TE AHO O TE KAHU
CANCER CONTROL AGENCY

Agenda
National Bowel Cancer Working Group

Date:	20 October 2021
Time:	09:30am to 12:30pm
Location:	https://us02web.zoom.us/j/89466244598?pwd=azZVRnk2SGI5WmNucHlNTllGdnRQdz09 Meeting ID: 894 6624 4598, Passcode: 328176
Chair:	Ian Bissett
Attendees:	Anne Cleland, Ben Lawrence (Tent) David Vernon, Denise Robbins, Iain Ward, Janet Hayward, Justin Hegarty, Marianne Lill, Masato Yozu, Nina Scott (tent), Ralph van Dalen, Siraj Rajaratnam, Teresa Chalmers-Watson **From Te Aho o Te Kahu, Cancer Control Agency:** Jan Smith, Gabrielle Nicholson, Liz Dennett (Tent), Rachael Neumann, Helen Stobba (agenda item 3), Jane Dancer (agenda item 3), Tess Luff (agenda item 6), Michelle Liu (agenda item 6) **From Ministry of Health:** Susan Parry, Cathy Whiteside **Other:** Elaine Edwards (Secretariat)
Apologies:	Diana Sarfati, John McMenamin

Time	Item	Presenter	Purpose
9:30	1. Welcome and introductions	Ian Bissett	*For information*
9:35	2. Review of: • Draft minutes from 24 June 2021 • Conflicts of interest register • Action register	Ian Bissett	*For discussion*
9:45	3. Te Aho o Te Kahu: a. General update b. Cancer Services Planning	Gabrielle Nicholson, Jane Dancer and Helen Stobba	*For discussion*
10:10	4. Bowel screening programme update	Susan Parry and Cathy Whiteside	*For information*
10:30	Break	N/A	N/A
10:35	5. New TOR etc for NBCWG • *Taking into account:* ○ *need for new chair* ○ *new approach, ie: joint management of group by Te Aho o Te Kahu and National Bowel Screening Programme*	Gabrielle Nicholson and Cathy Whiteside	*For discussion*

10:50	6. Bowel cancer QPI update	Gabrielle Nicholson, Tess Luff and Michelle Liu	*For discussion and endorsement*
11:30	Break	N/A	N/A
11:35	7. Regional updates	Shared	*For information*
11:55	8. FIT in symptomatic patients	Cathy Whiteside	*For information*
12:05	9. Rectal cancer treatment options	Ian Bissett on behalf of Ben Lawrence	*For information*
12:15	10. Review CRC standards for MDM	Ian Bissett	*For information*
12:25	11. Other business	Ian Bissett	*For information*
12:30	Meeting closes	N/A	N/A

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Minutes
National Bowel Cancer Working Group (NBCWG)

Date:	Thursday 24 June 2021
Time:	9am to 12 noon
Location:	Via Zoom
Chair:	Ian Bissett
Attendees:	Anne Cleland, Ben Lawrence, Denise Robbins, Justin Hegarty, Masato Yozu, Ralph van Dalen, Janet Hayward, Siraj Rajaratnam, Teresa Chalmers-Watson (from 9.11am), Susan Parry (from 9.11 to 10.30am) From Te Aho o Te Kahu, Cancer Control Agency: Gabrielle Nicholson, Jan Smith, Diana Sarfati (agenda item 3), Helen Stobba (agenda item 3), Ruth Pirie (agenda item 6), Vahid Arabnejad (agenda item 6)
Secretariat:	Elaine Edwards
Apologies:	David Vernon, Iain Ward, John McMenamin, Nina Scott, Marianne Lill, Ben Lawrence

Item

Minutes, actions and review of the conflicts of interest register

The minutes of the meeting held on 18 March 2021 were accepted as a true and correct record with the following corrections:

a) NQIP acronym on page 5 to be corrected to read NEQIP (National Endoscopic Quality Improvement Programme);
b) Item 5 ‘Bowel Screening Programme’ on page 3 to be corrected - the 6th bullet to instead reference 400 colonoscopies to date, finding 40 cancers (up to 1 June); and
c) Section 10 ‘Rectal Cancer Treatment Options with Bhusal SubGroup’ action (#126) to be changed to read that Te Aho o Te Kahu staff are to follow up regarding this.

The action register was reviewed. All actions were complete/progressing. Completed actions 116, 119, 120, 121, 123, 124 and 125 were removed from the register.

The conflicts register was received and noted with no changes.

Te Aho o Te Kahu update and discussion re Cancer Services Planning
Cancer Services Planning:

- As a result of the recently announced Health and Disability Sector Reforms, Te Aho o Te Kahu is undertaking a piece of work aimed at informing the Minister’s thinking (and eventually the two commissioning bodies: 1) Health NZ; and 2) the Māori Health Authority) about what cancer services should look like in the future in order to deliver appropriate, good quality cancer treatment.

- The group was advised that the current focus is on Tier 2 cancer services (ie: hospital-based). Considering access to primary care diagnostics and treatment etc will come later.
- Systemic treatments, cancer surgery, transport, accommodation, psycho-social support are all also in scope.
- The Agency aims to present recommendations of the report to the Minister in October 2021.
- Feedback from the group was sought.
- The Group suggested the need for some cancer treatment services to be provided nationally rather than regionally or locally This was confirmed as being within the scope of the work.
- The Group referenced the domino effect of complex cases being centralised to one DHB on peripheral services and noted the pathologists would wish to be consulted. Te Aho o Te Kahu staff confirmed there is a specific section looking at the impact on other services.

General update:

- Three other projects are underway:
  1. Consistency of molecular testing around the country and how it could be improved.
  2. Cancer medicines availability analysis
  3. Primary care cancer diagnostics and treatment review – this has only just started and is aimed at considering how primary care intersects or should intersect with secondary and tertiary cancer services.

  ACTION: *Updates regarding these projects to be provided at the next meeting.*

- 12 Cancer Community Hui have been held with approximately 2000 Māori whānau in attendance. Their experiences of cancer care will be used to inform the Cancer Services Planning work.

- QPI programme update
  The QPI development process is being refined to be more efficient and appropriate given the number of tumour streams that need QPIs agreed and calculated. Communications regarding the next steps will be issued to key stakeholders in late July/ early August.

- The Group queried remuneration for representatives on regional groups. Te Aho o Te Kahu staff advised that as the regional groups are not Te Aho o Te Kahu groups Te Aho o Te Kahu is not responsible for their management or things like fees and/ or travel. Remuneration for members of DHB groups would need to be provide by DHBs.

New Terms of Reference for the NBCWG

Te Aho o Te Kahu is updating all of its advisory groups' terms of reference. As part of this will also be considering changes to membership to achieve at least two Māori and two consumer members per group and ensure membership succession planning is in place where appropriate. Another focus is ensuring that work programmes are clear and aligned with the particular group's purpose.

Also, as part of this work the frequency of meetings for all advisory groups is being considered. As signalled at the last meeting of this group the meeting frequency going forward will be two meetings per annum plus additional, ad hoc meetings as required/ in agreement with the chair.

A draft revised TOR for this group will be on the agenda for this group's next meeting.

The Group confirmed they were in agreement with the proposed way forward.

Bowel Cancer QPI Recalculations

Te Aho o Te Kahu staff gave a presentation regarding the bowel cancer QPI recalculations, building on what had been provided to the group prior to the meeting. They focused on demonstrating the changes between the two time periods (2013 -2016 and 2017-2019) at a national level, rather than the change over time at individual DHBs, which is harder to present because of low numbers.

The NBCWG were requested to provide feedback with regard to the format of the data/report to be published. It was agreed that the approach should be to keep the written report a minimum and instead put more effort into getting the data available online via the cancer care explorer and promoting use of the explorer.

Key points were highlighted and discussed as follows:

- The recalculations have been done using same definitions as previously.
- Reporting will focus on the national trends.
- Te Aho o Te Kahu will focus on following up with outlier DHBs via the regional hubs and regional groups.
- The group agreed that in future consideration may need to be given to setting targets – because no targets have been set to date it is not possible for comments about the appropriateness of performance to be made, instead the focus has to be on outliers (performance compared to peers).
- The group agreed it was encouraging to note the lymph node count is improving.
- Regarding how best to disseminate the data: the Group suggested the DHB Department Heads needed to be advised that the data was being collected and reported publicly in order to increase awareness and follow up. Te Aho o Te Kahu staff are expanding the email circulation list in future (to cc additional recipients rather than just sending information to DHB CEs and expecting them to forward it on).
- Te Aho o Te Kahu staff queried if there is a need to produce a written report or should stakeholders simply be referred to the dashboard.
- **The Group agreed** that the written report should be minimal and instead people should be directed to the dashboard.
- **The Group recommended** the release of a summary/communications piece which directed people to the dashboard and also a summary for each DHB.
- **The Group requested** that outlier DHBs are advised of the findings and to support them to check/ resolve any data quality issues prior to publication.

Regional Updates

Northern Region Update

- Northland is yet to commence bowel cancer screening but is on track for later in the year.
- Radiology for rectal cancer was the main topic for discussion at the regional meeting (standardisation/timing of scans/watch and wait protocols).

Te Manawa Taki (Midland) Region Update

- Waikato systems are slowly coming back online following the recent cyber-attack.
- Dendrite is being rolled out which is starting to show benefits.
- Taranaki are preparing to commence bowel cancer screening.
- The Lakes Bowel Screening Evaluation Report would be provided to the Executive Group next week. A project plan was in place to address the recommendations. **ACTION:** Lakes Bowel Screening Evaluation Report to be shared with the NBCWG in due course.

Central Region

- The whole region is live with screening.
- Three DHBs will be audited later this year.

Southern Region

- No update. ***ACTION:*** *Te Aho o Te Kahu staff to ensure all regions are represented/ able to report at future meetings.*

FIT in Symptomatic Patients – Pilot Study

The Chair's letter to the CEO of Waikato DHB was noted for information. The Chair had been advised in writing by the HDEC Manager and Chair of NTB that programme evaluation of the introduction of the use of a high FIT threshold to triage patients to urgent colonoscopy is an out of scope activity for HDEC review. The team are appointing a project manager to drive the pilot. Waikato DHB is keen to be the starting site in July/August to ensure wrap around services were working, particularly in term of Maori participation prior to expanding wider. There was very strong support from clinicians and manager of the screening programme.

A member queried if there would be FIT for surveillance patients? The Chair was unaware of this aside from patients with a strong family history who may go into screening when they reach the appropriate age.

Rectal Cancer Treatment Options with Bhusal Sub Group

The Chair shared a presentation prepared by Ben Lawrence. The way Stage 3 rectal cancer is managed across NZ varies greatly with regard to the delivery of chemotherapy. Some centres give adjuvant chemo, others do not. There is variation around whether watch and wait vs surgery is preferred. The assumption is that no single protocols cover all clinical situations (but the organ preservation in rectal adenocarcinoma (OPRA) trial covers most). A prospective audit of practice was suggested as being essential.

Review Standards for MDM Discussion for CRC

In relation to the requirement for all screen detected colon cancers to be presented to a MDM prior to surgery, the Chair noted it had been pointed out that this was different to the provisional bowel cancer standards from 2013. In this document Standard 11 states *"patients with non-metastatic colon cancer are presented in the bowel cancer MDM within three weeks after surgery for consideration of adjuvant therapy*". A number of DHBs have indicated that they did not have the capacity to discuss all such patients at MDM prior to surgery.

The meeting was informed that Canterbury DHB and other DHBs use an abridged MDM discussion for such cases. ***ACTION**: Canterbury abridged MDM process documentation to be shared with the Chair and this will be discussed to provide a clear way forward.*

Other Business

Category 2 Family History: a meeting regarding this has been scheduled for later in the year and the group will be updated regarding this at the next meeting.

BPAC Document Draft for discussion: The Group noted the document was excellent and would be very useful for general practice. Te Aho o Te Kahu staff asked that feedback be provided directly to BPAC using the email address previously provided.

