be considered.

Work is needed on relationships and interpersonal communication. Rules of behaviour are required, with a communications facilitator to work through the differences. [REDACTED]

[REDACTED] GPs especially need

better written advice on how to manage declined cases. [REDACTED]
[REDACTED]

Opinion: A1 concluded that some of the interviewees showed some signs of stress but much less than their Southland colleagues. There was general dissatisfaction with the level of available resources for clinical services but little interest in advocating for the unmet need.

2.2 SURVEYMONKEY SURVEY (Appx D)

In 2017 the SDHB GD arranged for a SurveyMonkey survey of the views of SMOs who use the endoscopy services provided by the GD. The results were distributed as a confidential report back to users in June 2017. The eight questions asked, the numbers of responses and a précis of the comments are given in the summary Table 2.2.

There was a wide spectrum of views on the quality of the service. Some common themes were present in the comments made including: problems with the quality and nature of communications with the GD; concerns about how patients who failed to meet the strict LGs but were in the 'Grey Zone' should be managed; issues with some specific triage criteria, particularly ferritin levels; the different needs for children and adolescents; and the need for bowel screening, given the high regional incidence of CRC. Of particular concern was the 32.4% of respondents who indicated they were aware of patients they thought had come to harm as a result of having a referral for endoscopy declined. The results of this survey confirm that the SDHB management were aware by June 2017 of serious concerns about the endoscopy service among its group of referring SMOs.

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Table 2.2 : Summary of Confidential SMO Endoscopy Feedback Survey of Referrers by SDHB Medical Directorate. June 2017. Res = number of responses out of 82; No. = number of comments Main Comments are a precise of main issues raised.				
Question	Res	% Yes Answers	No.	Main Comments
In the last six months have you requested either a gastroscopy or colonoscopy from Southern DHB?	82	64.6%		N/A
Were you aware of the criteria that we used to prioritise the referral?	52	63.5%		N/A
Were you aware of the information that we need to be able to effectively prioritise your referral?	44	70.5%	8	Ferritin level problem; more specific information on forms; problems with referral forms
If your referral was accepted how long, on average, did your patient have to wait for their procedure	39	<2 wks 10.3% <4 wks 5.1% <6 wks 15.4% <8 wks 18.0% >8 wks 2.56% Don't know 48.7%		N/A
If a referral was not accepted did you receive adequate explanation as to the reasons why?	38	44.7%	21	Grey Zone cases; some cases need discussion; poor feedback sometimes rude; some delays; some cases declined incorrectly
Are you aware of any patient that has come to harm as a direct result of a procedure that was not accepted when all relevant information was supplied?	37	32.4%	15	Some communication issues; delayed diagnoses of malignancy and IBD
Are you satisfied with the service that is provided?	43	37.2%	27	Some in Grey Zone & need discussion; criteria too restrictive; inpatient referral problems; children & adolescents need separate criteria; bully & rude; Fe deficient anaemia; triage system not for all referrers; more bowel screening
Do you have any general comments with regard to the endoscopy service at Southern DHB?	42	N/A		Wide ranging from complimentary to derogatory comments

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3. EFFECTS OF SDHB LOCAL COLONOSCOPY GUIDELINES

3.1 EVIDENCE FROM CASE AUDITS

For each of the twenty cases to be audited, AA produced a PDF file containing as many relevant documents as possible. Some of these documents were difficult or impossible to trace. A1 and A2 then reviewed the files independently and produced consensus opinions for each case depending on whether the LGs had been applied correctly, and whether any undue delay had occurred in the clinical management.

3.1.1 Findings

Table 3.1.1 : Summary of Results for 20 Audited Cases. N = Patient number (confidentiality code maintained by AA); G = Gender; Age = at first relevant review by GD; LGs = Local Guidelines; WL = Colonoscopy waiting list; CTC = CT Colonography						
N	G	Age	Reason(s) for referral for Col/CRC	Reason(s) given why Col/CRC delayed or deferred	Delay in diagnosis or Treatment	Comments
1	F	71	PR bleeding	Was on old Southland WL. When LGs introduced told she waited so long sinister pathology unlikely	3½ years	Surveyed & said she wished to stay on WL but removed. Later re-referred successfully
2	F	74	PR bleeding	Said not to have met LGs on first GP referral	10 months	Met LGs on 2/3 rd referral so should have been put on 6 week priority B WL
3	M	69	Altered bowel habit	Initial referral details said to be incomplete	5 months	Initial referral shows he met LGs for priority B WL
4	M	74	Rectal bleeding	Two GP referrals to GD declined	3 months	Met LGs for priority B on second GP referral
5	F	86	Persistent Fe deficient anaemia	Said did not meet LGs for Fe deficient anaemia	5 months Had private CTC	Had documented recurrent anaemia & Fe deficiency
6	F	87	Altered bowel habit & abdo pain	Did not meet LGs – Had constipation		Had private CTC
7	F	65	Abdo mass & Fe deficient anaemia	CT ordered instead		Satisfactory management
8	F	71	Persistent Fe deficient anaemia	Did not meet LGs – Ferritin level. Sent via CT route		Satisfactory management
9	F	62	Abdo pain, altered bowel habit, anaemia, PR bleeding, sigmoid thickening on CT	Non-urgent priority B		A possible 2 month delay in making the referral for endoscopy
10	M	89	Weight loss, anaemia & melaena – 2 referrals	Did not meet LGs. 1 st time - Ferritin level. 2 nd time - weight loss only reason given		

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11	M	71	Anaemia possibly Fe deficient – two referrals	1 st Said not to meet LGs as Fe deficiency perhaps uncorrected. 2 nd referral accepted priority B WL	Some months	
12	F	82	PR bleeding & altered bowel habit	Did not meet LGs – (2 weeks of symptoms)		Diagnosed by private CTC
13	M	71	Persistent possibly Fe deficient anaemia	Did not meet LGs – Ferritin level	4 months	
14	M	81	Altered bowel habit & +ve FOBs – 2 referrals	1 st time did not meet LGs. 2 nd time said didn't met LGs but did meet them priority A	7 months	Diagnosed by private colonoscopy
15	M	78	Altered bowel habit & PR bleeding		CTC delayed for 1 year	Reasons for problem should be investigated
16	M	76	Recurrent GI bleeding. Polyps & angiodysplasia	Adequate reason existed for the bleeding. Was capsule endoscopy done?		Management satisfactory but records incomplete
17	F	79	Anaemia & altered bowel habit			Management satisfactory
18	M	65	Altered bowel habit & abdo pain	Referral declined but sent via GD clinic & given priority B	10 months	
19	M	90	Altered bowel habit – 2 referrals	1 st declined not meeting LGs. 2 nd CTC organised	9 month	1 st referral did meet LGs. Perhaps age was a factor
20	M	72	1 st Rectal bleeding & anaemia; 2 nd for 3 year follow-up after CRC resection			Both in accordance with LGs

3.1.2 Case Summaries and Opinions on Management

Patient 1 was on the old Southland waiting list for colonoscopy for rectal bleeding in May 2011. When this list was reviewed, and the new LGs introduced, the patient was surveyed and, apparently, indicated they wished to remain on the waiting list. Their name was, however, removed in March 2013 because it was thought they had been waiting so long that sinister pathology was unlikely. They re-presented with rectal bleeding, diarrhoea and abdominal pain in October 2014. A rectal tumour was seen on rigid sigmoidoscopy and confirmed on colonoscopy in November. They had a HALS anterior resection in March 2015 for Stage 1 adenocarcinoma. A request for follow-up colonoscopy was declined as they would be over 75 years old in 3 years.

Opinion: If this patient stated that they wish to remain on the waiting list, they should not have been removed without a further clinical evaluation. Colonoscopy was delayed for over 3 years, most of which was due to the length of the old waiting list. The patient was re-referred, accepted and diagnosis made without delay. The 3 year follow-up decision was according to the LGs for postoperative CRC surveillance.

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Patient 2 was only having unexplained rectal bleeding for two weeks when first referred for colonoscopy in February 2013. However, two subsequent GP referral letters showed the bleeding was persistent and the patient was accepted for colonoscopy April. Colonoscopy in March 2014 showed a sigmoid adenocarcinoma. In July 2014 a laparoscopy showed extensive intraperitoneal disease with omental nodules. The tumour was not resected. The patient was referred for palliative chemotherapy.

