

Briefing

Release of reports on pancreatic cancer quality improvement

Date due to MO:	N/A	Action required by:	31/03/2023
Security level:	IN CONFIDENCE	Health Report number:	H2023020866
To:	Hon Dr Ayesha Verrall, Minister of Health		
Copies to:	Hon Peeni Henare, Associate Minister of Health (Māori Health) Hon Barbara Edmonds, Associate Minister of Health (Pacific Health) Hon Willow-Jean Prime, Associate Minister of Health (Public Health)		

Contact for telephone discussion

Name	Position	Telephone
Nicola Hill	Acting Chief Executive	s 9(2)(a)
Gabrielle Nicholson	Manager, Quality Improvement	s 9(2)(a)

Minister's office to complete:

- | | | |
|---|------------------------------------|--|
| <input type="checkbox"/> Approved | <input type="checkbox"/> Decline | <input type="checkbox"/> Noted |
| <input type="checkbox"/> Needs change | <input type="checkbox"/> Seen | <input type="checkbox"/> Overtaken by events |
| <input type="checkbox"/> See Minister's Notes | <input type="checkbox"/> Withdrawn | |

Comment:

Release of the Pancreatic Cancer Quality Improvement Monitoring Report 2023

Security level: IN CONFIDENCE **Date:** 22 March 2023

To: Hon Dr Ayesha Verrall, Minister of Health

Purpose of report

1. This briefing provides key information about quality improvement in pancreatic cancer care and treatment and seeks your approval to undertake a two-stage public release of three pancreatic cancer quality improvement reports: 1) the Pancreatic Cancer Quality Improvement Monitoring Report; 2) the Pancreatic Cancer Quality Performance Indicator Descriptions; and 3) the Pancreatic Cancer Quality Performance Indicator Technical Specifications (the reports).

Summary

2. The quality performance indicator (QPI) programme aims to highlight variation in cancer diagnosis, treatment and outcomes in order to inform cancer service quality improvement activities.
3. Te Aho o Te Kahu, together with the national Pancreatic Cancer Working Group (the working group), which is made up of clinical experts, sector stakeholders and consumers, has produced these three reports as part of the wider QPI programme.
4. Once approval is given, the reports will be released via a two-stage proactive release plan:
 - a) Stage one: Distribution of the draft reports to Te Whatu Ora, clinicians and other relevant health and cancer stakeholders, for review and feedback.
 - b) Stage two: Public release of the final reports via publication on the Te Aho o Te Kahu website.
5. This two-stage release enables feedback and the resolution of any issues arising from Te Whatu Ora, clinicians or other key stakeholders. Te Whatu Ora can compare the report findings to their own local data and give feedback and/or request amendments prior to the public release of the reports. This approach has been used previously with the reports for bowel, lung and prostate cancer with constructive engagement from the sector and low media interest.
6. The nine QPIs reported on in the monitoring report are:
 - a) Route to diagnosis
 - b) Pancreatic resection

- c) Biliary drainage / stenting
 - d) Tissue diagnosis
 - e) Medical oncology review
 - f) Radiation therapy
 - g) Days alive and out of hospital
 - h) Post-operative mortality
 - i) Overall survival.
7. Detail about the findings against each indicator is provided in the *Key findings* section below.
 8. The QPI programme also aims to provide evidence to support the achievement of equity in the cancer system for Māori, and other groups including Pacific Peoples. Data for all QPIs was stratified by ethnicity except for the post-operative mortality QPI (which could not be stratified due to low numbers and was instead reported nationally). For the majority of the pancreatic cancer QPIs, the results suggest inequity for Māori, noting that for some indicators it is difficult to make inferences from the data due to the small number of Māori patients.
 9. The monitoring report shows that there is geographical variation across Te Whatu Ora Districts (Districts) for the majority of the QPIs.¹ It is highly likely that some of the variation can be explained by patients in some locations presenting later, with more advanced disease.
 10. Messaging for the release of the report will focus on the opportunities for improvement and the proposed next steps for the health sector and Te Aho o Te Kahu.

Recommendations

11. It is recommended that you:
 - a) **Approve** the public release of the pancreatic cancer quality improvement reports, in a two-stage process. **Yes/No**
 - b) **Note** that if significant changes are required to these reports after stage-one, then stage-two will be put on hold until these changes have been made. If substantial changes are required, Te Aho o Te Kahu will seek your approval for release of the final, updated reports. **Yes/No**



Nicola Hill
 Tumuaki, Acting Chief Executive
Te Aho o Te Kahu, Cancer Control Agency

Hon Dr Ayesha Verrall,
 Minister of Health
 Date:

¹ The reports use the term DHB because they were still in existence for the time period the reports cover; however, in this briefing the terminology used is Te Whatu Ora - Districts.

