Cancer services performance indicators

FINAL

Data Collection Method for newly diagnosed cancer cases in 2018

Date: 5 September 2019

VICTORIA State Government | Health and Human Services

Contents

1. Introduction

The Victorian cancer service performance indicator (CSPI) program was established to measure and monitor progress with Victorian Government policy. The four key priorities for reform have been identified as the focus for service improvement at the Integrated Cancer Service (ICS) and state-wide levels:

- multidisciplinary care;
- care coordination across the cancer care pathway;
- supportive care;
- reducing unwarranted variation in practice.

The four priority areas are integrally linked to each other and initiatives may impact across priority areas.

ICS were established within metropolitan and regional Victoria and there is one state-wide Paediatric Integrated Cancer Service (PICS). The development of ICS has supported networking and linking of hospitals, community and primary care services to ensure that cancer can be detected and treated by groups of health care professionals who have committed to working together to plan and coordinate patient care across specified geographic areas.

The cancer service performance indicator program was established in 2007 and has evolved over the years. The indicator program is one component of several cancer quality evaluation and benchmarking strategies including the state-wide multidisciplinary team meeting (MDM) survey, cancer patient experience survey, cancer clinical indicators, clinical audit, program evaluation and cancer peer review. These quality and evaluation initiatives underpin the model for safety and quality in Victorian cancer services as outlined in *Clinical Excellence in Cancer Care* (DHS, 2007).

This performance indicator program is consistent with *"a quality improvement process that seeks to improve patient care and outcomes through systematic review of care against explicit criteria and the implementation of change"* (NICE, 2002).

The four performance indicators being audited are:

- Documented evidence of multidisciplinary team recommendations
- Documented evidence of disease staging in the multidisciplinary team meeting recommendations
- Documented evidence of ECOG in the multidisciplinary team meeting recommendations
- Documented evidence of supportive care screening.

The last state-wide cancer service performance indicator program audit reported against 2017 service provision and was undertaken in 2018. That audit also included a fifth performance indicator, “Documented evidence of communication of initial treatment plan to GP”. With the event of more automated systems included in MDM software it was decided amongst ICS manages and the department to remove this indicator from the current audit.

This method paper outlines the performance indicators, sample definition and reporting requirements for the CSPI audit of the medical records relating to cancer patients newly diagnosed and treated in 2018.

The CSPI program provides a high-level report that is intended for distribution and reporting at health service, ICS and state-wide levels to monitor processes of care and identify where care can be improved. Indicators provide a flag rather than a definitive answer; they indicate potential problems that may require further investigation. The indicator program is designed to contribute to a culture of evaluation, benchmarking, feedback and continuous quality improvement.

The Cancer Strategy and Development section of the Department of Health & Human Services encourages ICS secretariats to produce a local level indicator report for participant member health services and to collect additional locally relevant performance data as part of this process.

The indicators are periodically reviewed, and the methods refined as required to promote a robust and useful cancer service performance indicator program. The review includes feedback from the ICS secretariats including the data / quality staff administering the data collection.

2. Data collection period

The cancer service performance indicator program promotes the timely collection, analysis and reporting of patient data across all ICS. The data collection period is defined by:

- All ICS will conduct data collection once in 2019.
- Patients will be identified based on cancer diagnosis and treatment during 2018. The diagnosis must have occurred between January 1 and December 31 2018 to be eligible for inclusion in the audit. This will allow for patients to have undertaken treatment planning and/or commenced treatment.
- All ICS will receive a data collection file pre-populated with details of their patient sample (including spares).

Table 1 outlines the timeframes for the CSPI Audit 2018 (undertaken in 2019).

Table 1: Schedule for data collection and submission of data to DHHS

	Key dates
Cancer diagnosis date* timeframe	1 Jan 2018 to 31 Dec 2018
Data collection	6 Sept to 6 Nov 2019
Due date for submission to DHHS	**7 November 2019 (Thurs)**

*diagnosis date for audit may be actual or inferred

3. Patient sample

The cancer service performance indicator program requires a consistent method for the identification of the patient sample, ensuring an adequate sample size. The target population for the indicator program is newly diagnosed Victorian[1] cancer patients meeting the criteria outlined below. A centralised sample selection process will identify patients for inclusion in the audit using the Victorian Admitted Episode Dataset (VAED). It is acknowledged that there are still limitations to this method as this will not be based on the linked VAED-Victorian Cancer Registry (VCR) data or capture patients who have only been treated with radiotherapy or oral therapy or who are under active surveillance alone.