Next Meeting:

***ACTION:** Secretariat to schedule an in-person meeting in Wellington in late October (on a Wednesday from 9.30 to 3.30pm).*

Close

The meeting closed at 11.55am.

NBCWG - Register of other Member Directorships & Other Roles (June 2021)

No.	Member	Organisation	Role	Date last Updated
1.	Ian Bissett	ADHB	Consultant General and Colorectal Surgeon	December 2019
		University of Auckland	Professor	December 2020
		Insides Company	Chief Medical Officer	December 2020
2.	Anne Cleland	MidCentral Health	Clinical Nurse Manager for Bowel Screening	December 2019
		New Zealand Nurses Organisation Gastroenterology Section (NZNOGNS)	Member	January 2018
3.	Denise Robbins	Central Cancer Network	Consumer Member	January 2018
4.	David Vernon	Lakes DHB	Chair Endoscopy Users Group	December 2019
		Lakes DHB	Clinical Lead for Bowel Screening	December 2020
		Private Practice	Colonoscopies	December 2019
		Ministry of Health	Member of Gen Surg Elective Prioritisation Working Group	December 2019
5.	Iain Ward	Canterbury DHB	Radiation oncologist	January 2018
		St George's Cancer Care Centre, Christchurch	Radiation oncologist	January 2018
		RANZCR Radiation Oncology Quality Improvement Committee	Member	December 2018
		RANZCR New Zealand Radiation Oncology Executive	Member	December 2018
6.	Janet Hayward	PHARMAC Rheumatology subcommittee of PTAC	Member	March 2018
		Nelson Marlborough DHB steering group NBSP	Primary care Lead	July 2018
		BSAG	Member	July 2019
		National Pancreatic Cancer Working Group	Member	July 2020
7.	Joe Feltham	Pacific Radiology Ltd and CCDHB	Radiologist	June 2019
		RANZCR	NZ branch committee member and CPD representative	January 2018
		ARGANZ	Deputy Chairman	January 2018
8.	John McMenamin	MoH, BSAG	GP/Primary Care Lead	February 2018
		Whanganui DHB NBSP steering group	Primary Care Advisor	February 2018
		Whanganui Regional Health Network Clinical Governance	Chair	February 2018
9.	Marianne Lill	Whanganui DHB	Consultant General Surgeon, Endoscopy lead	March 2018
		Whanganui DHB NBSP steering group	Hospital clinical lead	March 2018

		NZ Conjoint Committee for Recognition of Training in Gastrointestinal Endoscopy (NZCCRTGE)	Chairperson	March 2018
		Endoscopy Governance Group New Zealand (EGGNZ)	NZCCRTGE representative, chairperson of certification/recertification advisory subcommittee	March 2018
		RACS Surgical Gastrointestinal Endoscopy Committee	NZAGS representative	March 2018
		NZ Society for Gastroenterology	Member (newly joined)	March 2018
		NZAGS training committee	Whanganui surgical training supervisor	March 2018
10.	Masato Yozu	CMDHB	Anatomical pathology consultant	January 2019
		Australasian Gastrointestinal Pathology Society	Former president, Member	January 2019
		Northern Region Bowel Cancer Tumour Stream	Member	January 2019
		Bowel Screening Histopathology Subgroup	Member	January 2019
11.	Nina Scott	Hei Ahuru Mowai – National Maori Cancer Leadership Group and Hei Paa Harakeke – Midland Maori Cancer Leadership Group	Chair	February 2018
		Waikato DHB	Public Health Physician	February 2018
		Research – National Science Challenge – He Pikinga Waiora – making interventions work for Maori communities, Health Research Council – Harti Hauora Tamariki – Whanau Ora care for hospitalised tamariki.	Principal Investigator	February 2018
		Cancer Control Agency	Cancer Control Agency Council	December 2019
12.	Ralph Van Dalen	Waikato DHB	Consultant General and Colorectal Surgeon	January 2018
		Braemar Hospital	Trustee Braemar Hospital Trust	January 2018
13.	Siraj Rajaratnam	Waitemata DHB	Consultant colorectal and general surgeon	March 2018
		Waitemata DHB	Clinical Director, General Surgery	
		Waitemata Endoscopy (Private provider)	Shareholder	
14.	Teresa Chalmers-Watson	Canterbury DHB	Consultant Gastroenterologist and Hepatologist	December 2019
		Canterbury DHB	Consultant Gastroenterologist Bowel Screening Clinical Lead (effective 2020)	December 2019
15.	Ben Lawrence	Northern Regional Cancer and Blood Service (ADHB)	Medical Oncologist. Chair National NET MDM.	Jan 2020
		Ministry of Health	Tumour Stream Working Group - Neuroendocrine Lead	Jan 2020
		Australasian Gastrointestinal Trials Group	Convenor ASM 2022. Translational Subcommittee.	Oct 2020
		NZ Society for Oncology	Member. Past-President.	Jan 2020
		Head of Discipline of Oncology, Faculty of Medical and Health Sciences, University of Auckland	Senior Lecturer	Oct 2020

		Cancer Society of Auckland and Northland	Board Member	Oct 2020
16.	Justin Hegarty	Canterbury District Health Board	Radiologist	Jan 2020
		Pacific Radiology Canterbury	Radiologist	Jan 2020

The purpose of this register is to ensure transparency by identifying members other roles and responsibilities within organisations that have a mandate that could (or maybe perceived to) align, overlap or conflict with the function of the National Bowel Cancer Working Group.

Note: when group members believe they have a conflict of interest on a subject that will prevent them from reaching an impartial decision or undertaking an activity consistent with the Group's functions, they must declare a conflict of interest and withdraw themselves from the discussion and/or activity. The Group will then decide what part the member may take in any relevant discussion.

National Bowel Cancer Working Group - Action Points Register as at October 2021

No.	Action Point	Date Raised	Lead	Status
105	Peritonectomy and HIPEC surgery at Waikato DHB matters. **9 Dec Update:** An MDM was now taking place every Wednesday morning from 7am (via Zoom). NBCWG members were invited to participate as necessary.	December 2019	Ralph Van Dalen and Ian Bisset	Complete
117	Potential to standardise the CRC Follow Up Process: Ralph to present an update to the next meeting including focus on GP involvement, difference between 1 and 3 yr. colonoscopy follow up data and the holistic model.	Dec 2020	Ralph van Dalen and BSP	Progressing
122	Revising colonoscopy surveillance recommendations for Category 2 FH: Te Aho o Te Kahu staff to organise a meeting with Susan Parry, Ian Bissett, Di Safarti and Cathy to discuss a sub-group.	March 2021	Ian Bissett and BSP	Complete (sub-group meetings held in August and September, but work on going)
126	Rectal Cancer Treatment Options Te Aho o Te Kahu staff to follow up with B Lawrence/provide direction for updating the treatment advice. "Guidance from latest evidence" was suggested to indicate this treatment is an acceptable option.	March 2021	Ben Lawrence	
127	Updates regarding cancer services planning projects (molecular testing consistency; cancer medicines availability analysis and primary care cancer diagnostics and treatment review) to be provided at the next meeting.	June 2021	Te Aho o Te Kahu staff	
129	Lakes Bowel Screening Evaluation Report to be shared with the NBCWG in due course.	June 2021	BSP	
130	Te Aho o Te Kahu staff to follow up regarding ensuring all regions are represented/ able to report at future meetings.	June 2021	Te Aho o Te Kahu staff	
`131	Canterbury abridged MDM process documentation to be shared with the Chair and this will be discussed to provide a clear way forward.	June 2021	Teresa Chalmers-Watson	
132	Secretariat to schedule a face-to-face meeting in Wellington in late October (on a Wednesday from 9.30 to 3.30pm).	June 2021	Secretariat	Completed

Cancer Services Planning

October 2021

Context

- Te Aho o te Kahu has the leadership mandate for cancer control in New Zealand, including cancer treatment services.
- The current health reforms provide an opportunity to radically improve and future proof these services.
- The aim is to have a cancer system that puts whānau at the centre, is equitable, and provides treatment and care as close as possible to where people live.
- Cancer treatment services must also be safe, effective, cohesive and sustainable.
- This work has focussed on publicly-funded cancer treatment services. Other critical elements of cancer control including prevention, early detection, primary care services, palliative care services are out of scope of this report but included in other work underway across Te Aho o Te Kahu. Privately-funded cancer services are also out of scope.

Case for change

- Cancer is the leading cause of death in NZ and accounts for 18.5% of all health loss.
- Cancer treatment services currently deliver high-quality care for most people, most of the time.
- However, the cancer system does not serve everybody equally:
  - Once diagnosed with cancer, Māori are less likely to survive their cancer than non-Māori for almost every type of cancer.
  - Pacific peoples experience poorer cancer outcomes than non-Pacific, non-Māori.
  - The postcode lottery negatively affects access and outcomes.
- The current cancer system is also under strain, and has limited capacity to cope with the increasing demand of a growing and ageing population.
- We expect a 40% increase in cancer diagnoses 2020-2040, and the need for a rapid and dramatic increase in the provision of cancer treatment.

Project Approach

- Five cancer services planning workstreams were identified:
    - Coordination and Supportive Care (including non-clinical whānau-centred services);
    - Cancer surgery
    - Radiation oncology
    - Systemic anti-cancer therapies (including medical oncology, haematology)
    - Clinical support services (including allied health, imaging/radiology, pathology and laboratories).
- For each workstream, our team conducted a current state analysis, literature review, comprehensive equity analysis and extensive stakeholder engagement, in order to identify recommendations for improvements.
- To ensure Te Tiriti o Waitangi principles and equity impacts were considered in the project and report, a Te Tiriti and Equity framework was developed and applied.

Stakeholder Engagement

- Stakeholder engagement has been undertaken at project level and at workstream level.

- Approximately 50 individual engagements have taken place over the course of the project, plus several groups in addition to this (e.g. Cancer Society, NZ Cancer Nurses College Committee).

- Hei Āhuru Mōwai (Māori Cancer Leadership Group) and He Ara Tangata (Te Aho o Te Kahu consumer reference group) were actively involved in identifying concerns about the current state, and developing the recommendations.

- The HDSR Transition Unit was also engaged at the very start of the project, and in the latter stages of writing the report, once the draft recommendations were identified.

Analysis and recommendations

- Analysis across all workstreams identified the following common high-level themes:
  - The need for a transformative approach to cancer treatment and care
  - National system leadership
  - Clinical service distribution
  - Workforce
  - Coordination and supportive care services
- A Recommendations Summary report based on these themes has been completed and will be discussed with the Minister of Health and the HDSR Transition Unit.
- The full report with supporting detail from each workstream is being completed in parallel.

Transition Planning and Next Steps

- The project recommendations provide a high-level vision for how cancer treatment and supportive care services can be integrated, organised and distributed in a way that puts whānau at the centre, promotes equitable outcomes, and locates treatment and care as close as possible to where people live

- Te Aho o Te Kahu will work in partnership with Health NZ and the Māori Health Authority to prioritise and implement recommendations identified in this work

- Next steps include identifying respective roles and responsibilities, functions, collaboration opportunities, and advisory processes now that Health NZ and the Māori Health Authority have Boards in place

- Te Aho o Te Kahu will systematically monitor and report on the impact of the changes resulting from the implementation of the recommendations and developments related to this project.

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New Zealand Government

BOWEL CANCER QUALITY IMPROVEMENT MONITORING REPORT

UPDATE USING 2017-2019 DATA

NOVEMBER 2021

Acknowledgements

This report publishes quality performance indicator (QPI) data from the New Zealand Cancer Registry and the Ministry of Health’s national data collections for patients diagnosed with bowel cancer in Aotearoa New Zealand from 2017 to 2019.

The report is being released by Te Aho o Te Kahu | Cancer Control Agency, which worked with the national Bowel Cancer Working Group. This builds on the work previously done by the Ministry of Health to identify and report on bowel cancer QPIs.