Opinion: Having met the LGs (Unexplained rectal bleeding - benign anal causes treated – age over 50 years) the patient qualified for priority B in April 2013 and therefore should have had a colonoscopy within six weeks. There was a 10 month delay in reaching the diagnosis.

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Patient 3 was first referred for colonoscopy in January 2015. This was declined as it was said the information was incomplete. A second referral in February was declined but a GD First Specialist Appointment (FSA) was arranged. Then, in June, they were referred for colonoscopy, priority B1, on the grounds of iron deficient anaemia (apparently seen on a blood test in January) and a polyp seen on sigmoidoscopy. In October a colonoscopy showed a partially obstructing adenocarcinoma of sigmoid. In November a CT showed spread to the bladder and liver. At operation in December a laparoscopic loop colostomy was formed and bilateral ureteric stents were place because of the ureteric obstruction, then palliative chemotherapy was arranged.

Opinion: The first referral letter (17/01/2015) showed the patient met the LGs (altered bowel habit – more frequent and/or looser stool for over 6 weeks – age over 50 years) for priority B waiting list and should have had a colonoscopy within six weeks. Colonoscopy was delayed for 5 month.

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Patient 4 was referred twice by their GP for colonoscopy for rectal bleeding in 2014. Both were declined because of insufficient information. The patient was then referred by their GP to a Southland surgeon who arranged investigations. In November a CTC showed a large non-obstructing rectal lesion and no evidence for nodes or metastases. A flexible sigmoidoscopy showed a broad based fungating rectal adenocarcinoma and a small tubular adenoma in the descending colon with low grade dysplasia. MRI and CT staging showed some iliac nodes and suspicious basal lung nodules. In discussion with Oncology, short course radiotherapy given. In January 2015 a rectal tumour was resected by HALS low anterior resection and loop ileostomy. In February at a Multi-Disciplinary team Meeting (MDM), because of poor response to radiotherapy, adjuvant chemotherapy was arranged, and CT surveillance for lung lesions recommended. In June 2017 a request was sent for a surveillance colonoscopy in three year after the resection.

Opinion: On the basis of the second GP referral letter (8/08/2014) the patient met the LGs (unexplained rectal bleeding – benign anal causes treated – age over 50 years) for priority B waiting list and should have had a colonoscopy within six weeks. There was a consequent 3 month delay with investigations.

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Patient 5 was under investigation by a Southland physician from November 2014 for heart failure, anaemia, lung disease, back pain and possible renal failure. Their GP was concerned about recurrent iron deficient anaemia and some rectal bleeding. A request for colonoscopy was declined in July 2015 on the basis that rectal bleeding might be due to diverticular disease and no evidence could be found for iron deficiency. In August 2015 the patient had an acute hospital admission with GI bleeding and diarrhoea. They were seen by a Southland surgeon in private practice in November 2015 with a possible abdominal mass. In December 2015 a private CTC showed ascending colon thickening consistent with cancer. The patient went on to have a right hemicolectomy for an adenocarcinoma of the ascending colon in March 2016.

Opinion: The referral in July 2015 should not have been declined on the basis of no evidence for iron deficiency anaemia. There was documented evidence of this (GP letter 6/11/2014) and a history of recurrent microcytic anaemia. Fortunately, the patient had a private CTC. There was a 5 month delay with diagnosis.

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Patient 6 was referred in April 2016 for colonoscopy with constipation and a family history of bowel cancer. This was declined as they did not meet the LGs. In August a private CTC showed multiple polyps and a possible sigmoid tumour. A flexible sigmoidoscopy in September showed a partially obstructing distal sigmoid tumour. An emergency Hartmann's resection was performed for a nearly obstructing sigmoid adenocarcinoma in September 2016.

Opinion: This patient did not meet the LGs as they had constipation. Fortunately, the patient had a private CTC.

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Patient 7 had abdominal pain, weight loss and tiredness in February 2017. In May they also developed an upper abdominal mass and possible iron deficient anaemia, and were referred for a colonoscopy. An abdominal CT was arranged instead. This showed an advanced left sided transverse colon mass with widespread intraperitoneal metastases. In June 2017 a palliative transverse colectomy and resection of some metastatic deposits was performed. They went on to have palliative chemotherapy.

Opinion: This case was managed according to the LGs.

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Patient 8 was referred for gastroscopy in June 2016 for upper GI discomfort, low ferritin, raised CRP, and slight weight loss. This showed low grade oesophagitis and the GP was advised to refer for colonoscopy if anaemia persisted. The GP referred the patient for colonoscopy in December 2016 on the basis of microcytic hypochromic anaemia, a slightly reduced ferritin and slightly raised CRP. This was declined on the basis that ferritin was being maintained and anaemia was probably due to chronic disease. However, a GD First Specialist Assessment (FSA) was organised and occurred in February 2017, when an abdominal CT was arranged. In March 2017 this showed a mass suspicious of a cancer of the right colon. A colonoscopy the same month confirmed a partially obstructing

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tumour of the ascending colon. Referral back was via the Southland GD to the surgeons. Then in April 2017 a right hemicolectomy was performed with curative intent for a Stage II adenocarcinoma.

Opinion: This case was managed according to the LGs.

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Patient 9 was referred to Southland surgeons in July 2017 with offensive diarrhoea and a raised calprotectin. In August they were seen with lower abdominal pain and CT Abdomen & Pelvis was ordered. Then in September further letters from the GP stated stools were looser, black and smelly. There was also developing anaemia, low iron and raised CRP. A CT showed thickening of sigmoid. In October 2017 a Southland surgeon recommended flexible sigmoidoscopy at least to view the suspicious area. In December the Southland surgeon requested urgent flexible sigmoidoscopy or colonoscopy (saying he had referred for a flexible sigmoidoscopy in September). In December the referral was triaged as priority B. In February 2018 a colonoscopy showed a circumferential mass in the proximal sigmoid. A sigmoid resection was performed for an adenocarcinoma in March 2018.

Opinion: The initial referral letter (GP referral letter 13/07/2017) described a 7 month history of explosive diarrhoea. On that basis the patient met LGs (altered bowel habit – more frequent and/or looser stools for over six weeks – age over 50 years) for priority B waiting list and should have had a colonoscopy within six weeks. There was, however, no significant delay in making the diagnosis.

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Patient 10 was referred by their GP for colonoscopy in February 2015 because of weight loss, anaemia, previous colonic polyps and a normal ferritin. Instead an FSA with a Southland physician was organised for April where a CT abdomen was ordered. This showed splenomegaly and bladder wall thickening, so he was referred to Urology. Cystoscopy in September 2015 showed no abnormality. In March 2017 the patient was referred back to the Southland physician with constipation, abdominal discomfort, continued weight loss, anaemia treated with iron, and now dark motions. A colonoscopy referral was again refused in March saying the only symptom was weight loss. In May a letter from Medical outpatients to the GP said the patient had weight loss, decreased energy, constipation, black stools, and abdominal pain. A repeat CT scan was ordered. This was done in June 2017 and showed splenomegaly and narrowing of the ascending colon.

An urgent referral for a colonoscopy was made in August from a Southland surgeon and then a second referral was made by a Southland physician in September. The same month a letter from the GD said colonoscopy will be done by the end of the month (and saying a SafetyFirst Inquiry was initiated into the cause of the delay). The colonoscopy in September showed a malignant tumour at hepatic flexure with stenosis. A staging CT showed no evidence for metastases and a right hemicolectomy was done in October. This was followed by an anastomotic leak requiring surgical repair and ileostomy. The patient died in November 2017.

Opinion: At the time of the first referral there was a normal ferritin level, so they did not qualify as having iron deficiency anaemia. The reason for previous polyp surveillance was not discussed. However, the request refusal was in line with the LGs.

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Regarding the second referral for colonoscopy, refusal was on the basis that weight loss was the only symptom. Again the patient did not qualify for colonoscopy according to the LGs.