3.1 Identification of the patient sample

The Victorian Admitted Episode Dataset (VAED) will be used to identify patients for the audit.

[1] Victorian cancer patients are those receiving cancer treatments at a Victorian health service where their usual residence is a Victorian address.

- ICD-10-AM diagnostic and procedural codes (provided in Attachment 1) will be used to identify a patient with a cancer diagnosis who has undergone treatment. The use of these codes will allow ICS to identify patients who have had treatment and not just watchful observation within the required timeframe and locally.
- Selection will ensure each patient has not had a prior admission for the same ICD cancer code/s within the prior five years (i.e. are newly diagnosed).
- The ICD-10-AM diagnostic codes only include malignant codes; benign, in-situ and uncertain tumours will continue to be excluded.
- The diagnostic codes will be used to categorise patients into established tumour stream groupings, for example genitourinary instead of prostate.
- Patients were included in the sampling for PICS if they were less than 18 years of age in their first admission. Patients were only retained where the first campus of treatment was of one of The Royal Children's Hospital or Monash Children's Hospital.
- Patients sampled for metropolitan and regional ICS were included if the patient's age was 18 or older in their first admission, and their campus of treatment was not one of the PICS campuses.

3.2 Size and type of patient sample

The CSPI program requires an adequate sample size to ensure the results are meaningful and can identify change in performance over time. Clinical epidemiological advice was sourced by Cancer Strategy and Development to estimate the required sample size. The sample size required to estimate percentage to within +/-5% with 95% confidence was considered. The final sample for the regional ICS is lower than the epidemiological advice recommends but this is in part to account for the need for regional patients to travel for the treatment of some tumour streams. Similarly the metropolitan ICS sample is somewhat inflated to account for the referral of patients from outside of the ICS for rarer tumour stream care.

The minimum number of records to be audited has been specified in the table following (Table 2). If this number cannot be achieved, a note to this effect (including an explanation as relevant) is to be provided to the department when the data are submitted. All identified pancreatic cancer patients in the data collection form are to be audited in addition to the specified minimum sample.

Table 2: 2017 Audit Requirements - minimum record numbers and tumour streams and due date

ICS	Minimum Records	Tumour Streams
Metro	650	All*
Regional	250	All*
Paeds	90	Paediatrics
Total N	3290	

Notes to Table 2:

- *Record numbers will include additional cases above the minimum sample size. ICS are encouraged to capture data above the required minimum if considered important locally.*

4. Data source

The Central Medical Record

The central medical record is the source of data for the CSPI program. The central medical record is considered the main medical record for a patient, which may be electronic or paper-based. It should be a central repository to ensure easy access to all relevant information. The central medical record reinforces the standard that patient information should be available to all multidisciplinary team members in a central location to promote safe care.

To promote a consistent indicator methodology, information held in locations other than the central medical record (such as MDM software, databases, stored in ICS offices or other offices) should not be included as a source of data unless otherwise recognised by the health service as a legal component of the patient's central medical record. ICS are to advise the department where these systems occur. Printouts from databases and software programs that are then incorporated / filed in the central medical record are acceptable.

Health Services

Any public or private health service included in the ICS Memorandum of Understanding (MOU) will be considered for auditing if the facility treats 10 or more cases within a tumour stream. Treatment is defined in ICD-10-AM, which was reviewed by the ICS IMG for the 2018 CSPI audit.

5. Exclusion criteria

The CSPI program promotes appropriate and consistent collection of data.

The following exclusion criteria apply:

- Patients treated across more than one ICS should only be counted once and this should be at the site where the patient received their primary treatment including their treatment planning. If a multidisciplinary treatment recommendation from a health service in another ICS is located in the patient medical record (where it is not part of a formal linked MDM), this patient should be excluded from the data collection.
- Correspondence regarding treatment recommendations from another health service/ICS cannot be used as evidence for a different health service/ICS except under a formal intra-ICS outreach service arrangement.
- Non-Victorian residents treated in Victorian health services.
- For patients treated in metropolitan or regional ICS campuses, patients younger than 18 were excluded.