The development group acknowledges that each data point reflects an individual or cluster of patients and that each diagnosis of bowel cancer will have significantly affected the patient and their whānau/family. The group acknowledge all of those involved.

Authors

This report was prepared by Te Aho o Te Kahu and published as part of our quality improvement programme.

Citation: Te Aho o Te Kahu. 2021. *xTITLEx 2021*. Wellington: Cancer Control Agency.

Published in XXX 2021 by Te Aho o Te Kahu
PO Box 5013, Wellington 6140, New Zealand

ISBN XX (online)
HP XX

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EXECUTIVE SUMMARY

This report presents the second release of results of our investigation into the use of the Ministry of Health’s National Collections to calculate quality performance indicators (QPIs) for bowel cancer.

The primary audience for this report is those who deliver care to people with bowel cancer and manage the delivery of health services.

The aims of the report are to measure the quality of care and outcomes for people with bowel cancer in Aotearoa New Zealand (Aotearoa) and to provide information for ongoing quality improvement.

The report presents seven quality performance indicators (QPIs), six of which were originally calculated and reported on in the first bowel cancer QPI monitoring report in 2019 (reference). The seven QPIs reported on in this report are generally accepted as measures of good bowel cancer care. The QPI that differs from the 2019 report (abdominoperineal resection) is due to data challenges.

The report compares the variation in these measures between district health boards (DHBs). It also presents change over time (between the 2019 calculations and the 2021 calculations) at a national level.

Geographic variation in services received and outcomes can be seen with all indicators. For some indicators there are also variations in access and outcomes for people belonging to different ethnic groups and ages.

Further investigation of the QPI results at DHB level is needed to understand the variation between DHBs, particularly for DHBs presenting as outliers. The results of further investigations will identify local opportunities to reduce inequalities, improve health services and care pathways and validate and improve local data collections.

1 KEY FINDINGS

This section summarises the key findings for the indicators based on our analyses of national administrative data for people diagnosed with bowel cancer in Aotearoa New Zealand. We have grouped the indicator results and recommendations under the following four headings: equity, care pathway, surgical care and rectal cancer.

1.1 Equity

Māori are more likely than European/Other to be diagnosed following presentation to an emergency department, undergo emergency surgery and undergo an abdominoperineal resection for rectal cancer. For rectal cancer treatment, Māori have considerably lower rates of surgery alone compared with European/Other, who are more likely to have radiotherapy in combination with surgery. Māori are less likely to have 12 or more lymph nodes pathologically examined at the time of colon cancer surgery.

Rates of Pacific peoples diagnosed following an ED presentation also remain high as is the case with people living in areas of high deprivation. Pacific peoples also had higher rates of emergency surgery compared European/Other.

Inequities in the routes to diagnosis and emergency surgery indicators are likely to be reflective of inequities in pre-hospital processes, including access to primary care, the presence of comorbidities (that may not be optimised or able to be optimised prior to surgery), and differential access to the social determinants of health such as education and employment driven by a legacy of colonisation and racism (Te Aho o Te Kahu, 2020).

It is recommended that DHBs prioritise those QPIs that highlight inequities, particularly for Māori and Pacific peoples.

1.2 Care Pathway

Between 2017 and 2019, there was an increase in diagnosis following screening from 2.8% to 10.1%, which aligns with the roll out of the National Bowel Screening Programme with a concurrent reduction in diagnosis following referral to clinic. However, the proportion of diagnosis following ED presentations did not appear to change

Similar to the previous report, people aged younger than 50 years or 75 years and older, women, Pacific people, Māori and those living in areas of high social deprivation were more likely to be diagnosed after presenting at an ED.

This indicator is reflective of inequities in diagnostic pathways and should be a priority for DHBs. DHBs who are outliers should further investigate their data and potential reasons for variance compared to other DHBs.

1.3 Surgical Care

There is indication that 90-day post-operative mortality is reducing, and this appears to be in emergency as well elective surgery. However, mortality rates remain higher for Māori compared to European/Other. There remains considerable variation between DHBs, although no DHB mortality rates are above the 95% confidence limits.

The rate of emergency resections performed for colorectal cancer in Aotearoa is high and may contribute to poorer cancer outcomes. For Māori and Pacific people, the rate is highest, contributing to inequity of outcome as well as likely reflecting inequity in other aspects of the patient pathway. This is particularly important to further understand considering the higher mortality rate seen with emergency surgery. It is unclear why there appears to have been an increase in the proportion of emergency surgery for Pacific peoples, however this is a concerning trend. Investigating and improving the emergency surgery QPI should be prioritised by DHBs.

The results for the length of stay indicator were similar across time periods for ethnicity and DHB variation with a reduction in median length of stay for colon cancer between the two time periods. This indicator will continue to provide a useful monitor of overall post-operative care.

The proportion of people with 12 or more lymph nodes pathologically examined appears to be continuing to increase which is promising. However, the disparity remains for Māori. The higher rates of emergency surgery for Māori may indirectly contribute to this result; however, further investigation at a DHB level is required.

1.4 Rectal Cancer

There was a suggestion of decreasing use of long course radiotherapy (LCRT) and increasing use of short course radiotherapy (SCRT) over time. However, there is a general change in international practice for the use of radiotherapy in rectal cancer, making interpretation of the rectal cancer treatment QPI challenging. For this QPI there was also a persistently lower rate of management of rectal cancer by surgery alone for Māori and a wide variation in practice across DHBs.

20.7% of people who underwent major surgery for rectal cancer had an abdominoperineal resection (APR). Māori had a higher proportion of APR procedures compared to other ethnicities (23.4%) and there was wide variation in the proportion of APR performed across DHBs.

2 INTRODUCTION

2.1 Background

Bowel cancer is a leading cause of illness, disability and death in Aotearoa New Zealand.

During 2017 and 2018 the Ministry of Health and the National Bowel Cancer Working Group (NBCWG) worked together to develop a set of proposed quality performance indicators (QPIs) for bowel cancer.

The proposed QPIs were selected to measure performance and drive quality improvement in bowel cancer diagnosis and treatment services in Aotearoa New Zealand. In some instances, the indicators were not able to be measured using data available in national data collections. Areas where national data improvement is required (eg: on stage and grade of cancer) to enable future measurement at a national level were identified.

The first Bowel Cancer Quality Improvement Report was published in 2019, covering the years 2013 to 2016.

In December 2019, Te Aho o Te Kahu Cancer Control Agency (Te Aho o Te Kahu) was set up to provide national leadership for, and oversight of, cancer control in Aotearoa New Zealand. Te Aho o Te Kahu took over the cancer QPI programme of work from the Ministry of Health.

Te Aho o Te Kahu has prepared this report in collaboration with the NBCWG. The report presents the second release of results of the bowel QPIs for which robust national data is available. The report presents QPIs that are agreed measures of good care and primarily describes the variation in these measures between district health boards (DHBs).

The primary audience for the report is those who deliver care to people with bowel cancer and manage the delivery of services.

2.2 Equity

In Aotearoa, people have health differences that are not only avoidable but unfair and unjust. Equity recognises that people with different levels of advantage require different approaches and resources to get equitable health outcomes (Ministry of Health, 2019a).

Māori currently experience a disproportionate and inequitable burden in mortality from bowel cancer. Addressing variation in the quality of cancer services is pivotal to delivering equitable, high-quality care.

Internationally, QPIs are a recognised tool for identifying opportunities for quality improvement and addressing equity. By stratifying QPIs by ethnicity, Te Aho o Te Kahu and DHBs will identify specific areas of inequity and be able to develop quality improvement initiatives to address these and monitor progress over time.

Te Tiriti o Waitangi

Te Tiriti o Waitangi (the Treaty of Waitangi) provides an imperative for the Crown to protect and promote the health and wellbeing of Māori, including responding to and meeting Māori health needs.

The Waitangi Tribunal Health Services and Outcomes Inquiry (Wai 2575), initiated in November 2016, commenced hearing all claims concerning grievances relating to health services and outcomes of national significance for Māori.

Given that Māori have the poorest overall health status in Aotearoa New Zealand and are significantly disadvantaged in terms of health inequities, it is essential that we ensure the rights and meet the needs of Māori people (Ministry of Health, 2019b). From the initial hearings related to primary health care, the Waitangi Tribunal made several recommendations in accordance with the principles of tino rangatiratanga, equity, active protection, options and partnership.

The QPIs were developed with these factors in mind, and a partnership approach should be taken with respect to all quality improvement initiatives.

2.3 Using this report

The indicator results are presented in Sections 4-6. We present the pathway to care indicator (BCQI01 Routes to diagnosis) in Section 4, surgical care indicators (BCQI07 Treatment survival, BCQI10 Lymph node yield, BCQI19 Emergency surgery) in Section 5 and indicators specific to rectal cancer (BCQI 16 Radiotherapy, BCQI 21_a Abdominoperineal resection) in Section 6.

While DHBs had access to provisional results of the previous report in October 2018, due to the timing of the release of that report in March 2019, there is overlap with the period covered in this report (2017 to 2019). Therefore, while changes in QPI results are noted, it is not assumed that the previous report and associated activity are the only influencers on the current numbers. This report provides a way of tracking progress that will be influenced by numerous factors and provide service providers with important information to continue to improve delivery of cancer care.

The sources of data for the indicators and the methods of analysis are explained in the previous Bowel Cancer Quality Improvement Report 2019 with the exception of the indicator on abdominoperineal resection which can be found in this report at Appendix A.

3 METHODS

For this report, we have calculated the QPIs for people diagnosed with bowel cancer between 2017 and 2019. The sources of data and methods for calculating the indicators are described in the previous Bowel Cancer Quality Improvement Report 2019.

We have removed the stoma free at 18 months quality performance indicator due to issues with the accuracy of data collection meaning we were unable to accurately capture people who had stoma forming operations and people who had their stoma reversed. We have replaced this with an indicator measuring how many people having rectal cancer surgery had an abdominoperineal resection. The description and technical specifications for this indicator are presented in Appendix A.

In addition to the presentation of funnel plots and tables, we have included graphs to explore the differences in QPIs across the time periods at a national level.

4 QUALITY PERFORMANCE INDICATOR: CARE PATHWAY

4.1 Routes to diagnosis

Indicator description

Proportion of people with colorectal cancer who are diagnosed following a referral to a clinic, screening or presentation to an emergency department (ED) (with or without surgery).

The National Bowel Screening Programme

The Bowel Screening Pilot for people aged 60-74 years began in Waitematā DHB in January 2012. Following its completion, the Ministry of Health began rolling the National Bowel Screening Programme progressively across DHBs.

Prior to the time period covered in this report, only Waitematā had screening available. This was reflected in the previous Bowel Cancer Quality Improvement Report.

Over the period included in the current report (2017-2019), the following DHBs sequentially introduced bowel screening as follows; Hutt Valley and Wairarapa in 2017, Waitematā, Southern, and Counties Manukau in early-mid 2018, Nelson Marlborough and Hawke's Bay in late 2018, Lakes in early 2019, and Whanganui and MidCentral in late 2019.

Results

Between 2017 and 2019, most people (68.2%) were diagnosed following referral to a clinic, although this was a reduction compared to the 2013-2016 time period (Table 1).

5.9% of people were diagnosed following a referral from screening services (compared to 2.7 percent in the previous period), and 25.9% people were diagnosed following presentation at an ED (compared with 26.3%).

Between 2017 and 2019, there was an increase in diagnosis following screening from 2.8% to 10.1%, which aligns with the roll out of the National Bowel Screening Programme (Table 1 and Figure 1), with a concurrent reduction in diagnosis following referral to clinic from 72% to 64.2% (Figure 1). However, the diagnosis following ED presentations did not appear to change (Figure 1).