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Patient 11 had melaena and a sudden drop in Hb in November 2015 and was referred for endoscopy by a Southland physician. The patient had blood transfusions and iron infusions but continued to be anaemic. A reply from the GD said they were happy to do an endoscopy but questioned whether the iron deficiency had been corrected. This letter has scribbled messages back and forth on it, which are difficult to evaluate. In February 2016 a gastroscopy detected *H. pylori* infection, which the GP was to treat. The patient had a coronary angiogram deferred because of their anaemia. A colonoscopy was again requested. In March this was given a B1 priority. This letter was returned with handwriting on it requesting a more urgent colonoscopy as the patient was waiting for the angiogram. In April the GD responded saying the urgency will not be increased. In May a colonoscopy found a cancer in the ascending colon and multiple other polyps, some dysplastic. In July 2016 an extended right hemicolectomy was performed for a nearly obstructing adenocarcinoma of the ascending colon and a serrated adenoma of the transverse colon.

Opinion: It appears the patient continued to have iron deficiency anaemic after the iron infusion and blood transfusion (letter 29/02/2016) so it is not clear why they did not qualify for earlier endoscopies. However, they had a gastroscopy in February and a colonoscopy in May of 2016.

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Patient 12 in August 2017 colonoscopy was requested for 2 weeks of PR bleeding and changed bowel habit. This was declined as it did not meet LGs. In September the patient was admitted to Southland Hospital with decreased appetite, increased fatigue, diarrhoea and rectal bleeding, and was diagnosed with a UTI. They were booked for a private colonoscopy. They had a CT colonography, however, in September which showed an annular lesion in the mid sigmoid. In October a referral was made for an urgent flexible sigmoidoscopy, and a Staging CT showed no evidence for metastasis. In October a circumferential sigmoid tumour was seen and biopsies confirmed adenocarcinoma. In October 2017 at surgery the sigmoid tumour was attached to the uterus and so an en-block Hartmann's resection and hysterectomy was performed.

Opinion: At the time of referral for colonoscopy, rectal bleeding and diarrhoea were present for less than 6 weeks, so refusal was in accordance with the LGs.

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Patient 13 was referred in December 2014 for colonoscopy because of persistent asymptomatic anaemia of unknown origin for 4 years. This was declined because the ferritin was normal. In September 2017 the patient was investigated by the urologists because of right sided abdominal pain, problems with self-catheterisation (incomplete paraplegic with artificial sphincter), and faecal loading of lower sigmoid and rectum. In May 2018 the GP made a referral to the GD Southland for urgent assessment of asymptomatic anaemia (Hb 81, ferritin 10, CRP 31), with no known urological cause. In June, two Day Ward admissions were arranged for iron infusions. A gastroscopy showed oesophagitis and duodenitis, and the GP was asked to treat *H. Pylori* infection. The Hb was 104.

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The patient had bladder and sphincter surgery, and recovered in the Spinal Unit at Burwood. In July the GP again referred the patient to the GD Southland for urgent assessment of asymptomatic iron deficiency anaemia with Hb 85. In September colonoscopy showed an ulcerating non-obstructing mass in ascending colon and scattered polyps. An urgent referral was made to surgical outpatients. A staging CT showed mediastinal lymph nodes, and a thickened rectum and rectosigmoid. In October 2018 a sleeve resection of right colon was performed for an adenocarcinoma.

Opinion: There was chronic undiagnosed anaemia that merited investigation but colonoscopy was declined as ferritin was normal. When referred in May 2018 the ferritin was low. On that basis the patient met the LGs (Iron deficiency anaemia – Hb below local reference range with low ferritin level – no urinary loss) for priority B waiting list and should have had a colonoscopy within six weeks. There was a 4 month delay in making the diagnosis.

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Patient 14 in 2002 had a colonoscopy because of a family history of CRC (3 first degree relatives in their 50s) and a history of adenomatous polyps on previous colonoscopies. Then there was only marked diverticular disease. They are said to have had a normal colonoscopy in 2008. In May 2013 the patient was referred for colonoscopy because of two months of altered bowel habit and positive faecal occult bloods. In June the request was declined but an FSA was arranged. In December the patient was seen in the GD Southland outpatients with increased diarrhoea but no rectal bleeding, some abdominal pain and fatigue, and occasional strangury. Blood tests were ordered. In January 2014 a CTC showed a left renal cyst, gallstones, diverticula of descending colon and sigmoid, with some thickening of the latter. The GP was reassured and outpatient follow-up was arranged.

In August 2014 the GP wrote back to GD Southland saying the patient had urgency and was passing mucus and blood. In November a reply from Medical outpatients said symptoms were much worse, with bowels opened every two hours with urgency, some incontinence, and passing of blood and mucus three times a week. Sigmoidoscopy of the lower rectum was normal, and referral for colonoscopy was arranged. In December, the referral was declined because of a normal Hb and a CTC last January that showed uncomplicated diverticular disease.

In June 2015 the patient was referred to a private surgeon with ongoing PR mucus and bleeding, diverticulitis and chronic medical disorders. Colonoscopy showed diverticular disease and a large tumour at 15cm. A CT Chest & Abdomen showed diverticula, gallstones and renal cyst. In August a second request for colonoscopy was declined as two previous CTCs had not shown any obstructing lesion of the left colon; there were hand written notes on a referral form about technique. In March 2016 a letter from a Southland surgeon to the GP was about ongoing symptoms and the mass seen on rigid sigmoidoscopy, which was too large for endoscopic removal, so surgery was planned. In April 2016 the patient had a HALS anterior resection for adenocarcinoma of the rectum.

Opinion: Increasing symptoms were recorded in December 2013. A CTC was misleading, but by November 2014 there was severe diarrhoea, faecal urgency, some incontinence, and rectal bleeding with mucus. On this basis the patient met the LGs (altered bowel habit and rectal bleeding – more frequent and/or looser stools for over six weeks – age over 50 years) for priority A waiting list and should have had a colonoscopy within two weeks. It was declined because the Hb and ferritin were normal and the CT showed diverticular disease. The patient was able to afford a private colonoscopy

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which showed a rectal cancer. There was a delay in diagnosis of 7 month. A completion colonoscopy was refused.

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Patient 15 was referred to General Surgery Southland in June 2016 with sudden onset of constipation and lower abdominal pain, which settled with laxatives, then returned. In surgical outpatients in November the patient was passing 3 small hard bowel motions a day with difficulty and with fresh blood on the motions. They were referred for a CTC. In September 2017 they were seen again in surgical outpatients, with symptoms as before. The CTC was not done and so was reordered. It was done in November and showed an annular sigmoid lesion and at least one hypodense liver lesion. In December a colonoscopy was requested. A flexible sigmoidoscopy was performed, at which the lesion was seen in the mid sigmoid.

The patient was not thought fit for surgery because of aortic valve stenosis. Therefore in February 2018 the GD arranged an endoscopic placement of colonic bridging stents across the sigmoid lesion to avoid imminent obstruction. An aortic valve replacement was then performed. This was complicated by a postoperative tamponade but managed successfully. In March a sigmoid resection with colostomy was performed for an adenocarcinoma with liver metastases. The colonic stents were removed in May 2018. The patient had palliative chemotherapy and radio frequency ablation therapy for their liver secondaries.

Opinion: The reasons why a CTC was not done in November 2016 should be investigated. It was finally done in November 2017 after the GP re-referred (letter missing). There was a one year delay in achieving a diagnosis.

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Patient 16 was admitted to Southland Hospital with rectal bleeding in November 2013. The initial Hb 54 increased to Hb 97 after 4 unit blood transfusion. A colonoscopy showed diverticular disease, right colon angiodysplasia, and a sigmoid tubular adenoma. Arrangements were made for a gastroscopy and repeat colonoscopy in 2 years. In February 2014 the gastroscopy showed oesophagitis and duodenitis. In June the patient was admitted with symptomatic anaemia, Hb 56 and again transfused.