For patients treated in PICS campuses, patients aged 18 years or older were excluded.

6. Performance indicators

The performance indicators being evaluated by the current medical record audit program for 2018 are:

6.1 documented evidence of multidisciplinary team recommendations,

6.2 documented evidence of disease staging in the multidisciplinary team recommendations

6.3 documented evidence of patient Eastern Cooperative Oncology Group (ECOG) performance status in the multidisciplinary team recommendations

6.4 documented evidence of supportive care screening

In addition, the audit will capture some key dates which will facilitate assessment of derived performance indicators:

- date that the patient was audited
- date of diagnosis
- date of the first documented multidisciplinary team discussion
- whether the first documented multidisciplinary team discussion was prospective or retrospective. Prospective is defined as whether the MDM discussion date precedes definitive treatment dates (excepting where surgery date = date of diagnosis which for this audit will be deemed prospective)

Each performance indicator is discussed below, including rationale, acceptable and unacceptable evidence for the performance measure, along with the target for this audit cycle. The tumour stream, tumour site and the health service site and patient medical record number will be pre-populated on the data collection forms. The performance indicators will be presented as results by ICS and by tumour stream.

6.1 Documented evidence of multidisciplinary team meeting recommendations

Rationale: Multidisciplinary care is a key component to providing best practice care for cancer patients. Documentation of multidisciplinary team recommendations in the medical record ensures such information is accessible to all team members. *Achieving best practice cancer care – A guide for implementing multidisciplinary care* (DHS, 2007) states 'recommendations are recorded in the patient's medical record and signed by the presenting or treating clinician'. Effective communication between all team members involved in a patient's care is critical for maximising patient care coordination. This performance measure provides an indication of the level of documentation of multidisciplinary team meeting recommendations in the central medical record.

Numerator	Total number of new cancer patients with documented evidence of multidisciplinary team recommendations
Denominator	Total number of new cancer patients audited

Target for 2018: **85 per cent**

Victoria's Cancer Action Plan 2008-2011 (VCAP[2]) states 'we will work to increase the number of newly diagnosed cancer patients that have a documented multidisciplinary care treatment plan … with the aim of achieving 80 per cent documentation by 2012' (p68). MDM discussion of newly diagnosed cancer patients is also highlighted as best practice in the Optimal Care Pathways[3].

Acceptable evidence:

- Written summary of recommendations located in the central medical record.
- MDM outcomes or recommendations form filed in the central medical record.
- Printout from MDM management software of recommendations and filed in the central medical record.
- Recommendations outlined in correspondence between medical clinicians with a copy filed in the central medical record.

Not acceptable evidence:

- Reference in the central medical record to an MDM discussion having taken place, but without the recommendations being outlined.
- A brief statement such as "medical oncology opinion" or similar.

Note: This performance indicator relates to 'team recommendations' whereas the VCAP target relates to 'treatment plan'. This measure highlights the process required to achieve the VCAP target. Other evaluations such as the multidisciplinary survey process and quality audits will supplement the evaluation of policy implementation.

[2] Although Victoria's cancer plan 2016-2020 (released 2016) updates strategic priorities for cancer control it does not set specific performance targets such as those established through VCAP. This monitoring framework remains based on VCAP targets.

[3] https://www.cancervic.org.au/for-health-professionals/optimal-care-pathways

6.2 Documented evidence of cancer staging in the multidisciplinary team meeting recommendations

Rationale: Staging is the cornerstone of treatment planning. MDMs across the state are working hard to include appropriately credentialed specialists to inform both clinical and histopathological staging. The optimal care pathways outline staging requirements for each tumour stream. Staging should be recorded using the AJCC staging (TNM), SEER or other accepted staging system for the disease type as endorsed by local tumour groups or multidisciplinary teams. One example of a well-accepted 'other' staging system is 'Dukes staging' for colorectal cancer, another is 'FIGO' for gynaecological cancer.