Cancer Quality Performance Indicators

Background

12. Across Aotearoa New Zealand (Aotearoa), cancer services deliver high quality care for most people, most of the time. However, this high-quality care is not consistently delivered in all parts of the country and to all people equally.
13. The QPI programme aims to highlight variation in cancer diagnosis, treatment and outcomes in order to identify where further investigation might be needed and to support quality improvement activities. Addressing variation in cancer services is fundamental to improving the quality of care and patient outcomes as well as reducing inequities caused by geographical location, ethnicity, age and deprivation.
14. The QPI programme reports on QPIs by cancer type using data from the New Zealand Cancer Registry (NZCR) and other national data collections.
15. Reporting on clinical processes and outcomes is an internationally accepted approach to driving quality improvement in cancer care. Te Aho o Te Kahu has modelled the QPI programme on similar indicator programmes delivered in jurisdictions like Queensland, Australia and Ontario, Canada.
16. The reports aim to provide information that can be used to inform further investigation and quality improvement activity at district, regional and national levels.
17. The programme, in partnership with cancer-specific expert working groups, has developed and reported on cancer specific QPIs for bowel (initially reported in 2019 and recalculated and reported in 2022), lung, and prostate cancers. The pancreatic cancer QPI reports represent the fourth cancer-specific set of QPIs. Breast cancer QPIs are currently in development and will be reported in 2024.
18. The QPIs are recalculated with more recent data and reported approximately every three years, in order to highlight changes (improvements) over time.
19. The QPI programme intends to provide information on the full cancer pathway from referral, to diagnosis, to treatment, to survivorship or palliation. However, due to current data limitations, most QPIs reported are on cancer treatments and outcomes. Data quality improvement projects to enable broader, more complete reporting are in progress.

Pancreatic cancer quality improvement monitoring report

20. Te Aho o Te Kahu, together with the national Pancreatic Cancer Working Group, have produced the Pancreatic Cancer Quality Improvement Monitoring Report 2023, and its supporting documents (the Pancreatic Cancer Quality Performance Indicator Descriptions and Pancreatic Cancer Quality Performance Indicator Technical Specifications).
21. The monitoring report provides results using national data collections for nine pancreatic cancer QPIs, which have been identified as important to improving pancreatic cancer treatment and care in Aotearoa:
 - a) Route to diagnosis
 - b) Pancreatic resection
 - c) Biliary drainage / stenting
 - d) Tissue diagnosis

- e) Medical oncology review
- f) Radiation therapy
- g) Days alive and out of hospital
- h) Post-operative mortality
- i) Overall survival.

Development of the pancreatic cancer quality performance indicators

22. Work on the pancreatic cancer-specific QPIs was commenced by Manatū Hauora prior to the Te Aho o Te Kahu's establishment; Te Aho o Te Kahu took over responsibility for the QPI programme at its inception in December 2019.
23. Te Aho o Te Kahu, together with the working group, developed 19 potential pancreatic cancer QPIs, which were publicly consulted on in 2021. The full list of 19 QPIs is outlined in the Pancreatic Cancer Quality Performance Indicator Descriptions document.
24. The process for selecting the 19 QPIs included three steps:
 - a) Collating a 'long list' of pancreatic cancer QPIs with the working group based on international and national literature and evidence. The working group then reviewed these indicators and considered which would be most valuable to drive quality improvement for pancreatic cancer care in Aotearoa.
 - b) A 'short list' was carried forward for further discussion and an initial assessment of measurability.
 - c) A final list of potential pancreatic cancer QPIs were released for public consultation from August 2021 to September 2021.
25. Only nine of the 19 potential pancreatic cancer QPIs can be calculated at this time, due to the limitations of existing national data. The remaining 10 QPIs are 'aspirational' and will be measured and reported on in the future when the data improves.
26. The Pancreatic Cancer Quality Improvement Monitoring Report provides the results for nine of the QPIs listed in the Pancreatic Cancer Quality Performance Indicator Descriptions document.
27. The Pancreatic Cancer Quality Performance Indicator Technical Specifications document describes how the nine indicators were calculated.
28. To calculate the nine measurable pancreatic cancer QPIs, data was extracted from national data collections, starting with the New Zealand Cancer Registry (NZCR), for people diagnosed with a new primary diagnosis of pancreatic cancer from 1 January 2015 to 31 December 2019. This timeframe was chosen because it contains the most complete data.
29. Where the data enables it, analysis on equity differences, including geographical location, ethnicity, age, sex and deprivation have been provided.
30. Te Aho o Te Kahu will recalculate these QPIs with more recent data approximately every three years, to show change over time.