In July 2014 a Southland physician asked the GD whether colonoscopy or capsule endoscopy was indicated. In August this was given priority B1. In January 2015 a gastroscopy showed Barrett's oesophagus; colonoscopy showed diverticular disease, angiodysplasia, and hyperplastic polyps. In May the patient was admitted overnight with Hb 68, transfused 2 units and started on iron treatment. In February 2016 a Southland physician informed the GP that capsule endoscopy might be considered. In July the patient was admitted in uncontrolled AF with Hb 101, given an iron infusion and referred back to GD. In August the GD declined further endoscopic evaluations as already done 18 months before, but capsule endoscopy might be indicated if ongoing iron deficiency anaemia despite iron supplements or overt GI bleeding occurred. In October the patient was re-admitted with melaena, Hb 78, Ferritin 13 and transfused. An urgent referral was made to the GD. In December the patient was again admitted with symptomatic anaemia Hb 70, ferritin 11; transfused 2 units and given an iron infusion. (The discharge letter says angiodysplasia was

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diagnosed on capsule endoscopy within last 2 months but there is no other information available on the system.)

In March 2017 colonoscopy was repeated and showed an area of angioectasia which was treated, diverticular disease and an adenocarcinoma at the rectosigmoid junction. A surgical referral was made. In April a staging CT showed multiple lymph nodes of uncertain significance and a possible right renal cell carcinoma. A referral was made to Urology regarding the renal lesion. At an MDM definitive surgery was recommended for the rectosigmoid cancer. Tumour localization was undertaken by endoscopic tattooing. In May a HAL low anterior resection was performed. A CT Abdomen & Pelvis 6 days postoperatively showed a pneumoperitoneum, with uncertainty about the site of leakage. Few details were provided on how this was managed; however, the SDHB timeline says the patient died of an anastomotic leak 9 days postoperatively.

Opinion: The case notes are incomplete, especially around the issue of the capsule endoscopy. However, an adequate diagnosis was established to explain the chronic GI bleeding and anaemia, so management of the cases appears to have been satisfactory.

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Patient 17 was seen by a Southland surgeon in March 1994 with rectal bleeding, abdominal pain and constipation. No abnormality was found, dietary advice given and the patient was discharged from follow-up. In December 2012 they were seen in the GD with abdominal pain, bloating, diarrhoea, and a history of maternal CRC. In February a CTC was arranged as the patient was diabetic. This showed old vertebral fractures but no bowel pathology.

In September 2017 the patient was referred by their GP to the GD for urgent investigation of anaemia (Hb 82 down from 123 seven months before) and increased bowel frequency. A reply from the GD said the referral was taken off the urgent list but put through the colonoscopy triage system. A second GP letter asked for upgrading the urgency as there was a significant Hb drop and bowels were now opened 2 -3 times a day for over 6 weeks, with no other reason for iron deficiency. The GD said the case did not qualify for urgent prioritisation according to NGs. In November a colonoscopy showed an obstructing adenocarcinoma of sigmoid and the patient was referred to Southland surgeons. A staging CT reported a large sigmoid mass in contact with uterus but no definite metastases were seen.

The patient deteriorated at home and was admitted acutely to hospital. A sigmoid colectomy was performed with en-block resection of uterus, adnexa and duplicated left ureter. Histology showed an adenocarcinoma with invasion of adjacent organs. In December, two days postoperatively, a CT indicated an anastomotic leak. This was treated with a laparotomy, abdominal washout and conversion to Hartmann's resection with an end colostomy. It was followed by two further abdominal washout operations, and a complicated postoperative course with multiple sites of infection. In July 2018 the patient had a right basal ganglia infarct with dense left hemiparesis and cognitive impairment.

Opinion: Anaemia and altered bowel habit for over 6 weeks did not meet the LGs criteria for urgent priority but they did qualify for semi-urgent priority B. There was no resultant delay in diagnosis.

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Patient 18 was seen by their GP in June 2015 with 2 years of abdominal pain, 6 watery stools a day, and had one first degree relative with CRC in their 50s. A semi-urgent referral was made to the GD for colonoscopy. In July this was declined but a semi-urgent outpatient appointment was made. In September the GP asked for prioritisation to be reviewed as Hb was down from 131 to 122 with iron 9, ferritin 32. In November the patient was seen in Southland GD outpatients and the colonoscopy referral was given a priority B. In April 2016 a colonoscopy showed obstructing sigmoid cancer.

In May 2016 a staging CT showed a T4 tumour invading the bladder with a colovesical fistula but no demonstrable metastases. A Hartmann's en-block resection was performed, excising the portion of the posterior wall of bladder that included the fistula. Histology showed an adenocarcinoma, which was adherent to adjacent organs and 3 involved lymph nodes. In May the patient was referred to Oncology and to the GD for a completion colonoscopy. At an MDM the decision was to have chemotherapy and an MRI of liver. The MRI showed 3 simple cysts and one indeterminate lesion, but at a subsequent MDM all 4 lesions were considered to be benign and so chemotherapy was approved. In June a referral was sent to the GD for completion colonoscopy. In January 2017 the referral request was repeated. In March the referring Southland surgeon was informed the patient was too unwell for a booked colonoscopy. They were admitted to hospital after collapse with multiple medical problems and died in April.

Opinion: The referral in June 2015 describes a two year history of diarrhoea. On this basis the patient met the LGs (altered bowel habit – more frequent and/or looser stools for over six weeks – age over 50 years) for priority B waiting list and should have had a colonoscopy within six weeks. A semi-urgent outpatient appointment was made instead, resulting in a 10 month delay in diagnosis.

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Patient 19 was apparently referred for colonoscopy in September 2009 for changed bowel habit with thin stools and abdominal pain. In 2009 a colonoscopy is said to have shown diverticular disease. In 2010 there was a TURP. In September 2015 the patient was referred to Lakes Hospital with increase frequency of defaecation, a constant feeling of incomplete rectal emptying, urgency and some faecal incontinence. There was also prostatism and myelodysplasia. A request for urgent colonoscopy was declined but an appointment was made for Southland GD. In outpatients in October, the history was of 6-8 month altered bowel habit, a year of right iliac fossa pain, and constant rectal and lower back pain. They were prescribed Konsyl, restarted on B12 replacement for myelodysplasia and advised to return in 3 months if necessary.

In April 2016 the patient was referred back to the GD with worse bowel symptoms and an indwelling urinary catheter. They were referred for a CTC. This was done in June and showed sigmoid diverticular disease and a prominent ileocaecal valve, of uncertain significance. Inpatient colonoscopy in July showed a non-obstructing adenocarcinoma in the caecal pole. The patient was seen by a Southland surgeon, and planning for surgery commenced. However, in August the patient was admitted to Lakes District Hospital (LDH) with possible urosepsis and transferred to Southland Hospital with melaena and cardiac, renal and respiratory problems. In September 2016 they were discharged back to LDH, kept comfortable and died.

Opinion: The referral in September 2015 described diarrhoea, faecal urgency and incontinence. On that basis the patient met the LGs (altered bowel habit – more frequent and/or looser stools for over

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six weeks – age over 50 years) for priority B waiting list and strictly should have been offered a colonoscopy within six weeks. There was a resulting 10 month delay in diagnosis. The patient's age might have been an understandable factor in the decision making process.

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Patient 20 had a colonoscopy in August 1999 for rectal bleeding. This found some benign polyps and a friable lesion at ileocaecal valve, which showed only non-specific inflammation on histology. In March 2000 they were seen and booked for colonoscopy in 1 year. They did not, however, attend for yearly surveillance colonoscopy appointments twice.

In July 2016 their GP referred them for colonoscopy to investigate right upper quadrant and lower abdominal pain, one rectal bleed and ferritin 9. In August, CTC demonstrated numerous polyps in the rectum and sigmoid, a fungating mass at hepatic flexure, diverticular disease of sigmoid and a gallstone. Colonoscopy was recommended. In September at colonoscopy 7 polyps were removed and a malignant tumour seen and biopsied in proximal transverse colon. A staging CT showed a small nodule in the transverse mesocolon but no other evidence of metastases.

An open extended right hemicolectomy and cholecystectomy was performed. Histology showed one adenocarcinoma and 2 tubular adenomas, one with low grade and one with high grade dysplasias. In October 2017 a requested was made for a repeat colonoscopy in 1 year. In December a response from the GD said surveillance colonoscopy will be in 3 years. In April 2018 a surveillance CT showed para-aortic lymph node, so a PET scan was arranged. This was suggestive of nodal and lung metastases, so palliative chemotherapy was recommended. By November 2018 the patient had developed monoclonal B cell lymphocytosis with CLL phenotype.