Numerator	Total number of new cancer patients with documented evidence of cancer staging in the MDM recommendations
Denominator	Total number of new cancer patients with documented MDM recommendations

Target for 2018: **85 per cent**

Acceptable evidence:

- As per evidence required for indicator 6.1 including a diagnosis with clinico-pathological stage noted.
- Descriptions of stage (SEER): localised, regional (locally advanced, with nodal involvement) or distant (advanced, metastatic) are all acceptable.
- For Small Cell Lung Cancer (SCLC) the use of the terms; invasive, limited or extensive are appropriate.
- For Haematology staging systems listed on p 17 are acceptable
- For CNS tumours the WHO grading system of grades I-IV is acceptable

Not acceptable evidence:

- The use of descriptive terms such as extensive or invasive without the use of the staging system defined above (except SCLC).

Notes:
SEER: Surveillance Epidemiology and End Results. For further information http://seer.cancer.gov/

6.3 Documented evidence of patient ECOG performance status in the multidisciplinary team meeting recommendations

Rationale: ECOG performance status scales and criteria are used by doctors and researchers to assess how a patient's disease is progressing, assess how the disease affects the daily living abilities of the patient, and determine appropriate treatment and prognosis. The Improving Cancer Outcomes Act 2014 also requires recording of ECOG status in notifications sent to the state-wide Victorian Cancer Registry to enable appropriate risk adjustment and comparative analyses of patient health outcomes. Documentation of ECOG in the MDM recommendations would enable easy identification of ECOG for notifying VCR.

Numerator	Total number of new cancer patients with documented evidence of ECOG performance status (grade) in the MDM recommendations
Denominator	Total number of new cancer patients with documented MDM recommendations

Target for 2018: **100 per cent**

Acceptable evidence for this audit:

- As per evidence required for indicator 6.1 including a diagnosis with ECOG performance status (grade) noted.
- The following table displays the ECOG performance status scale and criteria:

ECOG performance status scale and criteria

Grade	ECOG
0	Fully active, able to carry on all pre-disease performance without restriction
1	Restricted in physically strenuous activity but ambulatory and able to carry out work of a light or sedentary nature, for example, light house work, office work
2	Ambulatory and capable of all self-care but unable to carry out any work activities; up and about more than 50 per cent of waking hours
3	Capable of only limited self-care; confined to a bed or chair more than 50 per cent of waking hours
4	Completely disabled; cannot carry on any self-care; totally confined to a bed or chair
5	Dead

*Adapted from: Oken M, Creech R, Tormey D, et al. Toxicity and response criteria of the Eastern Cooperative Oncology Group.*Am J Clin Oncol. *1982;5:649-655.*

6.4 Documented evidence of supportive care screening

Rationale: Supportive care, which addresses a wide range of needs across the continuum of care for those affected by cancer, is increasingly seen as a core component of cancer care. Improving supportive care for those affected by cancer is one of the priority areas for the ICS. This measure provides an indication of the level of documented appropriate supportive care screening.

Numerator	Total number of new cancer patients with documented evidence of supportive care screening
Denominator	Total number of new cancer patients audited

***Target for 2018: 8*0 per cent**

The relevant target documented in VCAP states: 'We will aim to document supportive care screening for 50 per cent of newly diagnosed cancer patients by 2012'. Following interim results of the supportive care point prevalence study indicating that 63 per cent of patients have a documented supportive care screen the target for this indicator has been increased to 80 per cent.

Acceptable evidence:

- For adults, a completed, validated, supportive care screening tool that assesses the five inter-related domains of care (physical, social, psychological, spiritual and information) located in the central medical record (such as the Distress Thermometer and problem checklist or the Peter Mac Supportive Care Needs Tool though we note this tool is being phased out). Evidence of validation is usually available in the published literature.
- For paediatrics, the recently validated screening tool being used in the clinical setting in Australia.
- If the medical record includes documentation that a patient declined to complete screening, this will be considered that the individual has been screened. However, it must be noted in the comments section that screening was declined.

Not acceptable evidence:

- Informal referral notes in the central medical record.
- A note stating that screening was undertaken without detailing outcomes.
- Evidence of supportive care assessment without evidence of screening.
- A supportive care screening tool that is located in a place other than the central medical record.
- For paediatrics, the use of the social work screening tool will **no longer** be considered adequate evidence.