Table 1 People diagnosed with colorectal cancer following screening, presentation to an emergency department or referral to a clinic, by year of diagnosis, age group, sex, ethnicity and deprivation

	People diagnosed	ED presentation		Referral to clinic		Screening	
	N	N	%	N	%	N	%
Total	8677	2244	25.9	5917	68.2	516	5.9
Year of diagnosis							
2017	2746	692	25.2	1976	72	78	2.8
2018	2932	782	26.7	2016	68.8	134	4.6
2019	2999	770	25.7	1925	64.2	304	10.1
Age group							
18-49	685	219	32	466	68	0	0
50-59	1090	266	24.4	786	72.1	38	3.5
60-74	3359	692	20.6	2227	66.3	440	13.1
75+	3543	1067	30.1	2438	68.8	38	1.1
Sex							
Female	4046	1117	27.6	2726	67.4	203	5
Male	4631	1127	24.3	3191	68.9	313	6.8
Ethnicity							
Māori	593	214	36.1	349	58.9	30	5.1
Pacific	212	94	44.3	100	47.2	18	8.5
Asian	402	105	26.1	242	60.2	55	13.7
European/Other	7404	1825	24.6	5180	70	399	5.4
Unknown	66	6	9.1	46	69.7	14	21.2
NZDep2013 quintile							
1	1665	368	22.1	1193	71.7	104	6.2
2	1665	390	23.4	1154	69.3	121	7.3
3	1845	456	24.7	1281	69.4	108	5.9
4	1895	489	25.8	1296	68.4	110	5.8
5	1605	541	33.7	991	61.7	73	4.5

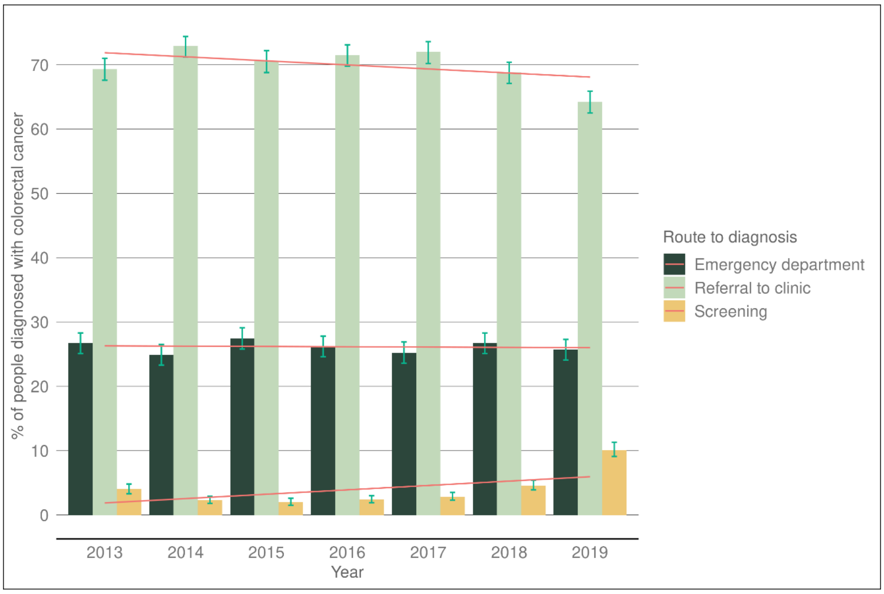

Figure 1 Proportion of people who were diagnosed with bowel cancer following presentation to an emergency department, following referral to a clinic, and following presentation to an emergency department.

Although small numbers, over 2017-2019 Māori appeared to have an increase in diagnosis following screening at 5.1% compared to the previous time period at 1.7% (2013-16). There was no decrease in diagnosis after emergency presentations, rather the reduction appears to be in diagnosis following clinic visits (63% in 2013-2016 compared with 58.9% in 2017-2019).

Similar to the previous report, people aged younger than 50 years or 75 years and older, women, Pacific people, Māori and those living in areas of high social deprivation were more likely to be diagnosed after presenting at an ED. The percentage of Pacific people diagnosed after presenting to an ED was higher than other groups at 44.3% (43.6% in the previous report, 2013-2016).

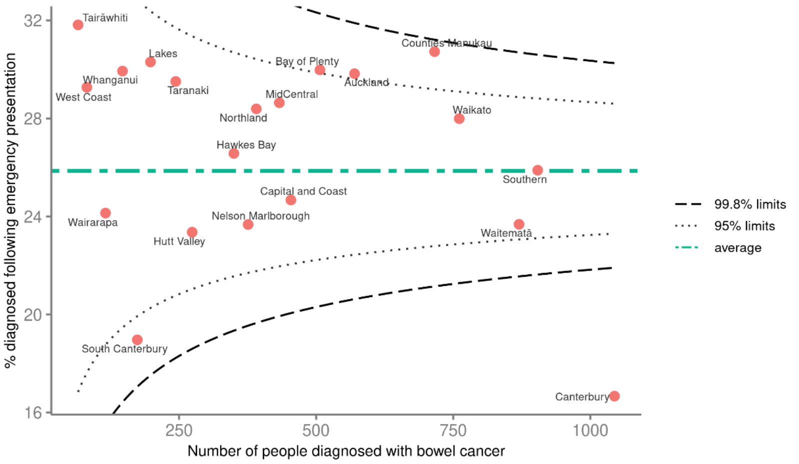

Figure 2 Proportion of people diagnosed with bowel cancer following presentation at an emergency department, by district health board of domicile, 2017-2019

For the proportion of bowel cancer diagnosed following an ED presentation over 2017-2019, there are no DHBs above the upper 99.8% limit and three above 95% limit (Figure 2). There is one DHB below the lower 99.8% limit of funnel plot.

Discussion

Rates for Māori and Pacific peoples being diagnosed following an ED presentation remain high as is the case with people living in areas of high deprivation. This indicator is reflective of inequities in diagnostic pathways.

This indicator provides an opportunity to monitor the consequences of the Bowel Screening Programme. Although calculated while the Bowel Cancer Screening Programme was in the process of being rolled out, it shows an increase in diagnosis following screening. While emergency department related diagnoses have not reduced in response to this, this may represent the programme being in the early stages.

Recommendations

Investigating this indicator at a local level should be a priority for DHBs. DHBs who are outliers should further investigate their data and address potential reasons for variance compared to other DHBs.

The recommended actions for this QPI from the November 2020 Bowel Cancer Quality Improvement Plan have been reproduced below for ease of access.

Recommended actions for routes to diagnosis from Bowel Cancer Quality Improvement Plan 2020

Te Aho o Te Kahu

1. Continue to review diagnosis of colorectal cancer following emergency presentation, including inequities in the proportion of patients presenting to ED, and report to DHBs two-yearly. Report and review more regularly for those DHBs whose results lie outside the 99.8 percent limit above the mean.
2. Develop educational resources for primary care providers on symptoms and appropriate management of patients, including direct access to colonoscopy referral for patients with symptoms consistent with bowel cancer.
3. Consider work to improve public understanding of symptoms of bowel cancer, with a focus on groups disproportionately affected by emergency diagnosis.
4. Establish a primary care advisory group to Te Aho o Te Kahu to provide advice on the factors occurring at primary care level that support or act as barriers to the early diagnosis of cancer including bowel cancer. This might cover pre-diagnosis and referral measures, as well as post-diagnosis primary care management and support.
5. Support the ongoing roll-out of the National Bowel Cancer Screening Programme.

District health boards

1. Review referral pathways to identify unwarranted variation or delays in the referral process. This may include consideration of the processes for direct referral from primary care, and a review of patients who have been diagnosed following acute presentation, to identify barriers that may have prevented earlier diagnosis.
2. Establish robust ‘Did Not Attend’ processes that ensure patients are not removed from a waiting list until several attempts have been made to contact them, both in writing and by phone. Consider established outreach processes. No patient should be removed from a waiting list until a clinician has reviewed the referral and approved the removal, and the DHB has formally notified the patient referrer that the patient could not be contacted. Encourage further attempts to contact the patient through primary care.
3. Encourage and promote the use of educational resources to primary care providers and priority populations.

5 QUALITY PERFORMANCE INDICATORS: SURGICAL CARE

5.1 Post-operative mortality

Indicator description

Proportion of people with colorectal cancer who died within 90 days of surgery (all surgery and elective surgery).

Results

For people with colorectal cancer, the overall 90-day mortality following major surgery was 3% (Table 2), a decrease from 4% in 2013-2016.

For people with colon cancer the 90-day mortality after surgery has decreased from 4.8% to 3.4% over the two time periods.

The 90-day mortality rates for people having surgery for acute or elective colon cancer have both decreased (10.1% to 8.0% and 3.0% to 1.9%, respectively).

Table 2 90-day post-operative mortality for people undergoing major surgery for bowel cancer in public hospitals, 2017-19

	Major bowel cancer surgery	Death within 90 days of surgery	
	N	N	%
Total	5313	158	3
Year of diagnosis			
2017	1725	56	3.2
2018	1759	46	2.6
2019	1829	56	3.1
Age group (years)			
18-49	396	9	2.3
50-59	597	11	1.8
60-74	2189	31	1.4
75+	2131	107	5
Sex			
Female	2488	63	2.5
Male	2825	95	3.4
Ethnicity			
Māori	368	17	4.6
Pacific*	103	-	-
Asian*	240	-	-
European/Other	4560	135	3
Unknown*	42	-	-
NZDep2013 quintile			
1	920	14	1.5
2	998	15	1.5
3	1142	38	3.3
4	1208	48	4
5	1043	42	4

* Due to small numbers, some figures have not been included

Figure 3 shows data 2013 to 2019 for 90-day mortality from bowel cancer showing a likely reduction in mortality over time. Figures 4 and 5 on the next page further explore the possible reduction in mortality for colon cancer. Although there is fluctuation between years particularly for emergency colon surgery, there appears to be a general downward trend 2013 and 2019 in both elective and emergency post-operative mortality rates.

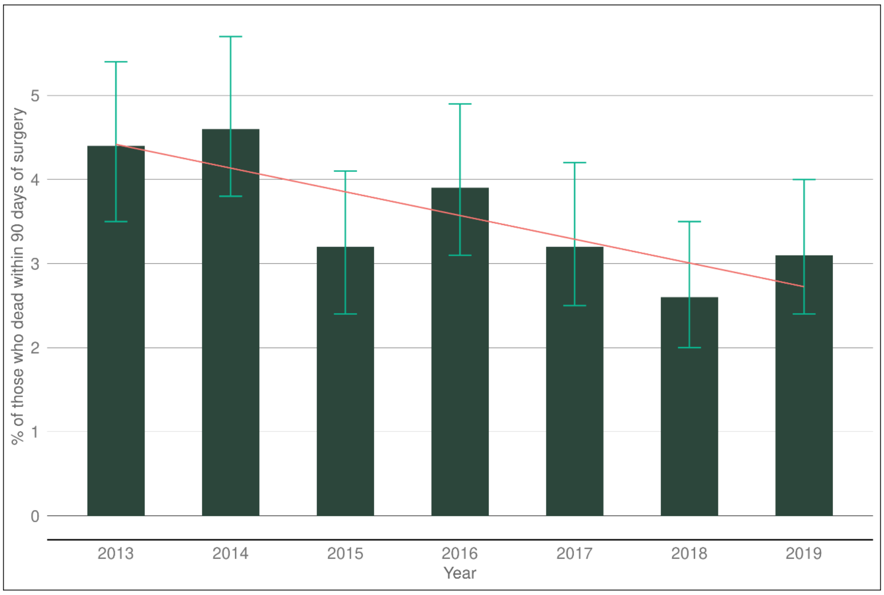

Figure 3 Proportion of people with bowel cancer who died within 90 days of acute or elective surgery