General information about pancreatic cancer in Aotearoa

31. Internationally, the incidence of pancreatic cancer is increasing, and five-year survival rates have shown little improvement compared to other common solid cancers.

32. In Aotearoa, improvement in outcomes for pancreatic cancer appear to be lagging behind other high-income countries.
33. Pancreatic cancer has a very low five-year survival rate (12%), with Māori more likely to die from this cancer compared to non-Māori.
34. In Aotearoa, over 630 patients are diagnosed with pancreatic cancer each year and the incidence of pancreatic cancer has increased for both Māori and non-Māori.
35. Pancreatic cancer is difficult to diagnose when it is in its early stages, when it is most curable; early pancreatic cancer does not cause many signs or symptoms. In general, symptoms are not experienced until it has spread, or the tumour is large enough to block the bile duct and cause jaundice. Also, the symptoms that occur with pancreatic cancer can occur/be confused with many other conditions.
36. There is no examination that is specific for the diagnosis of pancreatic cancer. Most patients will need to have several tests and scans to confirm a diagnosis of pancreatic cancer.
37. As with many cancers, the risk of pancreatic cancer increases with some modifiable risk factors such as tobacco and alcohol use, type 2 diabetes and excess body weight. Physical activity can reduce risk.

Key findings

38. The report found geographical variation between districts for the majority of the QPIs. It is highly likely that some of the variation can be explained by patients in some locations presenting later, with more advanced disease. Te Whatu Ora districts will need to investigate the cause of later presentation; exploration should include consideration of community and primary care pathways into diagnostics and secondary care.
39. *Route to diagnosis:* A considerable proportion (68.7%) of people with pancreatic cancer had an emergency/acute admission to hospital in the 30 days prior to their cancer diagnosis. This finding aligns to recent research finding Aotearoa has a higher proportion of diagnosis through emergency department compared to other high-income countries and this is an area for attention and improvement. Māori and Pacific peoples were more likely to have their pancreatic cancer diagnosed following an acute hospital admission².
40. *Pancreatic resection:* This indicator gives the proportion of people with pancreatic cancer who have had a pancreatic resection, as well as providing information about where the surgery is performed. The indicator results show that only 7.2% of people with pancreatic cancer had a pancreatic resection. Pancreatic resections were performed in 13 districts and there was a wide range of volumes across districts. This is relevant considering there is a relationship between volume of surgery and outcomes. Māori with pancreatic cancer had lower rates of pancreatic resection than people of European/other and Asian ethnicities. These inequities may be explained by more advanced disease at diagnosis, differences in access to primary care and diagnostics, and greater comorbidity.

² McPhail, S., et al. (2022). "Risk factors and prognostic implications of diagnosis of cancer within 30 days after an emergency hospital admission (emergency presentation): an International Cancer Benchmarking Partnership (ICBP) population-based study." *The Lancet Oncology* **23**(5): 587-600.

41. *Biliary drainage:* The intent of this indicator is that all people with pancreatic cancer should have biliary drainage for obstructive jaundice when indicated. Indications include delay to pancreatic resection, symptom management, and pre-neoadjuvant chemotherapy. The overall proportion of biliary drainage was 34.8%. People of Asian ethnicity and Māori had a higher proportion of procedures (41.4% and 37.2%). There was less variation across districts than expected in proportion of biliary drainage.
42. *Tissue diagnosis:* It is optimal to have a tissue diagnosis before surgery or chemotherapy. The intent of this indicator is to explore whether this is occurring and if there is any variation in practice. The overall proportion of people with pancreatic cancer who had a tissue diagnosis was 56.4%. There were lower proportions of tissue diagnoses in those with distant Surveillance, Epidemiology and End Results (SEER) stage and those in older age groups, who are less likely to have proceeded to surgery or chemotherapy.
43. *Medical oncology review:* It is accepted that the majority of people with pancreatic cancer will benefit from a review by a medical oncologist and consideration of systemic therapy (eg, chemotherapy or managing endocrine or exocrine complications); however, this occurred in only 23.9% of pancreatic cancer patients in Aotearoa.
44. *Radiation therapy:* People with pancreatic cancer should be given the opportunity to discuss their radiation treatment options and to have radiation treatment where this is appropriate. Overall, the low proportion (4.9%) of people receiving radiation therapy is in keeping with international data. The younger age group (18-49 years) were more likely to receive radiation therapy than older age groups, but the numbers are small.
45. *Days alive and out of hospital:* This indicator reports on the median number of days alive and out of hospital 30 days after pancreatic resection for pancreatic cancer. People with pancreatic cancer receiving optimal care will have a lower complication rate and a shorter hospital stay, which will be reflected in more days alive and out of hospital. People with pancreatic cancer who had a pancreatic resection were alive and out of hospital for a median of 20 days in the 30 days following surgery.
46. *Post operative mortality:* Treatment-related mortality can be used as a marker of the quality and safety of treatment. The overall 30-day mortality following pancreatic resection for people with pancreatic cancer was 3.8% for those diagnosed between 2015 and 2019. International centres of excellence have reported mortality rates of 2%, indicating that there is room for improvement in Aotearoa. Better case selection, limiting pancreatic resections to higher volume centres, lower 'failure to rescue'³ rates, and more timely and effective chemotherapy, for example, could all contribute to this. The 90-day mortality was 5.4%. This is above the internationally accepted rate of <5%, indicating potential for improvement.
47. *Overall survival:* Overall survival rates are an indication of the quality of clinical management and outcome measures. The result of this QPI reflects the insidious and aggressive nature of pancreatic cancer. The overall survival of people with pancreatic cancer was 21.8% at one-year and 9.7% at two years. The results are comparable to some international studies^{4 5},