Opinion: LGs were followed for both the initial referral and for the first surveillance colonoscopy at 3 years after the extended right hemicolectomy.

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3.1.3 Summary of Opinions

- Eleven cases met the LGs for acceptance for colonoscopy.
- Six cases met the LGs but were refused colonoscopy.
- Four cases did not meet the LGs.
- Ten cases had an undue delay in reaching a diagnosis.
- After referral for colonoscopy, six cases were sent for an initial FSA, with resultant diagnostic delays for some of them.
- In seven cases ferritin levels were factors in the decision making processes.
- One case was assigned a waiting list priority different than they merited.
- In one case documentation was insufficient to conclude the appropriate level of priority.

The number of cases with local advanced disease at the time of initial treatment was a serious concern to the auditors. Access to colonoscopy has been tightly restricted. One solution might be to change or modify individual criteria. This might include some of the following:

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- Rectal bleeding recurring or persisting for over six weeks.
- Recurrent and chronic anaemia of unknown cause despite normal ferritin levels (which is not the gold standard for iron deficiency anaemia).^{4,5}
- Any significant change in bowel habit of unknown cause.
- Lowering the age limit below 50 years old.
- Specific alarm symptoms such as persistent tenesmus.
- Inpatients and pre- or post-operative cases.
- Particular criteria for other specific groups such as: children and adolescents.

Adding to, subtracting from or modifying the existing list of individual access criteria is, however, problematic. Any changes would need to be referred back to the NGs authors for approval or validated locally. This would be a long process and would not address concerns about many cases in the 'Grey Zone'. Furthermore, it would not address concerns by GI specialist physicians and surgeons who need access to colonoscopy to do their work.

3.2 EVIDENCE FROM CORRESPONDENCE WITH OTHER DHBS (Appx C)

There were administrative delays getting responses from the other 19 DHBS to the four questions in our survey asking about their colonoscopy triage processes, whether they are applied as a single route for acceptance or whether exceptions are permitted. By 12th February 2019 it was necessary to close the data acquisition to avoid further unnecessary and frustrating delays. The responses from the DHBS are summarised in the table below and discussed separately.

Table 3.2 : Summary of Responses from DHBS to Questions on their Colonoscopy Triage Processes.				
DHB	Q1. What Triage Tool is used for GP & non-GI Specialist referrals?	Q2. What Triage Tool is used for GI Specialist referrals?	Q3. Is specialist overriding acceptable in specific cases?	Q4. Numbers of referrals accepted / declined July '16 to June '18
BOP	Based on National		Yes – reviewed at weekly mtg.	Data only captured by service
Canterbury	National Guidelines 2015	National Guidelines		Accepted 9,441 Can't provide declined
Capital Coast	National Criteria	National Criteria	Yes as per clinical judgement	~250 / month, 170 accepted
Counties-Manukau	National	Paper referrals	yes	Accepted – 580 Declined - 63. Data only captured by service

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Hutt	National Guidelines	National Guidelines	Yes for: some inpatients; pre- or post- bowel surgery; or diagnosis or management of inpatients	Accepted 3,374 Declined 45
MidCentral	National Guidelines with variation to 'persistent' rectal bleeding	National Guidelines with variation to 'persistent' rectal bleeding	yes	Estimate 110/week 30-40 accepted 20 to clinic 30 to gastroscopy Rest declined ~20
Nelson-Marlborough	National Guidelines	National Guidelines	Yes, with approval from Clinical Nurse Co-ordinator & Clinical Lead/HOD	
Southern	National Guidelines	National Guidelines		Accepted 1398 Declined 176
Taranaki	National Guidelines	National Guidelines	NA	
Waikato	Based on National Guidelines	1. Scoping surgeons can book directly onto lists. 2. Non-scoping surgeons, other specialists, & GP all triaged the same	yes	
Waitemata	National Guidelines	National Guidelines		Data only captured by service. Accepted 10593 Declined 1411
Whanganui	National Guidelines	Internal referral form	Yes at consultants discretion & GPs encouraged to provide additional information	Accepted 2034 Declined 3

Twelve of the 19 DHBs answered the survey although not all 4 questions were answered by all participants.

Question 1: All said they use the NGs to triage referrals from GP and non-GI specialists but two indicated they employ some modification(s):

- One specified rectal bleeding must be 'persistent'.
- Another stressed that these are 'guidelines not compulsory rules'.

Question 2: All but one uses the NGs to triage referrals from GI specialists but:

- Some vary in whether the process is electronic or mixed with paper referrals.

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- One specified having two separate triage streams: one allows surgeon endoscopists to book cases directly onto their lists; the other stream has the same NGs triage process for referrals from everyone else.

Question 3: Eight of the 12 listed or discussed some form of clinical override for specific cases:

- This was mostly in the form of a weekly meeting to discuss declined cases that were contentious in any way in order to reach consensus. In some of these cases additional information was requested or an FSA was arranged.
- One DHB said they have specific override provisions for: some inpatients; pre- or post-op bowel surgery; or diagnosis or management of inpatients.

Question 4: Some data on acceptance and decline rates for the year July 2016 to June 2018 was provided by eight DHB. Most of these questioned the quality of the data by saying the system only collects overall numbers of endoscopies and some even include outpatient clinic numbers. They could not separate the colonoscopy subset. It is therefore unlikely that these data are reliable.

3.2.1 Discussions with New Zealand National Gastroenterology Authorities

In order to further investigate the national situation regarding the use of triage tools for access to colonoscopy services, A1 corresponded by email and/or telephone with: The President of the New Zealand Society of Gastroenterology and Clinical Lead of the National Endoscopy Quality Improvement Programme; the Chair of The Endoscopy Guidance Group for New Zealand; and two principal authors of the NGs called the 'Referral Criteria for Direct Access Outpatient Colonoscopy or CT Colonography' (NGs).^{Appx G}

These authorities did not know whether the NGs are being applied uniformly around the country. They affirmed that monitoring of the process comprises only recording total numbers of colonoscopies and waiting times for differing acuities. They were not aware, however, of any nationwide research into the health outcomes or any overall cost, risk, benefit analyses of the effects of the NGs. The authors of the NGs confirmed that they are only intended to apply to referrals for colonoscopy from GPs and specialist without a GI interest.

3.2.2 Opinions of Auditors

It was unfortunate that responses to the survey could not be elicited in the time available from all DHBs. It seems clear, however, that most DHBs are using the NGs, occasionally with minor modification, and are applying them to referrals from all sources.^(Appx C) The approach is justified by those involved on the basis of greater equity, but the underlying motivations are more likely to be the inevitable rationing of a nationally under-resourced services, and possibly also for risk management purposes. This represents a major departure from the intention of the NGs, which was to provide a prioritisation tool. It also raises serious national clinical, ethical and medico-legal questions as it appears neither the NGs nor any local modifications are being subjected to the appropriate ongoing objective scrutiny due to a major change in clinical practice. This would usually take the form of independent validation and real-time supervision by an expert group of the type used to oversee major clinical trials.⁶

3.3 BRIEF SUMMARY OF EVIDENCE PUBLISHED IN REFEREED MEDICAL JOURNALS

The medical literature on guidelines for triaging of open access to colonoscopy discusses the need for prioritization or rationing of access to this scarce resource.⁷ It is not clear whether the ultimate goal is equity of colonoscopy access or of clinical outcomes. These two alternatives require different approaches.^{8,9}

Colonoscopy triage guidelines in general have been based on symptoms, demographics and other risk stratification factors, and results of special laboratory tests. Increasingly they have employed various combinations of these elements in order to improve the ability to predict the presence of serious colorectal pathology and reduce the rate of endoscopies where no pathology is found.^{10,11}

There are well known examples of international, national and regional guidelines, and there are articles describing how some have been modified to suit local circumstances.¹²⁻¹⁹ There has been less published on how uniformly guidelines are applied and adhered to, with and without local modification. Furthermore, although most of the guidelines have undergone development, and in some cases their sensitivity and specificity has been improved, there are few published data on the long term clinical effects on health or of any cost, risk, benefits analyses.²⁰⁻²⁴

From the literature it appears that the diagnosis and management of CRC has an overwhelming influence on open access guidelines for colonoscopy. Much less weight is ascribed to other serious colorectal pathologies.^{18,19} There is also much less published on: the associated clinical, ethical and medico-legal issues of rationing for patients, doctors and the implications for their interactions.²⁵⁻²⁷ Similarly, little has been published on the needs specialist physicians and surgeons have to practice their clinical expertise or their need to train future specialists.^{28,29}

There has been no widespread physician advocacy challenging the claim that rationing is justifiable on financial grounds and that it produces greater equity. Indeed, the widespread use of an exclusion criterion for those under 50 years of age may have disadvantaged younger patients who are now recognised as being at an increased risk of CRC.³⁰⁻³²

The current version of the New Zealand NGs^{Appx G} says:

'These criteria are designed to cover the majority of indications for referral for bowel investigation (colonoscopy or CT colonography) by general practitioners and non-gastrointestinal specialists.

