TE AHO O TE KAHU CANCER CONTROL AGENCY

New Zealand Government

LUNG CANCER QUALITY PERFORMANCE INDICATOR ACTION PLAN

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BACKGROUND

Quality performance indicator programme

Te Aho o Te Kahu | Cancer Control Agency has continued the Ministry of Health's cancer quality performance indicator (QPI) programme, which aims to drive quality improvement for cancer detection, diagnosis and treatment across Aotearoa New Zealand.

This document is the national *Lung Cancer Quality Performance Indicator Action Plan*. It follows on from the national *Lung Cancer Quality Improvement Monitoring Report* published in March 2021 (Te Aho o Te Kahu 2021).

We use QPIs to inform activity aimed at improving the quality of cancer services and delivering better outcomes for people diagnosed with cancer. The QPIs enable district health boards (DHBs) and hospitals to compare their performance with others and use that comparison to drive their local quality improvement efforts.

An expert cancer working group, and a range of clinical experts who are involved in providing patient care, select the QPIs. In the selection process, the working group asked the following questions of each potential QPI:

- Does this indicator address an area of clinical importance that could significantly affect the quality and outcome of care delivered for people diagnosed with cancer?
- Will this indicator support our goal of achieving Māori health gain and equity?
- Is there sound evidence and a clear rationale that this indicator can drive quality improvement?
- Can this indicator be measured with data in a national collection?

Once the sector has reviewed the selected QPIs and their inclusion has been confirmed, the working group develops and publishes a monitoring report calculating the QPIs using the Ministry of Health's national collections data.

Following the monitoring report, in consultation with the working group, Te Aho o Te Kahu produces an action plan that provides high-level examples of actions that DHBs and hospitals could undertake to better understand and improve poor performance. This plan guides DHBs and hospitals in their activities to improve the quality of their cancer treatment and/or standardisation.

Te Aho o Te Kahu, via its regional hubs, then uses the monitoring report and action plan to work with the sector to address areas where there is unwarranted variation between DHBs. The regional hubs will support DHBs to develop and implement local quality improvement plans, setting out actions appropriate to the local context and priorities.

The working group will adjust future iterations of the monitoring report and action plan to reflect the health and disability sector reforms, which were announced in mid-2021 and will be implemented from 2022 onwards.

Development process

The Ministry of Health's Cancer Services team (the functions of which were transferred to Te Aho o Te Kahu on 3 December 2019) and the National Lung Cancer Working Group (NLCWG) worked together to develop 11 QPIs for lung cancer. Appendix A lists members of the NLCWG.

In March 2021, Te Aho o Te Kahu published the *Lung Cancer Quality Improvement Monitoring Report*. This report presented findings against eight of the 11 QPIs (the remaining three will potentially be reported on at a later date, if the data become available).

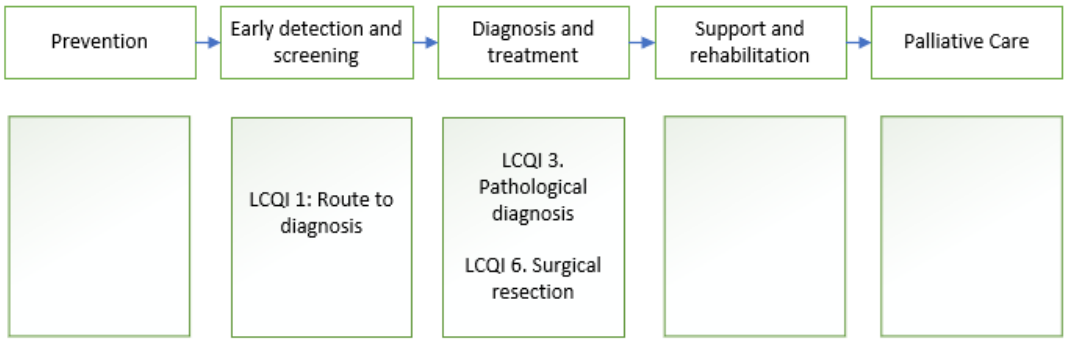
Te Aho o Te Kahu presented the monitoring report at the Lung and Prostate QPI Forum it hosted in April 2021, with over 80 clinicians or experts in lung and/or prostate cancer in attendance.

Te Aho o Te Kahu then developed this *Lung Cancer Quality Performance Indicator Action Plan*, using the feedback provided at the forum and subsequently as a guide. The NLCWG has approved this plan.

The action plan focuses on the three QPIs that the chair of the NLCWG identified as being the highest priority for lung cancer quality improvement activity; these three were the focus of discussion at the forum. They are:

- LCQI 1. Route to diagnosis
- LCQI 3. Pathological diagnosis
- LCQI 6. Surgical resection.