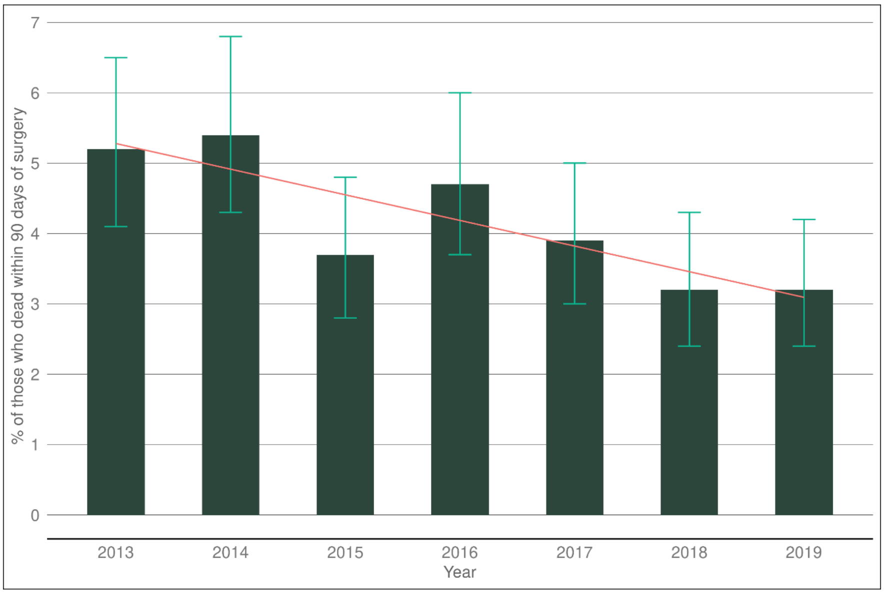

Figure 4 Proportion of people with colon cancer who died within 90 days of acute or elective surgery

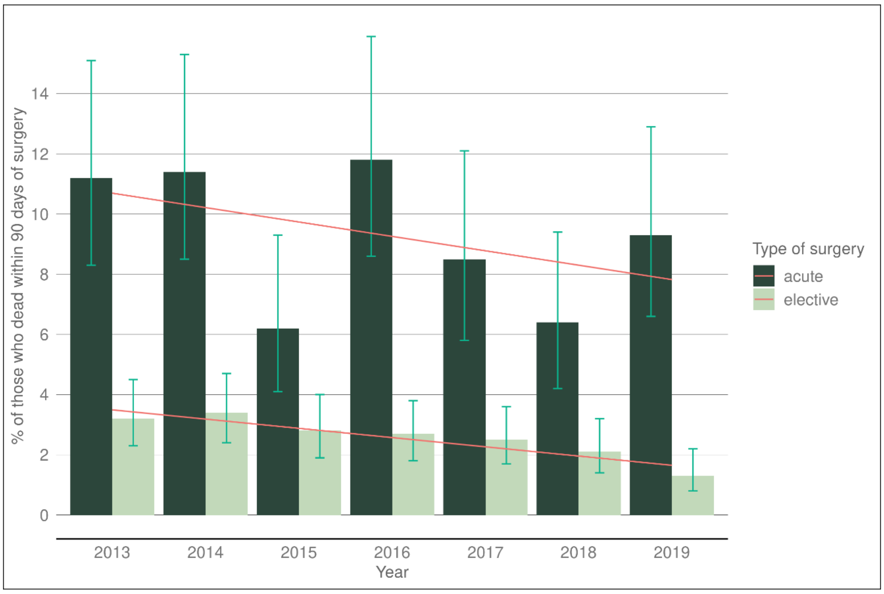

Figure 5 Proportion of people with bowel cancer who died within 90 days of elective or emergency (acute) surgery

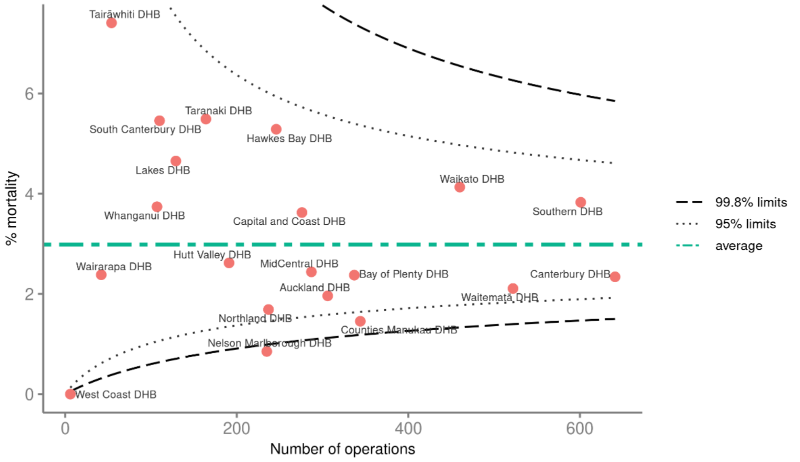

Figure 6 Observed 90-day post-operative mortality (elective and emergency admissions) for patients diagnosed with bowel cancer, by district health board of service, 2017-19

Post-operative 90-day mortality varied markedly across the DHBs from 0 to 7.4% for elective and emergency admissions with no DHBs above the 95% limit (Figure 6).

Discussion

There is an encouraging indication that post-operative mortality has reduced over 2013-2019 for total bowel cancer surgery and for both elective and emergency colon cancer surgery.

There remains considerable variation between DHBs, although no DHB mortality rates are above the 95% confidence limits (noting that this is not comparing against an ideal target). In addition, mortality rates remain higher for Māori and Pacific peoples compared to European/Other.

Recommendations

The recommended actions for this QPI from the November 2020 Bowel Cancer Quality Improvement Plan have been reproduced below for ease of access.

Recommended actions for post-operative mortality from Bowel Cancer Quality Improvement Plan 2020

Te Aho o Te Kahu

1. Continue to review 90-day mortality following colorectal cancer surgery, including inequities in this outcome, and report to DHBs two-yearly. Report and review more regularly for those DHBs whose results lie outside the 99.8 percent limit below the mean.

2. Determine whether there is a need for a nationally consistent and validated preoperative risk score (such as the Physiological and Operative Severity Score for the Enumeration of Mortality and Morbidity (POSSUM) or NZ RISK score).
3. Provide DHBs advice to ensure pathways include robust preoperative assessment and physiological optimisation strategies (nutrition, cardiorespiratory fitness, etc).

District health boards

1. Where a patient dies within 90 days of colorectal cancer surgery, facilitate a proactive audit and feedback process to identify and address factors that may have been preventable.
2. Ensure that a robust preoperative assessment covers patients' nutritional, functional and comorbidity status, and provide support preoperatively to those who need it. Consider delaying definitive surgery while undertaking preoperative assessment and intervention where the clinical setting allows.
3. Use 'enhanced recovery after surgery' (ERAS) protocols.[*] This may include the use of specialist nurses to provide pre- and post-surgical support and education.
4. Consider surgical options including stenting and de-functioning colostomy for high-risk patients and/or those with advanced disease before embarking on major tumour resection.
5. Provide culturally appropriate preoperative support for Māori and Pacific patients and their whānau to avoid delays from missed appointments and to generally improve patient journeys and outcomes.

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[*] Ministry of Health. 2015. *Enhanced Recovery After Surgery*. Wellington: Ministry of Health. URL: **https://www.health.govt.nz/our-work/hospitals-and-specialist-care/enhanced-recovery-after-surgery** (accessed 10 August 2020).

5.2 Emergency surgery

Indicator description

Proportion of people with colorectal cancer undergoing major resection who have emergency surgery.

Results

19.4% of people with colorectal cancer who had major surgical resection from 2017 to 2019 had their surgery performed as an emergency procedure (Table 3). This was similar to the previous time period (19.6%, 2013-2016) (Figure 7).

For people undergoing colon cancer surgery, the rate of emergency surgery was 24% (24.7% for 2013-2016) and for people with rectal cancer the rate was 4.3% (4.4% for 2013-2016).

Māori and Pacific peoples had higher rates of emergency surgery compared European/Other (Table 3). For Pacific peoples the proportion was 28.2% compared with 20.4% for 2013-2016 and for Māori 24.7% compared with the previous period at 23.8%.

Table 3 People undergoing emergency surgery for bowel cancer in public hospitals, 2017-19

	Major bowel cancer surgery	Emergency surgery	
	N	N	%
Total	5313	1030	19.4
Year of diagnosis			
2017	1725	321	18.6
2018	1759	360	20.5
2019	1829	349	19.1
Age group (years)			
18-49	396	103	26
50-59	597	117	19.6
60-74	2189	366	16.7
75+	2131	444	20.8
Sex			
F	2488	547	22
M	2825	483	17.1
Ethnicity			
Māori	368	91	24.7
Pacific	103	29	28.2
Asian	240	43	17.9
European/Other	4560	860	18.9
Unknown	42	7	16.7
NZDep2013 quintile			

1	920	181	19.7
2	998	176	17.6
3	1142	217	19
4	1208	243	20.1
5	1043	213	20.4

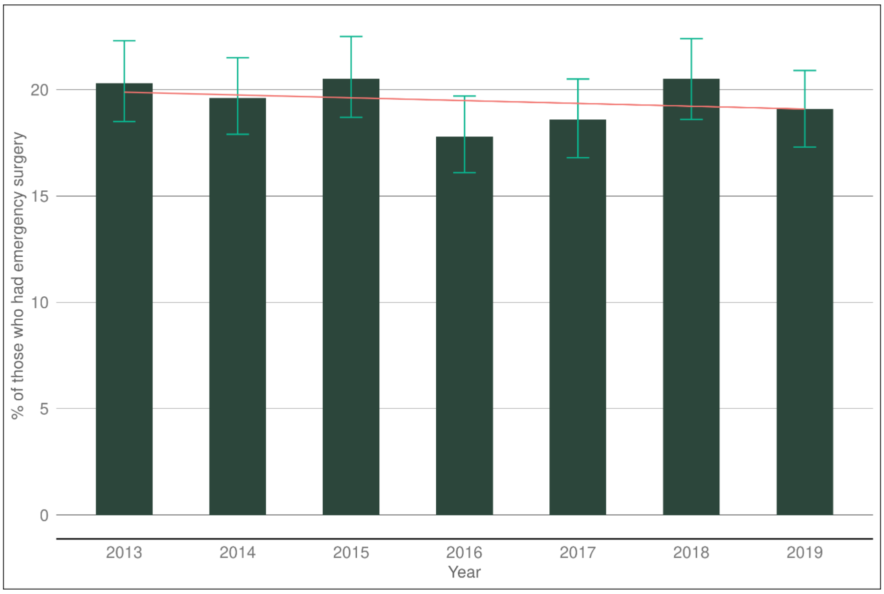


Figure 7 Proportion of people with colorectal cancer who had major resection performed as urgent or emergency surgery

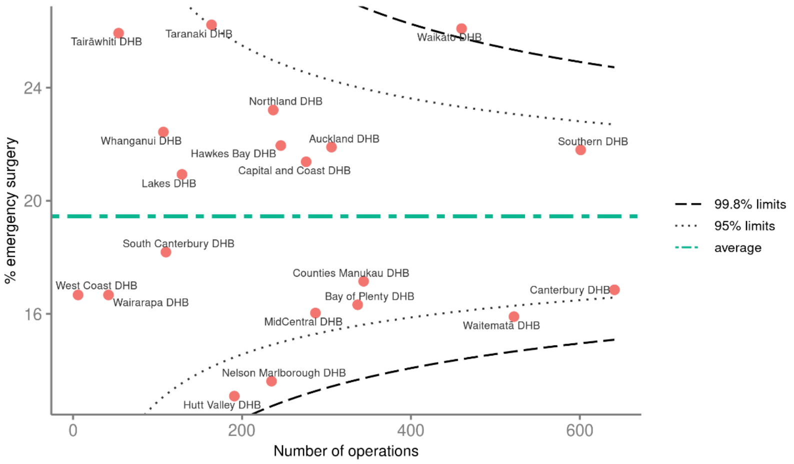


Figure 8 Observed emergency surgery rate for patients diagnosed with bowel cancer, by district health board of service, 2017-19

There were two DHBs above the 95% limits of the funnel plot and three below the 95% limits (Figure 8). There was considerable variation in rate of emergency surgery, from 13.1% to 26.2%.