District health board services are encouraged to provide direct access to colonoscopy and CT colonography for appropriate patients. There should be a single point of entry and triage of referrals for bowel investigation by either colonoscopy or CT colonography.

For patients falling outside these criteria, referrers should consider referral for a first specialist assessment (FSA).'

There are no recommendations on whether referrals for colonoscopies resulting from these FSAs should go through the same triage process or have a separate set of criteria. There is no published research on the overall consequent health outcomes for New Zealand and none is currently planned. Some work has been done on predicting the effects the implementation of the NBSP might have on non-screening access to colonoscopy.

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Opinion: Review of the current international medical literature does not give any clear direction on how the current LGs used by SDHB could be freed up sufficiently to encompass patients in the Grey Zone, who are currently being declined access to colonoscopy, without opening the floodgates to massive numbers of referrals.

4. PERFORMANCE STANDARDS FOR SDHB SERVICES

4.1 GENERAL PERFORMANCE STANDARDS FOR COLONOSCOPY SERVICE

4.1.1 SDHB Acceptance & decline rate for colonoscopy

Table 4.1.1 : SDHB annual acceptance & rejection rates for elective colonoscopies for the last 5 years. Data supplied by SDHB 15th January 2019. (The NBSP did not start in SDHB until April 2018)					
Decision regarding referrals for colonoscopy	2013/14	2014/15	2015/16	2016/17	2017/18 extrapolated using first 6 months
Accepted	1761	1587	1352	1331	1398
Not accepted	435	334	198	207	176
Total referrals	2196	1921	1550	1538	1574
Rate of non acceptance	0.20	0.17	0.13	0.13	0.11

These SDHB raw data (Table 4.1.1) show for the five year period of 2013/14 to 2017/18, a gradual decrease in the numbers of registered referrals for elective colonoscopies and a drop in the percentages of referrals not accepted for colonoscopy.

Opinion: The annual colonoscopy rate is small. The decline in the numbers of colonoscopies could be the result of: decreasing perceived need, decreasing service provision, or some combination of both. The trend towards a lower decline rate is appreciated but the fall in the acceptance rate is a concern, given the current problems SDHB has encountered in trying to provide an adequate service.

4.1.2 Waiting times for colonoscopy (Appx H)

The Ministry of Health data tables show for all DHBs the numbers of cases prioritized as requiring elective colonoscopies each month from September 2017 to August 2018 inclusive, within the following categories : Urgent (within 14 day); Non-urgent (within 42 days); and Surveillance (within 84 days).

For statistical analysis Waitemata and Wairarapa DHBs were excluded because of the influence of the NBSP. The percentages of SDHB cases receiving a colonoscopy within the prescribed time limit categories were compared with the overall averages for the other DHBs. The SDHB average for the 'Urgent' category was below the average of all the rest but not significantly so. For 'Non-urgent' and 'Surveillance' categories SDHB was better than the rest.

(Bar graphs of the data and statistical analysis can be found in Appx H).

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Opinion: These data confirm that, for the one year interval described, once accepted for colonoscopy by the SDHB, elective patients received their colonoscopy in a timely fashion.

4.1.3 Audit of the Local/National Access Criteria for Colonoscopy – A Retrospective Audit of Diagnosed Colorectal Cancer 2014-2015. (Appx I)

This was an internal retrospective audit performed by a GD registrar and supervised by [G]. Cases with a diagnosis of CRC from the SDHD region, listed on the National Cancer Registry for the year July 2014 to June 2015, were investigated to determine the ability of the LGs to detect and not miss the diagnosis.

Of those cases referred for colonoscopy, the reported acceptance was: for Dunedin residential area 123/130 (95%); for Southland residential area 56/56 (100%). The study was presented at the NZ Society of Gastroenterology Annual General Meeting of 2016, and displayed as a poster.

Opinion: These reported results were excellent and have been quoted in some staff interviews as indicating that the LGs are not missing many cancers. The auditors point out, however, that: (i) the audit interval was short and the period studied was soon after the introduction of the LGs; (ii) five of the 88 cases from Southland were also listed by the local surgeons as causes for concern; (iii) the results of this audit are somewhat at variance with those of the 20 cases audited by A1 and A2.

Recommendation: The auditors therefore recommend that SDHB undertakes a further study on which a much greater degree of confidence could be placed. This should not be a retrospective audits as these do not capture false negative results.

The outcomes from the LGs should be prospectively evaluated. Such an evaluation should determine the pathology status of those who are triaged for colonoscopy and follow the long term clinical outcomes of a random subset of those not triaged for colonoscopy. The evaluation of the LGs should ideally capture key clinical features of all cases presenting for triaging.

The primary objectives should be to determine the percentages who are not triaged for colonoscopy and ultimately transpire to have significant pathology (false negatives) and those who are triaged for colonoscopy and do not have significant pathology (false positives). These estimates should be made over a long follow-up period and within the context of a synchronous costs/risks/benefits analysis. Additionally, the features of all those presenting for potential triaging and the triaging decisions should be summarised to determine whether the defined triaging process is being followed.

It may be important to establish particular 'groups of interest' within this evaluation to determine whether the triaging process needs to be refined within specific risk groups with a potential for different disease aetiologies. Such groups might, for example, include children and adolescents, and it would be important to ensure that there are sufficient numbers within each of these groups to provide adequate precision for the false positive and false negative estimates.

4.2 SPECIFIC PERFORMANCE AGAINST CRC BENCHMARK STANDARDS

4.2.1 National CRC incidence rates

SDHB has one of the highest incidence rates of CRC in New Zealand. Table 4.2.1 from the Health Quality and Safety Commission of New Zealand indicates it had the third highest crude incidence rate in the period 2009 to 2013.³³

Table 4.2.1 : HQSCNZ Atlas of Healthcare Variation 2019. Bowel Cancer Incidence (crude rate per 100,000 : 2009-13).		
DHB	2009-13	Ranking
Northland	74.4	10
Waitemata	63.1	14
Auckland	45.5	19
Counties Manukau	44.4	20
Waikato	67.5	13
Lakes	62.5	15
Bay of Plenty	79.4	5
Tairāwhiti	51.8	17
Taranaki	78.9	6
Hawke's Bay	76.8	7
Whanganui	74.9	9
MidCentral	73.1	11
Hutt	60.3	16
Capital and Coast	49.2	18
Wairarapa	90.4	2
Nelson Marlborough	86.4	4
West Coast	76.5	8
Canterbury	71.8	12
South Canterbury	113.0	1
Southern	89.4	3

4.2.2 Annual Rates of Public Hospital Colonoscopies for All DHBs (Appx J)

Ministry of Health data on the numbers of colonoscopies performed in New Zealand public hospitals from 2014 to 2018 show for SDHB:

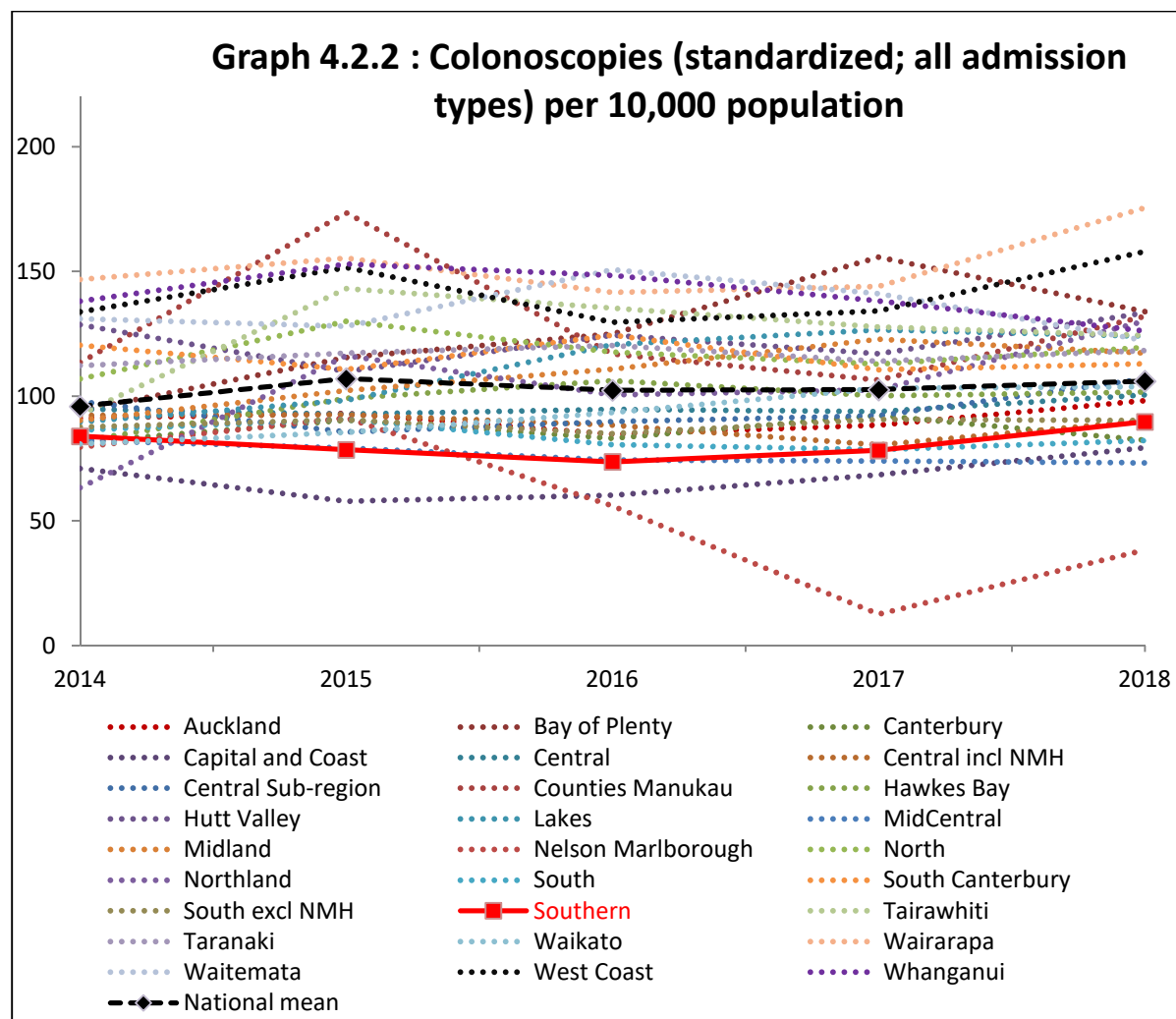
- The standardised colonoscopy rates per 10,000 of the population as a ratio against other DHBs varied annually between 0.72 and 0.88 (all $p < 0.0001$)

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- During this period the colonoscopy rate was between 12% and 28% significantly lower in SDHB residents than the national average given the distribution of age, sex, ethnicity and level of deprivation of the SDHB region (Graph 4.2.2)

(For data acquisition and full statistical analysis see Appx J, Tables 1, 2, 5 & 6)

Opinion: The combination of findings of such a high incidence rate for CRC and such a low colonoscopy rate are at variance with the expectations of the auditors.



4.2.3 Extent of CRC at time of first treatment (Appx J)

The New Zealand Cancer Registry gives the number CRCs diagnosed and the extent of disease at the time of diagnosis up to the end of 2016. For the period 2014 to 2016 data for the SDHB population compared with those for the rest of New Zealand, but excluding Waitemata and Wairarapa DHBs where NBSPs were operating, the combined data showed:

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- The extent of CRC confined to the bowel was 15.0% (17th lowest of 18) for SDHB and a mean of 20.8% for the rest of New Zealand ($p < 0.001$)
- When the same comparison was made, but excluding those cases in which the extent of disease was not recorded, it was 17.9% (17th lowest of 18) for SDHB and a mean 27.7% for the rest ($p < 0.001$)
- The significance level might change if the group with unrecorded extent of diseases is very different to the group with recorded extent.

(For data acquisition and full statistical analysis see Appx J, Tables 3, 4, & 7).

Opinion: These data provide strong evidence that, on average, either CRC is more aggressive or is being detected later in the population served by SDHB than for those of most other DHBs. The role played by the low colonoscopy rate in SDHB needs to be independently investigated.

4.2.4 Ministry of Health and National Bowel Cancer Working Group's Draft Quality Indicator Report for Bowel Cancer Services in New Zealand 2018. (Appx K)

The draft report covers the years 2013 to 2016 and looked at some potential national benchmarking standards for the outcomes of CRC. It makes some general observations, including the fact that the overall postoperative mortality has wide variations between DHBs and pathways are needed to reduce the variable rates of emergency surgery for bowel cancer.

The results show, compared to the other 19 DHBs, SDHB had:

- The 12th highest rate of major surgery for colon cancer; the 8th highest rate of major surgery for rectal cancer
- For Major Bowel Surgery: (a) the second highest rate of emergency surgery; (b) the 2nd equal highest rate of unplanned returns to surgery within 30 days
- For Major Colon Cancer Surgery: (a) the highest rate of emergency surgery; (b) the 4th highest rate of unplanned returns to surgery within 30 days
- For Major Rectal Cancer Surgery: (a) the 4th highest rate of emergency surgery; (b) the 7th highest rate of unplanned return to surgery within 30 days.

(For data acquisition and full statistical analysis see Appx K).

Opinion: The high rates of emergency surgery in SDHB might be the result of: later presentation of cases with more advanced disease, needing urgent surgical treatment; delayed diagnosis from any cause; insufficient operating theatre resources to do the major surgery on elective lists; or some combination of these factors.

The data showing a relatively high rate of unplanned return to theatre within 30 days is currently being reviewed (personal communication with a report author) but will need to be addressed if validated. The possible causes might again relate to: more advanced disease, some kind of treatment failure; or insufficient elective operating theatre time. Any influence of the low colonoscopy rate on these data needs further investigation.

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Summary: New Zealand national data from the Ministry of Health, the Cancer Registry and the Health Quality and Safety Commission show SDHB has in recent years: one of the highest incidences of CRC in the country, one of the highest rates of CRC spread beyond the bowel at the time of initial treatment, the second highest rate of emergency surgery for CRC, and one of the lowest colonoscopy rates. Poor performance against these four important benchmarking standards for the management of CRC necessitates the urgent provision of an overall OP by the SDHB. This OP should be based on the objectives of achieving the lowest possible incidence of CRC, the earliest diagnoses of the disease and the best possible outcomes for established cases. Extensive efforts need to be made to ensure the GD is able to function satisfactorily within the OP.