³ Failure to rescue metrics give an indication of preventable in-hospital deaths

⁴ Burmeister, E. A., et al. (2015). "Describing patterns of care in pancreatic cancer: a population-based study." *Pancreas* 44(8): 1259-1265.

⁵ Rawla P, Sunkara T, Gaduputi V. 2019. Epidemiology of Pancreatic Cancer: Global Trends, Etiology and Risk Factors. *World Journal of Oncology* 10(1): 10–27. DOI: 10.14740/wjon1166 (accessed 20 January 2023).

however, the survival of pancreatic cancer in Aotearoa has been slower to improve than some other high-income countries⁶.

Data interpretation considerations

48. Only data for publicly funded treatment services are included in this report.
49. The cohort used for the analysis comprised 2,556 people diagnosed with a new primary diagnosis of pancreatic cancer from 1 January 2015 to 31 December 2019.
50. This report includes all cases of pancreatic cancer with the exclusion of pancreatic neuroendocrine tumours (PNETs), which account for about 5% of pancreatic cancers. PNETs have different biology, treatments, and outcomes compared with pancreatic ductal adenocarcinoma and are therefore best grouped with other NETs for the purposes of quality improvement. The remaining cases in the cohort are termed 'pancreatic cancer', noting that the majority will be pancreatic ductal adenocarcinoma.
51. The relatively low number of cases of pancreatic cancer in some districts has meant that some QPIs could not be analysed without risk of individual case identification. Where this was the case, data has been reported nationally (as for the post-operative mortality QPI).

Health system actions

52. The QPI programme is aimed at clinicians and health professionals involved in cancer treatment and care, as well as those responsible for the delivery and performance of cancer services including districts, hospitals and government agencies.
53. The results of the QPI calculations provide information for discussion and can be used to inform further investigation and quality improvement activity at district, region and national levels.
54. Where a district identifies that their performance is outside the norm compared to others, or their performance is sitting outside the 95% confidence intervals on the funnel plots included in the report, Te Aho o Te Kahu expects that districts and clinicians will investigate and identify appropriate quality improvement actions.
55. The recommendations provided in the monitoring report are intended as a guide to the types of actions that could be taken to improve patient outcomes or their districts performance. However, the intention is that districts should develop and implement local quality improvement plans with actions appropriate to their local context and priorities.
56. Te Aho o Te Kahu will:
 - a) communicate the findings of these reports with districts, clinicians, government agencies and other key stakeholders
 - b) remeasure the QPIs every three years to monitor change over time
 - c) continue to undertake programmes of work to improve the cancer system
 - d) improve the collection and sharing of data to inform cancer related quality improvement.

⁶ Arnold, M., et al. (2019). "Progress in cancer survival, mortality, and incidence in seven high-income countries 1995–2014 (ICBP SURVMARK-2): a population-based study." *The Lancet Oncology* **20**(11): 1493-1505.