Figure 1: Outline of lung cancer quality performance indicators selected for improvement along the cancer control continuum[1]



The primary audience for this action plan is DHBs, hospitals delivering cancer services, people who deliver care to people with lung cancer and people who manage health care service delivery generally. This action plan will also support Te Aho o Te Kahu in developing and prioritising its own work programme.

Te Aho o Te Kahu expects that DHBs will review their performance and, where they find unwarranted variation, take action to improve their performance and patient outcomes.

Please note the following.

[1] The document *Lung Cancer Quality Performance Indicators: Descriptions 2021* (Te Aho o Te Kahu 2021b) lists all the lung cancer QPIs with their identification numbers.

- the Ministry of Health, rather than Te Aho o Te Kahu, manages the palliative care / end-of-life choice work programme, as this work programme extends beyond cancer-related palliative care
- this report does not cover actions relating to primary care and Smokefree 2025 initiatives.

How to use this document

District health boards should review the *Lung Cancer Quality Improvement Monitoring Report* to identify where their performance is significantly different to that of other DHBs and apply quality improvement principles to plan for and implement improvement projects.

The 'recommended actions' set out in this action plan are restricted to three of the eight QPIs in the *Lung Cancer Quality Improvement Monitoring Report*. We intend them as a guide as to the types of actions DHBs could take to improve their performance. District health boards should develop and implement local quality improvement plans with actions appropriate to the local context and priorities.

We note that some DHBs are already undertaking quality improvement work, and that these recommendations do not preclude additional actions or the continuation of existing quality improvement activity.

LUNG CANCER QUALITY PERFORMANCE INDICATORS

LCQI 1. Route to diagnosis

Indicator description

Proportion of people with lung cancer who are diagnosed following a referral to a clinic or presentation to an emergency department (ED).

Statement of intent

The majority of people with lung cancer should be diagnosed through an established elective referral pathway.

Context

People presenting with lung cancer via an ED are more likely to have advanced, incurable disease than those diagnosed through a clinic (Beatty et al 2009). Initial presentation to an ED is a strong negative predictor of survival. The ED is often a suboptimal environment for routine cancer work-up for patients, whānau/families and staff, as out-of-hours access to specialist imaging, knowledge and support are reduced and the patient journey is likely to be less smooth than it would be on rapid ambulatory work-up pathways.

Key findings from monitoring report

A high proportion of people with lung cancer (45.0 percent) were diagnosed with lung cancer following a presentation to an ED.

There was wide variation between DHBs for diagnosis following presentation at an ED, ranging from 30.8 percent to 62.7 percent (Te Aho o Te Kahu 2021a).

There was also large variation by ethnicity, by social deprivation and by age. The rate of ED presentation with lung cancer in Aotearoa New Zealand was high compared with international rates.

Recommended actions

Te Aho o Te Kahu | Cancer Control Agency

1. Continue to review diagnosis of lung cancer following ED presentation, including inequities in the proportion of patients presenting to ED, and report to DHBs two-yearly.
2. Work in partnership with the Health Research Council of New Zealand and the Ministry of Health on equity-centred lung cancer research priorities.
3. Support national early detection of lung cancer initiatives.
4. Support national consistency in access to lung cancer diagnostics.
5. Support initiatives to address health literacy and messaging about the early signs and symptoms of lung cancer.

District health boards and hospitals delivering cancer services

1. Undertake an audit of patients who have been diagnosed following acute presentation to identify barriers that may have prevented earlier diagnosis via an elective pathway, with a focus on understanding and addressing the systemic reasons why more Māori and Pacific peoples are diagnosed through the ED.
2. Where potential improvements to the referral and diagnostic pathways are identified, develop and implement a service improvement plan.
3. Monitor local and regional initiatives that contribute to reducing the high level of ED presentations and improving earlier detection of lung cancer.

LCQI 3. Pathological diagnosis

Indicator description

Proportion of people who have a pathological diagnosis of lung cancer.

Statement of intent

The majority of people diagnosed with lung cancer should have a pathological diagnosis.

Context

Pathological diagnosis is important for guiding treatment decisions. A pathological diagnosis identifies tumour type and enables molecular analysis to ascertain the suitability of targeted

therapies. However, biopsies also carry a risk of complication; not every patient will benefit from a pathological diagnosis.

Key findings from monitoring report

Attempts to obtain a pathological diagnosis need to be balanced against the risk of undertaking the diagnostic procedure. Overall, the proportion of people with a pathological diagnosis of lung cancer was high (81.4 percent), with some variation by DHB (71.4–89.1 percent). Pathological diagnosis rates decreased with increasing age and increasing social deprivation.