Discussion

The rate of emergency resections performed for colorectal cancer in Aotearoa New Zealand is high and may contribute to poorer cancer outcomes.

For Māori and Pacific people, the rate is highest, contributing to inequity of outcome as well as likely reflecting inequity in other aspects of the patient pathway. This is particularly important to further understand considering the higher mortality rate seen with emergency surgery. It is unclear why there appears to have been an increase in the proportion of emergency surgery for Pacific peoples, however this is a concerning trend.

Recommendations

Investigating this indicator further should be prioritised by DHBs. Activities to better understand and improve this indicator may include developing a clearer understanding of DHB data, considering and addressing inequity of access to care and any differences in onward referral.

There were no specific recommendations for the emergency surgery QPI in the November 2020 Bowel Cancer Quality Improvement Plan.

5.3 Length of stay after surgery

Indicator description

Median length of stay following surgery for colorectal cancer.

Results

The median length of stay in hospital for people with bowel cancer following major resection was seven days (Table 4), with no change from the previous QPI calculations using data from 2013-2016.

The median length of stay after surgery for bowel cancer ranged from 5.5 to eight days between DHBs. The median length of stay after surgery was six days for people with colon cancer (seven for 2013-2016) and eight days for people with rectal cancer (no change). For the 60-75 year age group, the median length of stay was 6 days compared to 7 days in the previous time period.

Table 4 Length of stay after major surgery for bowel cancer, 2017-2019

	Major bowel cancer surgery	**Median length of stay**
	N	days
Total	5313	7
Year of diagnosis		
2017	1725	7
2018	1759	7
2019	1829	7
Age group (years)		
18-49	396	7
50-59	597	7
60-74	2189	6
75+	2131	7
Sex		
F	2488	7
M	2825	7
Ethnicity		
Māori	368	7
Pacific	103	7
Asian	240	6
European/Other	4560	7
Unknown	42	6
NZDep2013 quintile		
1	920	6
2	998	7
3	1142	7
4	1208	7
5	1043	7

Discussion

The results for this indicator were similar across time periods for ethnicity and DHB variation with a reduction in median length of stay for colon cancer between the two time periods. Improved perioperative management may have contributed to improvement in median length of stay. This indicator will continue to provide a useful monitor of overall post-operative care.

~~Recommendations~~

Commented [TL1]: The Bowel Cancer Quality Improvement Plan 2020 did not make any recommendations specific to this indicator.

The monitoring report also did not make any recommendations for this QPI.

We did not discuss any potential recommendations at the sub-working group meeting.

Suggest no recommendation section

This could be discussed with the working group.

5.4 Lymph node yield

Indicator description

Proportion of people with colon cancer who undergo surgical resection where 12 or more lymph nodes are pathologically examined.

Results

The percentage of people having surgery for colon cancer with 12 more lymph nodes examined increased from 81.5% to 84.5% (2013-2016 compared to current report period 2017-2019) (Table 5). When examined using annual figures form 2013-2019, this increase appears to be sequential (Figure 9).

For Māori, a lower proportion (80.3%) of those who have colon cancer surgery have 12 or more lymph nodes examined compared with European/Other (84.5%). However Pacific people and Asian ethnicity have rates higher than the average at 88.6% and 89.2% respectively.

83.1% of males who had colon cancer surgery had 21 or more lymph nodes examined compared with 85.7% of females. Younger age groups had higher proportion of 12 or more lymph nodes examined compared with the older age groups.

Table 5 Twelve or more lymph nodes pathologically examined for those undergoing surgical resection for colon cancer, 2017-2019

	Major Colon Cancer Surgery	12 or more lymph nodes examined	
	N	N	%
Total	4000	3378	84.5
Year of diagnosis			
2017	1295	1062	82
2018	1331	1121	84.2
2019	1374	1195	87
Age group (years)			
18-49	252	221	87.7
50-59	377	323	85.7
60-74	1569	1334	85
75+	1802	1500	83.2
Sex			
Female	2020	1732	85.7
Male	1980	1646	83.1
Ethnicity			
Māori	254	204	80.3
Pacific	70	62	88.6
Asian	176	157	89.2
European/Other	3465	2927	84.5
Unknown	35	28	80
NZDep2013 quintile			
1	683	598	87.6
2	759	661	87.1
3	875	735	84
4	904	727	80.4
5	777	656	84.4

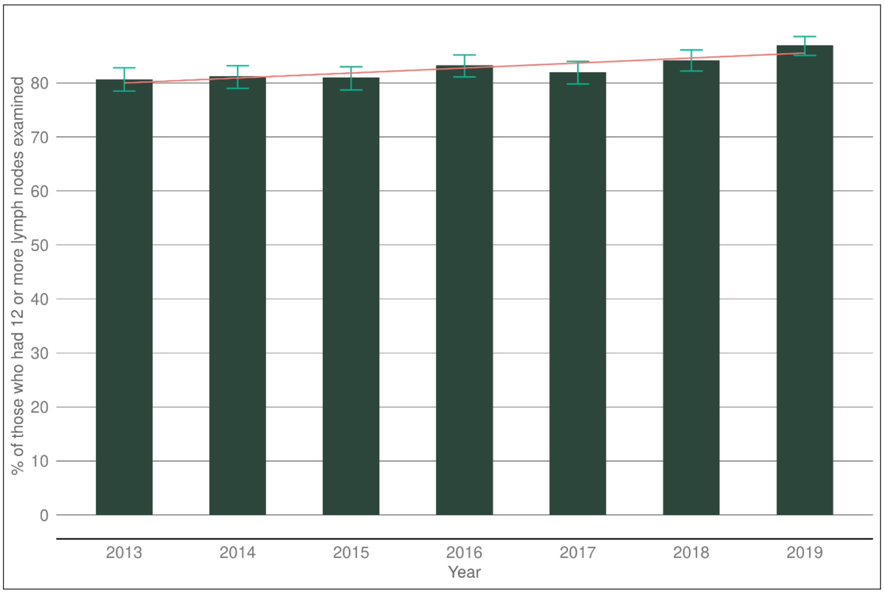


Figure 9 Proportion of people with colon cancer who had surgery where 12 or more lymph nodes were pathologically examined

Figure 10 below shows the funnel plot representation of DHB variation for this indicator. Three DHBs were above the 99.8% limits (compared with six in the previous time period 2013-2016). Five DHBs were below the 95% confidence limits compared with seven in the previous time period.

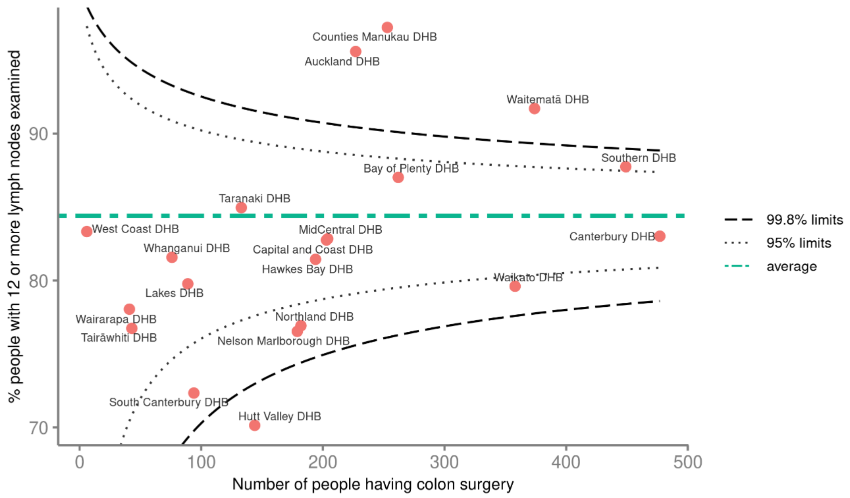


Figure 10 Proportion of people with colon cancer who had surgery where 12 or more lymph nodes were pathologically examined, by district health board of service, 2017-2019

Discussion

The proportion of people with 12 or more lymph nodes pathologically examined appears to be continuing to increase which is promising.

However, the disparity remains for Māori. The higher rates of emergency surgery for Māori may indirectly contribute to this result, however further investigation at a DHB is required.

Recommendations

The recommended actions for this QPI from the November 2020 Bowel Cancer Quality Improvement Plan have been reproduced below for ease of access.

Recommended actions from Bowel Cancer Quality Improvement Plan 2020

Te Aho o Te Kahu

1. Continue to review lymph node harvest following colorectal cancer surgery, including inequities in this outcome, and report to DHBs two-yearly. Report and review more regularly for those DHBs whose results lie outside the 99.8 percent limit below the mean.

2. Investigate implementing a structured pathology reporting project with key stakeholders including the RCPA and DHB chief operating officers (COOs) aiming to incorporate structured reporting as a requirement in laboratory contracts. This would include seeking agreement on which structured report should be used.
3. Work with stakeholders to develop a structured histology request form for colorectal cancer specimens, ensuring that pathologists are fully aware of each patient's key surgical, anatomical, radiological and clinical staging details.
4. Ensure any process developed is mandated by International Accreditation New Zealand standards.

District health boards

1. Develop a quality improvement programme to improve the harvesting, examination and reporting of lymph node yields. This should involve discussions within MDMs and should incorporate an audit cycle to review and monitor progress.
2. Ensure that there is clear understanding among relevant staff (surgeons and pathologists) of the importance of a lymph node harvest of at least 12 nodes.
3. Implement a system whereby, if there are fewer than 12 lymph nodes identified in a surgical sample, a repeat review is requested. Pathology assistants may be able to assist with this.
4. Ensure that clinical staff and laboratory service providers support the implementation of the nationally agreed structured pathology reporting project and structured histology request form.

6 QUALITY PERFORMANCE INDICATORS: RECTAL CANCER

6.1 Rectal cancer treatment

Indicator description

Proportion of people with rectal cancer who receive a) no radiotherapy (ie, surgery alone), b) pre-operative short-course radiotherapy (SCRT) or c) pre-operative long-course radiotherapy (LCRT)

Results

The percentage of people with rectal cancer having no radiotherapy is the same as the previous period (44.2% for 2013-2016 vs 44.1% for 2017-2019) (Table 5).

A small percentage more people with rectal cancer received short course radiotherapy (16.3% for 2017-19, an increase of 1.2%) and a similar percentage received long course radiotherapy (37.6%) compared to the previous period.

Māori have considerably lower rates of surgery alone at 34.3% compared with European/Other at 45.3%.

Table 6 People with rectal cancer having surgery alone and short-course and long-course preoperative radiotherapy, 2017-19

	Major surgery for rectal cancer	Pre-operative radiotherapy		Long-course RT		Short-course RT		No radiotherapy (surgery alone)	
	N	N	%	N	%	N	%	N	%
Total	1218	669	54.9	458	37.6	199	16.3	537	44.1
Year of diagnosis									
2017	394	230	58.4	161	40.9	62	15.7	160	40.6
2018	402	220	54.7	156	38.8	61	15.2	179	44.5
2019	422	219	51.9	141	33.4	76	18	198	46.9
Age group (years)									
18-49	129	90	69.8	70	54.3	17	13.2	38	29.5
50-59	204	136	66.7	98	48	35	17.2	67	32.8
60-74	588	313	53.2	224	38.1	86	14.6	268	45.6
75+	297	130	43.8	66	22.2	61	20.5	164	55.2
Sex									
Female	430	238	55.3	164	38.1	73	17	188	43.7
Male	788	431	54.7	294	37.3	126	16	349	44.3
Ethnicity									
Māori	108	71	65.7	53	49.1	15	13.9	37	34.3
Pacific*	31	19	61.3	18	58.1	-	-	-	-
Asian	64	38	59.4	27	42.2	11	17.2	26	40.6
European/Other	1008	540	53.6	360	35.7	171	17	457	45.3
Unknown*	7	-	-	-	-	-	-	-	-
NZDep2013 quintile									
1	219	115	52.5	81	37	33	15.1	102	46.6
2	225	110	48.9	83	36.9	24	10.7	114	50.7
3	247	148	59.9	98	39.7	46	18.6	98	39.7
4	284	167	58.8	106	37.3	60	21.1	112	39.4
5	243	129	53.1	90	37	36	14.8	111	45.7

* Due to small numbers, some figures have not been included

Commented [TL2]: Vahid - Regarding exclusion criteria for denominator data:

We have an error in calculation. Do we need to rerun the code?