Equity

57. The QPI programme aims to highlight inequities and support the achievement of equity in the cancer system for Māori first, followed by other groups including Pacific Peoples.
58. Some of the ways the programme drives equity is through:
- selecting indicators that will highlight inequities
 - the stratification of data by ethnicity, and in the future using age-standardisation models for data analysis
 - the stratification of data by geographic region, age and gender
 - equity-focused reporting of the results
 - consultation with a broad range of cancer and health sector stakeholders as well as consumers
 - ensuring diversity on the expert working groups.
59. Results for the pancreatic cancer QPIs, except for the 'post-operative mortality' QPI (due to low numbers), were stratified by ethnicity. For the majority of QPIs, results suggest inequity for Māori, although small numbers mean it is challenging to know if there is a true difference.
60. Māori and Pacific peoples were more likely to have their pancreatic cancer diagnosed following an acute hospital admission. Māori with pancreatic cancer had lower rates of pancreatic resection compared to people of European / other and Asian ethnicities. These inequities may be explained by more advanced disease at diagnosis, reduced access to primary care and diagnostics and greater comorbidity.
61. Rates of biliary drainage / stenting appeared higher for Māori and Asian patients compared with European / other and Pacific peoples. These inequities may be explained by more advanced disease at diagnosis, reduced access to primary care and diagnostics, and greater comorbidity.

Proactive release strategy

62. Te Aho o Te Kahu will undertake a two-stage public release process of the pancreatic cancer quality improvement monitoring report and supporting documents. The two-stage public release of the reports includes:
- Stage one: Distribution of the draft reports to Te Whatu Ora, clinicians, government agencies and other relevant health and cancer stakeholders. The purpose of the draft release is to provide stakeholders the opportunity to review the drafts prior to their publication and conduct reviews of the monitoring report findings using local data and provide feedback to Te Aho o Te Kahu if necessary. They can also explore the report findings via the Cancer Data Explorer, using this link <https://minhealthnz.shinyapps.io/cancer-care-data-explorer-pancreatic-DRAFT/>
 - Stage two: Public release of the final reports via publication on the Te Aho o Te Kahu website and associated communications to stakeholders.
63. The purpose of the two-stage release is to provide districts, clinicians and other key stakeholders the opportunity to:
- review the data used to inform the reports

- b) check the results against their local data to see if the report provides an accurate reflection of their district's performance
 - c) raise any concerns with Te Aho o Te Kahu prior to the public release of the report
 - d) prepare any communication materials before the public release of the report
 - e) begin to consider potential quality improvement activity.
64. Often districts will request the data used to calculate the QPIs. This data is provided to them adhering to all privacy rules and regulations for sharing patient level data.
65. If stage-one of this process identifies substantial changes to the monitoring report are required, the stage-two public release of the report will be put on hold until this is resolved. For significant changes, Te Aho o Te Kahu would seek Minister approval for the release of the monitoring report publicly at a later date.
66. If there are no significant changes to the monitoring report required, then Te Aho o Te Kahu will proceed with publicly releasing the reports by publishing on them on Te Aho o Te Kahu website, distributing the reports via email to relevant cancer and health sector stakeholders and providing updates through the agency's sector newsletters as well as engagement directly with districts through the agency's regional hubs.

Risks

67. Te Aho o Te Kahu believes the risks associated with release of the pancreatic cancer quality improvement reports are low.
68. The agency has released similar reports for bowel, lung and prostate cancer with minimal negative reaction from the sector and low media interest.
69. To mitigate any concerns from districts, clinicians or other key stakeholders, Te Aho o Te Kahu will undertake a two-stage release approach. Initially, the reports will be released in draft to stakeholders to review the results/data and compare the findings with their local data to see if the QPI calculations accurately reflect their districts.
70. If concerns are raised, Te Aho o Te Kahu will engage directly with the district and provide the data used to inform the results. If changes to the reports are required based on this engagement, these changes will be made before progressing with stage-two (public release of the report).
71. The QPI development process includes several factors that reduce the level of risk:
- a) an early stage of the QPI development process includes a public consultation process - feedback from this is incorporated before the QPIs are calculated and reported in the final monitoring report
 - b) as part of the QPI development process, Te Aho o Te Kahu seeks advice from the national Māori cancer leadership group, Hei Āhuru Mōwai.
72. Te Aho o Te Kahu worked in partnership with the national Pancreatic Cancer Working Group, which is made up of clinical experts, sector stakeholders and consumers. A full list of the working group can be found in Appendix D of the monitoring report.

Next steps

73. Pending your approval, Te Aho o Te Kahu will publish the reports under its proactive release policy.

ENDS.

The final version of the appended Pancreatic Cancer Quality Improvement Monitoring Report has since been published here: <https://teaho.govt.nz/reports/qpi/qpi-pancreatic>

PROACTIVELY RELEASED