Recommended actions

Te Aho o Te Kahu | Cancer Control Agency

1. Continue to work with the New Zealand Cancer Registry to improve the accuracy of figures for patients in whom no pathological diagnosis has been made and identify factors that could address and improve the data; for example, cross-referencing with the radiation oncology collection and clinical coding.
2. Review and update the lung cancer pathological diagnosis QPI, and report to DHBs two-yearly.
3. Continue work on lung cancer structured pathology reporting requirements for implementation.

District health boards and hospitals delivering cancer services

1. Where a DHB has a lower proportion of pathological diagnosis, investigate further to better understand the variance and develop a quality improvement programme to ensure biopsy procedures are undertaken where appropriate. Documenting reasons why a biopsy is not done (for example, stereotactic ablative body radiotherapy treatment requiring no biopsy) supports treatment decision-making.
2. Where a DHB has a significantly higher proportion of pathological diagnosis, investigate further to ensure no inappropriate biopsies are occurring.

LCQI 6. Surgical resection

Indicator description

Proportion of people with non-small cell lung cancer (NSCLC) receiving surgical resection with curative intent.

Statement of intent

All people with early stage NSCLC cancer and good performance status should be considered for surgery.

Context

Complete surgical resection is the gold standard of treatment for early stage lung cancer and offers the best chance of cure. Surgical resection is recommended for patients with clinical stage I and II NSCLC (Howington et al 2013). Surgery should also be considered in selected regionally advanced lung cancers (stage IIIA). This is most appropriately done in a multidisciplinary setting, with the goal of maximising a patient's survival chances, as well as their quality of life.

Key findings from monitoring report

The overall New Zealand surgical resection rate (16.7 percent) is lower than rates in other Organisation for Economic Co-operation and Development (OECD) countries. There was a marked variation across DHB of domicile, ranging from 9.5 to 24.3 percent. Māori and Pacific peoples had the lowest curative resection rate compared with other ethnic groups.

Recommended actions

Te Aho o Te Kahu | Cancer Control Agency

1. Continue work to enable inclusion of staging and ECOG (European Cooperative Oncology Group) performance status data in future national QPI calculations.
2. Continue to review surgical resection rates and inequities in the proportion of patients having surgical treatment, and report to DHBs two-yearly.

District health boards hospitals delivering cancer services

1. Review the organisation's own data and investigate and clarify the drivers of variation of surgical resection rates, especially for Māori and Pacific peoples, and develop a quality improvement programme accordingly.
2. Identify opportunities for reducing/removing systemic barriers along the referral, diagnostic, multidisciplinary meeting, and specialist assessments for thoracic surgery pathways.
3. Implement the Health Information Standards Organisation multidisciplinary meeting standards for the collection of core data for lung cancer patients.

REFERENCES

Beatty S, Stevens W, Stevens G, et al. 2009. Lung cancer patients in New Zealand initially present to secondary care through the emergency department rather than by referral to a respiratory specialist. *New Zealand Medical Journal* 122(1294): 33–41.

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APPENDIX A: WORKING GROUP MEMBERS

The National Lung Cancer Working Group comprises:

Chair

Dr Paul Dawkins, respiratory physician, Counties Manukau District Health Board

Members

Dr Jonathan Adler, consultant palliative care, Capital & Coast District Health Board

Dr Denise Aitken, physician and clinical director medicine, Lakes District Health Board

Dr Scott Babington, radiation oncologist, Christchurch Hospital

Dr Ben Brockway, consultant and senior lecturer in respiratory medicine, Dunedin Hospital and Dunedin School of Medicine, University of Otago Medical School

Dr Paul Conaglen, cardiothoracic specialist, Waikato District Health Board

Dr James Entwisle, clinical leader, Radiology Department, Wellington Hospital

Dr Greg Frazer, respiratory and general physician, Christchurch Hospital; clinical senior lecturer, University of Otago, Christchurch

Dr David Hamilton, radiation oncologist, Capital & Coast District Health Board

Dr Jeremy Hyde, consultant anatomical pathologist, Canterbury Health Laboratories

Dianne Keip, clinical care coordinator, Hawke's Bay District Health Board

Dr George Laking, medical oncologist, Auckland District Health Board, Hei Āhuru Mōwai

Professor Ross Lawrenson, professor of population health, University of Waikato; clinical director, Waikato Hospital

Dr Brendan Luey, consultant medical oncologist, Capital & Coast District Health Board

Dr Felicity Meikle, cardiothoracic specialist, Waikato District Health Board

Dr Aisha Paulose, general practitioner

Jo Stafford, consumer and Māori representative