Commented [VA3R2]: If we re-run the code we will need to do this for all the indicators. If we re-run the code all numbers will be changed because of updates to the data. If we don't rerun and instead keep the current numbers, we will need to justify the difference. 1253 is the total number of surgeries for rectal. (1253 was in the Appendix table). Re running the code for all the indicators will take approximately 1 week.

Commented [GN4R2]: Yes, we should rerun the code.

Figures 11 and 12 show change over time from 2013 to 2019. As the proportions fluctuate for each treatment type between years, it is not clear if there is a true trend over this time period. However, there is a suggestion of an increasing trend in the use of SCRT and the converse for LCRT.

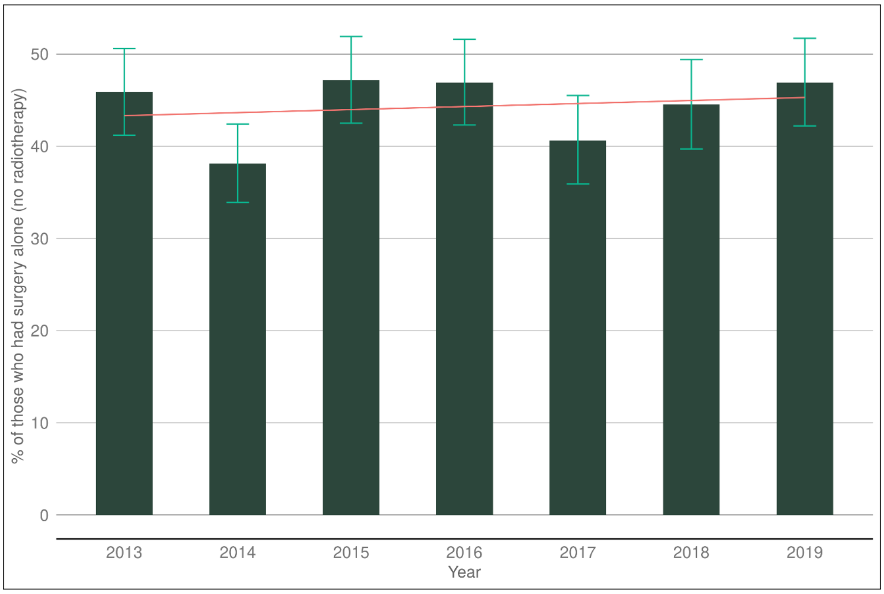


Figure 11 Proportion of people with rectal cancer who had no radiotherapy (surgery alone)

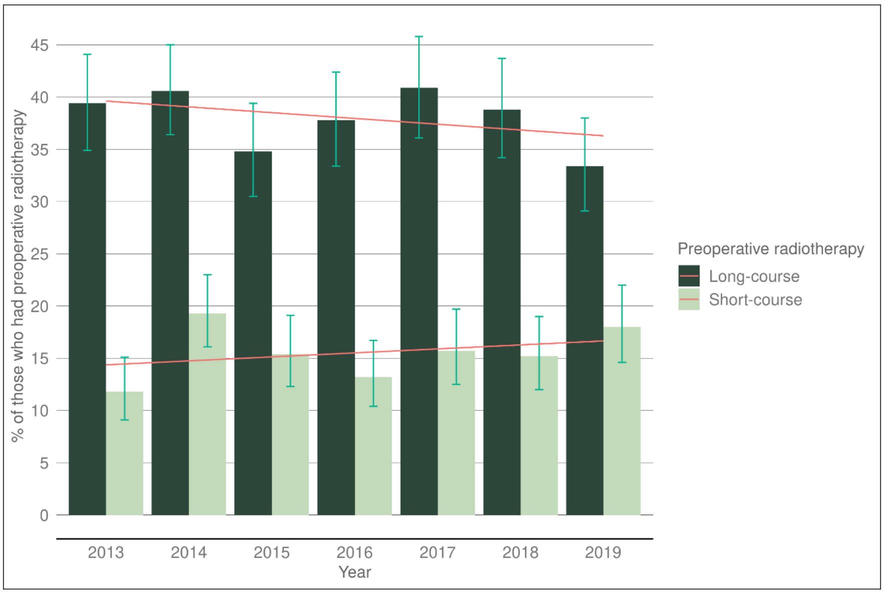


Figure 12 Proportion of people with rectal cancer who received surgery and either long course radiotherapy treatment (LCRT) or short course radiotherapy treatment (SCRT)

Figure 13 Proportion of people with rectal cancer having no radiotherapy (surgery alone), by district health board of service for surgery, 2017-19

For surgery alone (no publicly funded radiotherapy), three DHBs were below the 99.8% limits and one was above the 99.8% limits (Figure 13).

For SCRT and LCRT, there was wide variation across DHB regions (Figure 14 and Figure 15). For SCRT two DHBs were above the 95% confidence limits and two were below the 99.8% confidence limits. For LCRT, four DHBs were above the 95% limits and three were below the 95% limits.

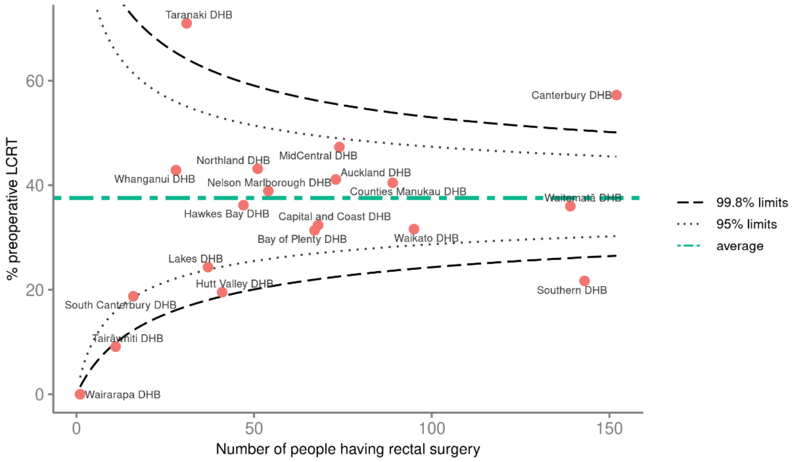


Figure 14 Proportion of people with rectal cancer having pre-operative long-course radiotherapy, by district health board of service for surgery, 2017-19

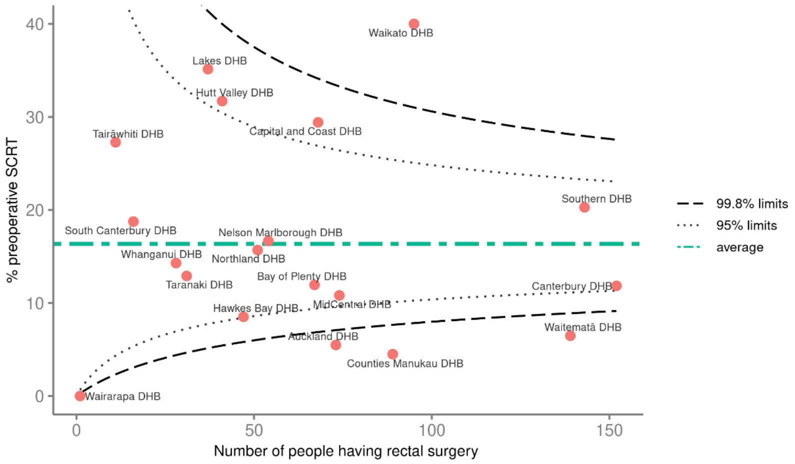


Figure 15 Proportion of people with rectal cancer having pre-operative short-course radiotherapy, by district health board of service for surgery, 2017-19

Discussion

There is no clear change in the results for this indicator between the two time periods (2013-2016 and 2017-2019), although there is a suggestion of decreasing use of LCRT and increasing use of SCRT over time. There is no clear reason for the wide variation seen between DHB regions.

There is a general change in international practice for the use of radiotherapy in rectal cancer, including an increasing use of pre-operative therapy. This makes interpretation of this indicator challenging, however will provide helpful comparisons over the next 5-10 years.

There is a persistently lower rate of management of rectal cancer by surgery alone for Māori, with reasons for this remaining unclear. It may be influenced by higher numbers of Māori with rectal cancer presenting with advanced disease and the wide variation in practice between DHBs combined with varying population make up in DHB regions.

Recommendations

The recommended actions for this QPI from the November 2020 Bowel Cancer Quality Improvement Plan have been reproduced below for ease of access.

Recommended actions from Bowel Cancer Quality Improvement Plan 2020

Te Aho o Te Kahu

1. Continue to review radiotherapy use preceding rectal cancer surgery, including inequities in this outcome, and report to DHBs two-yearly. Report and review more regularly for those DHBs whose results lie outside the lower limit of the 99.8 percent confidence intervals for this indicator.
2. Work with the Radiation Oncology Working Group and NBCWG to develop standardised indications for long and short course radiotherapy.

District health boards

1. Implement and monitor standardised indications for long- and short-course radiotherapy, once developed.

6.2 Abdominoperineal resection

Indicator description

Proportion of people with rectal cancer who had major surgery and an abdominoperineal resection (APR).

Results

20.7% of people who underwent major surgery for rectal cancer had an abdominoperineal resection (Table 7). Māori had a higher proportion of APR procedures compared to other ethnicities (23.4%).

Table 7 People who underwent major surgical resection for rectal cancer who had an abdominoperineal resection

	Major surgery for rectal cancer	Abdominoperineal resection (APR)	
	N	N	%
Total	1138	236	20.7
Year of diagnosis			
2017	366	76	20.8
2018	372	79	21.2
2019	400	81	20.2
Age group (years)			
18-49	126	26	20.6
50-59	194	45	23.2
60-74	560	113	20.2
75+	258	52	20.2
Sex			
Female	403	88	21.8
Male	735	148	20.1
Ethnicity			
Māori	94	22	23.4
Pacific*	30	-	-
Asian*	60	-	-
European/Other	947	202	21.3
Unknown*	7	-	-
NZDep2013 quintile			
1	207	34	16.4
2	211	47	22.3
3	229	41	17.9
4	263	65	24.7
5	228	49	21.5

* Due to small numbers, some figures have not been included

Commented [TL5]: Denominator excludes those who die prior to 18 months, as per Prof Bissett – this exclusion is not required for APR rate, only for the stoma-free survival

This is not a quick fix but will be sorted when we rerun the numbers

There was wide variation in the proportion of ABR performed across DHBs (Figure 16). One DHB was below the 99.8% lower limit of the funnel plot an no DHBs were above the 95% limit.

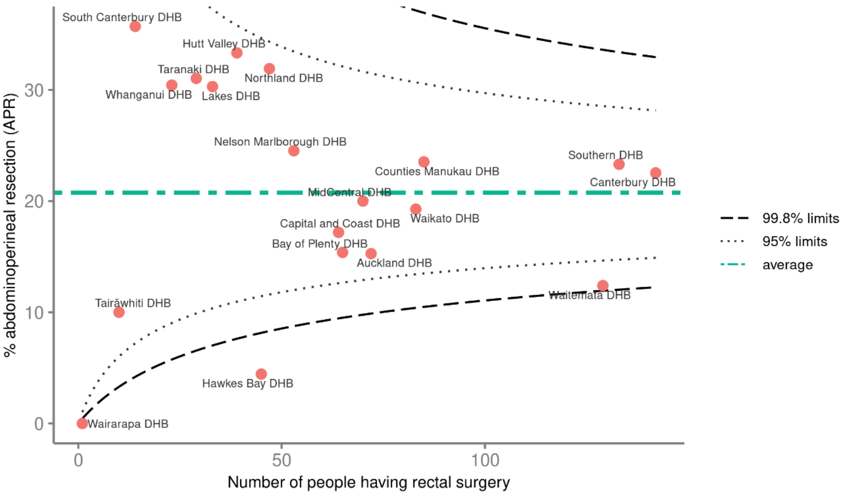


Figure 16 Proportion of people having rectal cancer surgery who underwent abdominoperineal resection by district health board, 2017-19

Discussion

A lower APR rate means a lower proportion of permanent stomas (decided at the time of surgery). This rate is similar to international comparisons such as the United Kingdom (HQIP, 2020).