5. CONCLUSIONS

- 5.1** Recently, SDHB has performed unfavourably against some benchmarking standards for the management of CRC. The population it serves has: one of the highest incidences of CRC in New Zealand; one of the highest rates of CRC spread beyond the bowel at the time of initial treatment; one of the highest rate of emergency surgery for bowel cancer; and one of the lowest colonoscopy rates.
- 5.2** These unfavourable standards indicate that there are serious problems with the control of CRC in the SDHB population.
- 5.3** Inadequate resourcing appears to be a major impediment to the SDHB dealing with these problems.
- 5.4** Current issues relating to the GD cannot be helping with the regional CRC problems.
- 5.5** Inter-professional relationships and communications within the GD, and between the GD and some other hospital and community health services, are poor and associated with high level of stress for some staff.
- 5.6** A major cause for these relationship issues was the introduction of guidelines for access to colonoscopy, which occurred more precipitously in Southland than in Dunedin. They were certainly needed to deal with the old colonoscopy waiting lists that were out of control.
- 5.7** Unfortunately, the pendulum has now swung too far in the opposite direction and access for colonoscopies has become too tightly controlled, with evidence for adverse consequences for patient care. This was apparent in some case studies, verbal evidence presented during the audit and from the results of a survey of the views of SMOs who use the colonoscopy services, which was conducted in 2017.
- 5.8** This audit was not able to comment on any direct effects this reduction in access to colonoscopies might have had on long-term patient health outcomes or workloads for, and cost to, other clinical services. These effects should be investigated.
- 5.9** The NGs, on which the LGs are based, were intended to control access from GPs and non-GI specialists. As with some other DHBs, they are now used by SDHB as a single entry point to control access to colonoscopies from all sources.
- 5.10** This approach marks a major change in policy from the use of guidelines as prioritisation tools to their use as rationing tools. This is an understandable response from DHBs trying to satisfy the need for, and risk-manage, a scarce resource that is underfunded. It does, however, have three undesirable consequences:
- It eliminates alternative routes of access for patients who are unable to pay for private colonoscopies.
 - It inhibits GI specialists from arranging or performing an investigation that they need to exercise their clinical expertise on behalf of their patients.

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- The change in policy raises national clinical, ethical and medico-legal issues, as the NGs were never formally validated in their effects on health outcomes or in their intrinsic utilities.
- 5.11** In order to begin addressing the benchmarking issues, access for GI specialist physicians and surgeons to colonoscopy needs to be improved.
- 5.12** There is evidence that senior management has been aware of the problems within the GD and its relationship with the surgeons in Southland Hospital for years, and has not been able to resolve them.

6. RECOMMENDATIONS

6.1 Benchmarking against national CRC management standards

The performance of SDHB in four areas, including the low colonoscopy rate, necessitates urgent action by the Commissioners and CEO of SDHB. This should include:

- formulation and enactment of a regional OP to reverse the undesirable performance
- engagement with experts from relevant community, hospital and university health fields in order to do all possible within current resources to reduce the incidence and impact of CRC
- action to: reduce dietary and environmental risk factors; improve detection of the premalignant state of CRC; diagnose it at an earlier stage: and treat established disease as quickly and effectively as possible
- if necessary, advocacy for additional resources, in the expectation of getting widespread public support.

6.2 Integration of community, hospital and university services into the OP

SDHB senior management needs to:

- promote the OP to the community and all appropriate health service providers
- emphasise the collective responsibility for the health of patients and the community
- ensure that different clinical departments work together collaboratively to implement the OP
- ensure no service works to promote itself at the expense of other services but all should play their part, not unfairly passing work and responsibilities onto other health services
- encourage such attitudes in order to avoid unnecessary recourse to managerial processes of accountability or censure.

6.3 Change to leadership style and organization of the GD

- The GD will have an important part to play in the OP in relation to population screening, and diagnosis and treatment of symptomatic cases.
- With the current competitive clinical management style in the GD, major changes will be needed to fit into the OP.
- External expert help should be sought from an organisation such as the Cognitive Institute³⁴ to work within the GD in order to normalise interpersonal relationships and address communication issues with an established code of behaviour.
- [REDACTED]
- Counselling should be offered to all members of the GD who find the current situation stressful.

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- Monthly departmental SHO meetings should be held with an agenda and minutes. The chairmanship should rotate around all senior medical staff of the GD.
- [REDACTED]
- The EUG meetings need to be open for all gastroenterology, medical and surgery staff with a GI interest to attend.
- The EUG should widen its focus to: include all aspects of endoscopy, including teaching and research; allow all interested parties to contribute to the agenda and receive the minutes; and, be held at times when all interested parties can attend in person or by telepresence.
- All members of the GD need to appreciate that they have a Hub & Spoke relationship with Southland Hospital staff. They need to encourage and foster Southland staff with a GI specialty interest with professional support and opportunities for CPD.
- [REDACTED] should arrange to give lectures to clinical and community groups around the SDHB region on the OP and the important role of endoscopy in the healthcare of the community. Such lectures have been shown to be beneficial.³⁵

6.4 Address serious resourcing issues

SDHB management should address some immediate resourcing issues before initiating the OP by:

- freeing up more elective operating theatre time in Dunedin
- fully resourcing another endoscopy room in order to allow better access to GI investigations, improve endoscopy training opportunities, and ensure accreditation for surgical registrar training is not lost.

6.5 Changes to current local guidelines (LGs)

- In accordance with the intentions the NGs, the SDHB's LGs for access to colonoscopy should be applied to GPs and non-GI specialists only.
- The NGs should be subjected to a scientifically robust prospective study to determine the validity of their use as rationing tools (see section 4.1.3 Recommendation)
- Any changes to specific triaging criteria along the lines discussed in section 3.1.3 should be deferred until the validity testing of the NGs has been completed.
- The SDHB's LGs should not apply to specialist physicians and surgeons with a particular GI interest.
- GI specialists need access to colonoscopies to do the work for which they are employed.
- They should be able to arrange colonoscopies for individual patients who were declined investigation on the basis of the LGs, if they consider it appropriate on the basis of their expert clinical judgment.
- These GI specialists should, however, use their sound judgment, and work cooperatively and collaboratively with members of the GD, to limit colonoscopies to appropriate cases. The GD senior mentor should monitor how well this process is working.

6.6 Changes to current SDHB triage process

- Cases initially seen by the Triage Nurse and declined should be evaluated by the Review Panel comprising of a gastroenterologist and a surgeon:
- for Dunedin cases this panel should include a Dunedin surgeon with a GI specialty interest
- for Southland cases this panel should include a Southland surgeon with a GI specialty interest.
- The two panel members should evaluate each case independently and if their opinions are at variance, and cannot be resolved between them, a third panel member's deciding vote should apply.
- Membership of the Review Panel should be more transparent.
- All members of the Departments of Gastroenterology and Surgery of Dunedin and Southland Hospitals with a GI specialty interest should serve as members of the Review Panel in strict rotation and without exception.

6.7 Changes for staff of Southland Hospital

- Clinical and management staff should be offered trauma counselling immediately, and this should be continued for as long as any of the clinical and management staff consider necessary.
- Southland clinicians with a GI specialty interest and appropriate endoscopic skills should have their own dedicated endoscopy lists, which they can share with appropriate colleagues, and be able to book cases for endoscopy that they consider appropriate.
- They should also all have access, in person or by telepresence, to all EUG meetings.
- As a consequence, they should commit to staffing these obligations invariably.
- SDHB should ensure they get the CPD support to develop their endoscopic skills.

6.8 Long term follow-up

- Some of the abovementioned changes can be implemented immediately.
- But some underlying problems have been present for years, so fundamental change in some areas might be slower to achieve.
- It is therefore important that some suitable monitoring is put in place. [REDACTED]
- In any event, it is recommended that a full review of SDHB endoscopic services is undertaken by a suitable external senior clinician in one year to ensure that satisfactory progress has been made against these recommendations.
- If satisfactory progress has not been achieved in one year, consideration should be given to the more costly option of having a separate endoscopy service for Southland Hospital.

6.9 Clarification of the scope, implementation and monitoring of the NGs & LGs

The SDHB Commissioners and CEO should discuss the role and future of the NGs and LGs in the National DHB Chair's and CEO's forum, when an approach to the Ministry of Health could be coordinated to clarify whether:

- they are to be applied in an invariable and universal fashion around New Zealand

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- they are to be used as strict rules or as guidelines, susceptible to local interpretation and modification
- they are to be applied equally to clinicians with and without a specialist interest in GI practice
- any proposed changes to specific access criteria can be referred back to the authors of the NGs for review
- they are to be prospectively validated and monitored at a national level in terms of health outcomes and utilities.

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APPENDICES EXCLUDED FROM RELEASE

8. APPENDICES