This highlights an inequity for Māori who are more likely to undergo this procedure.

Recommendations

Because this QPI was not included in the original 2019 monitoring report there were no recommended actions for this QPI from the November 2020 Bowel Cancer Quality Improvement Plan. However, it is now recommended that the action as a result of the calculation of the APR QPI is that Te Aho o Te Kahu and DHBs should continue to aim for data quality improvement to enable calculation of stoma-free survival in future reports.

APPENDIX A: DESCRIPTION AND TECHNICAL SPECIFICATION FOR ABDOMINOPERINEAL RESECTION INDICATOR

Need a statement to say that the specifications for the other QPIs can be found at www.xxxyyy.

BCQI21_a Abdominoperineal Resection (APR)

Indicator description	Proportion of people with rectal cancer who had major surgery and an abdominoperineal resection.
Rationale and evidence	Abdominoperineal resection (APR) is the removal of the sigmoid colon, the rectum, and the anus, leaving a permanent stoma. For patients undergoing resection for rectal cancer, sphincter preserving surgery should be considered if appropriate, with reversal of defunctioning stoma within 18 months. APR may have poorer outcomes compared to low anterior resection (Ptok, Marusch, Kuhn, Gastinger, & Lippert, 2007) and there APR may decrease quality of life due to the formation of a permanent stoma, However, sphincter preserving surgery for low rectal cancer can have complications and requirement for a permanent stoma (Campos-Lobato, Alves-Ferreira, Lavery, & Kiran, 2011; Holmgren et al., 2017) Therefore this QPI should be considered in conjunction with other markers of quality. While there is some evidence that this QPI may not be a useful marker of overall hospital performance (Jorgensen, Young, Dobbins, & Solomon, 2013), it highlights variation between services (E. Morris et al., 2008) and as this is a common indicator used internationally, it will allow for comparison. Effective MDT planning and surgical technique may lower the rate of permanent colostomy and ileostomy.
Equity / Māori health gain	There is international evidence of inequity in provision of sphincter sparing surgery for disadvantaged population groups, for example African American patients in the United States (**Arsoniadis et al., 2018**; **A. M. Morris, Billingsley, Baxter, & Baldwin, 2004**).

Specifications	**Numerator**	Number of people with colorectal cancer who had an abdomoperineal resection
	Denominator	All patients who undergo major resection for rectal cancer.
Data sources	NZCR, NDMS	

Sources of data for indicators

This document refers to the following national data sources.

- **New Zealand Cancer Registry (NZCR)** – a population-based register of all primary malignant diseases diagnosed in Aotearoa New Zealand, excluding squamous and basal cell skin cancers
- **National Minimum Dataset (NMDS)*** – a collection of public and private hospital discharge information, including coded clinical data for inpatients and day patients

More information on these data sources can be found on the Ministry of Health's website: **www.health.govt.nz**.

Measure items

Dataset	Data item	Description
NZCR	Site	Primary organ of origin of the cancer
NZCR	Sex	Sex of patient
NZCR	Age at diagnosis	Age of patient at diagnosis
NZCR	Morphology	Microscopic or cellular anatomy of the cancer
NZCR	Behaviour code	Neoplastic behaviour of the cancer
NZCR	Date of initial diagnosis	Date person first diagnosed with bowel cancer
NZCR	Basis	Basis of diagnosis
NZCR	Multiple tumour flags	Person diagnosed with more than one tumour
NZCR	Registration status code	Status of registration processing
NMDS	DHB name	DHB of service for patient
NMDS	Procedure code	Procedure code
NMDS	Procedure date	Date of procedure

* Hospital events in NMDS are coded using the International Statistical Classification of Diseases and Related Health Problems, Tenth Revision, Australian Modification (ICD-10-AM) for diagnoses and the Australian Classification of Health Interventions (ACHI) for procedures. Both ICD-10-AM and ACHI are from the Independent Hospital Pricing Authority, Australia.

Case eligibility criteria (denominator)

Diagram reference	Assessment	Item	Codes
1	First or only diagnosis of malignant neoplasm	Site	Date of first diagnosis with colorectal cancer
2	Primary site – rectum	Primary site	Rectum C20
3	Exclude manually censored case	Exclusion	Patients diagnosed following death certificate only (basis = 0) Patients domiciled outside of New Zealand (DHB_code = 999) People with appendiceal carcinomas C18.1 site code Patients with NETs, gastrointestinal stromal sarcoma (GISTs), lymphomas, squamous cell carcinomas, neuroendocrine carcinomas and melanomas. Morphology codes 8240, 8249, 8246, 8070, 8720, 8013, 8041, 8244 and 8936. Registration codes not R_C or R_R Non-incident cancer (exclude people with multiple tumour flags = yes) Exclude patients who had their initial surgery 2 months prior to initial diagnosis or 6 months after their initial diagnosis
4	Male or female	Sex	M or F
5	Adult patient over the age of 17 at diagnosis	Age at diagnosis	18 years and over
6	Invasive tumours	Behaviour code	3
7	Diagnosis date	Date of initial diagnosis	2016–18
8	Surgical procedure	Surgical procedure of the primary site	Patients who undergo definitive surgery for rectal cancer (same procedures codes as bowel cancer) between 50 days prior and 365 days after diagnosis. This excludes patients who undergo transanal endoscopic microsurgery, transanal resection of tumour or endoscopic resection of tumour (3210300, 3210500, 3210800)

Numerator criteria

Diagram reference	Assessment	Item	Codes
9	Numerator: Number of people with colorectal cancer who had an abdomoperineal resection	APR	**9** Includes people who had an APR (3203900) See ACHI procedure codes below

Australian Classification of Health Interventions (8th edition) procedure codes

Transanal resection codes

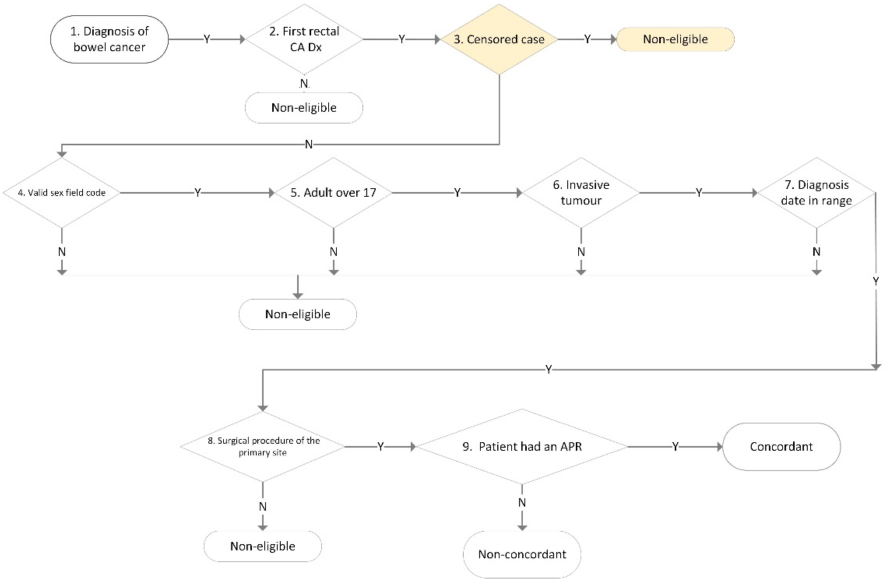
Code	Block short description	Clinical code description
3210300	Excision lesion or tissue rectum or anus	Per anal excision of lesion or tissue of rectum via stereoscopic rectoscopy
3210500	Excision lesion or tissue rectum or anus	Per anal full thickness excision of anorectal lesion or tissue
3210800	Excision lesion or tissue rectum or anus	Transsphincteric excision of lesion or tissue of rectum

Definitive surgery procedure codes for bowel cancer

Code	Block short description	Clinical code description
3200000	Colectomy	Limited excision of large intestine with formation of stoma
3200001	Colectomy	Right hemicolectomy with formation of stoma
3200300	Colectomy	Limited excision of large intestine with anastomosis
3200301	Colectomy	Right hemicolectomy with anastomosis
3200400	Colectomy	Subtotal colectomy with formation of stoma
3200401	Colectomy	Extended right hemicolectomy with formation of stoma
3200500	Colectomy	Subtotal colectomy with anastomosis
3200501	Colectomy	Extended right hemicolectomy with anastomosis
3200600	Colectomy	Left hemicolectomy with anastomosis
3200601	Colectomy	Left hemicolectomy with formation of stoma
3200900	Colectomy	Total colectomy with ileostomy
3201200	Colectomy	Total colectomy with ileorectal anastomosis

3201500	Total proctocolectomy	Total proctocolectomy with ileostomy
3202400	Anterior resection of rectum	High anterior resection of rectum
3202500	Anterior resection of rectum	Low anterior resection of rectum
3202600	Anterior resection of rectum	Ultra low anterior resection of rectum
3202800	Anterior resection of rectum	Ultra low anterior resection of rectum with hand sutured coloanal anastomosis
3203000	Rectosigmoidectomy or proctectomy	Rectosigmoidectomy with formation of stoma
3203900	Rectosigmoidectomy or proctectomy	Abdominoperineal proctectomy
3205100	Total proctocolectomy	Total proctocolectomy with ileo-anal anastomosis
3205101	Total proctocolectomy	Total proctocolectomy with ileo-anal anastomosis and formation of temporary ileostomy
3206000	Rectosigmoidectomy or proctectomy	Restorative proctectomy
3209900	Excision of lesion or tissue of rectum or anus	Per anal submucosal excision of lesion or tissue of rectum
3211200	Rectosigmoidectomy or proctectomy	Perineal rectosigmoidectomy
9220800	Anterior resection of rectum	Anterior resection of rectum, level unspecified

Flow diagram for calculating BCQI21_a Abdominoperineal Resection (APR)



APPENDIX B: REFERENCES

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APPENDIX C: WORKING GROUP MEMBERS

The National Bowel Cancer Working Group members in 2018 were:

- Professor Ian Bissett (chair), colorectal surgeon, Auckland District Health Board/University of Auckland
- Dr Christopher Jackson (deputy chair), medical oncologist, Southern District Health Board
- Mr Adrian Secker, general surgeon, Nelson Marlborough District Health Board
- Anne Cleland, gastroenterology nurse, MidCentral District Health Board
- Mr David Vernon, general surgeon, Lakes District Health Board
- Denise Robbins, consumer representative
- Dr Helen Moore, radiologist, Auckland District Health Board
- Dr Iain Ward, radiation oncologist, Canterbury District Health Board
- Dr Janet Hayward, general practitioner, Nelson
- Dr Joe Feltham, radiologist, Capital and Coast District Health Board
- Dr John McMenamin, general practitioner, Whanganui
- Judith Warren, cancer nurse, Waikato District Health Board
- Dr Marianne Lill, general surgeon, Whanganui District Health Board
- Dr Nicole Kramer, pathologist, Auckland District Health Board
- Dr Nina Scott (Ngāti Whatua), public health physician, Waikato
- Mr Ralph Van Dalen, colorectal surgeon, Waikato District Health Board
- Mr Siraj Rajaratnam, general and colorectal surgeon and endoscopist, Waitemata District Health Board
- Associate Professor Susan Parry, gastroenterologist, Auckland District Health Board
- Dr Teresa Chalmers-Watson, gastroenterologist and hepatologist, Canterbury District Health Board.