7. Data elements

7.1 Tumour stream

Rationale: To enable analysis of cancer performance indicators by tumour stream thus directing quality improvement activities to areas of need. ICS will be receiving a pre-populated data collection form with tumour stream (and type) for all cases recorded.

MICS & RICS Options:

- breast
- central nervous system
- colorectal
- endocrine and thyroid
- haematological
- genitourinary
- gynaecological
- head and neck
- lung
- upper gastrointestinal
- melanoma

PICS Options:

- haematological cancer
- central nervous system (CNS) tumour
- solid tumour.

7.2 Health service / hospital site

Rationale: Auditing medical records from a range of health services will better represent the care provided to those affected by cancer throughout Victoria.

Auditors will be provided with sample lists which include a record of the name of, and the VAED campus code, for the health service / hospital site housing the medical record. ICS are not to amend these details but can record comments in the data collection tool if required.

7.3 Additional dates/data items

Rationale: To enable analysis of timeliness of care ICS will be required to record some key dates as documented in the medical record into the Audit data collection tool. These dates include:

- date of the first documented multidisciplinary team discussion
- whether the first documented multidisciplinary team discussion was prospective or retrospective. Prospective is defined as whether the MDM discussion date precedes definitive treatment dates (excepting where surgery date = date of diagnosis which for this audit will be deemed prospective)

8. Submission of data

The data is to be collected using the Excel file, *CSPI Data Collection Template 2018, which* will be pre-populated with patient sample details. Absolutely no changes to this template or format are permitted. All data from each cycle will be listed on this sheet with the tumour streams grouped. ICS are to add or

remove lines depending on the number of patient medical records audited. A brief comments section is provided for data explanation, complexity of interpretation concerns, notes or suggestions.

Data and information must be reviewed locally and be approved by the program manager/director prior to submission. It should be noted that the Department provides funding to the ICS to enable audits to be undertaken and compliance is a requirement of the ICS funding.

The ICS are also reminded that the collection and reporting of accurate data is required as per the Financial Management Act 1994. Adequate data must be submitted and notification of any data errors must occur in a timely manner to the Cancer Strategy and Development team.

9. Definitions

Financial Management Act 1994 (Standing Order 3.4.13)

Public Sector Agencies must take reasonable steps to ensure that data is accurate and adequate when it is collected, and that its accuracy is maintained during subsequent use and reporting. The standard for accuracy and adequacy is to be determined by reference to what is expected for the purposes of effective risk management and financial and operational reporting.

Access: http://bfm.dtf.vic.gov.au/CA25713E0002EF44/pages/financial-management-compliance-framework-standing-directions-and-associated-rules

ICD-10-AM coding

International Statistical Classification of Diseases and Health Related Problems, 10th Revision, 2007, Australian Modification.

Multidisciplinary care (MDC)

An integrated team approach to health care in which medical and allied health care professionals consider all relevant treatment options and develop collaboratively an individual treatment plan for each patient (National Breast Cancer Centre, 2005).

Multidisciplinary meeting (MDM)

A scheduled meeting of core and invited team members for the purpose of prospective treatment and care planning of newly diagnosed cancer patients as well as those requiring review of treatment plans or palliative care. Note: Retrospective case review is a valuable approach to multidisciplinary learning, review and audit of prospectively planned treatment and care; however, it cannot replace multidisciplinary prospective treatment and care planning (Department of Human Services, 2006).

MDM Software

ICT systems designed specifically for the management and administration of cancer care coordination services and multidisciplinary team meetings (e.g. CANMAP).

Multidisciplinary team (MDT)

Team comprising health care practitioners required for all treatment and care decisions in a particular tumour stream. Team members can be from the primary, community and acute sectors, public and private sector and can be from several health services. Core team members will commonly include radiologists, pathologists, general practitioners, surgeons, physicians, medical oncologists, palliative care

practitioners, radiation oncologists, social workers and/or psychologists, oncology nurses, data managers, allied health and research nurses (Department of Human Services, 2006).

Performance Indicator

A performance indicator is a statistic or other unit of information which reflects, directly or indirectly, the extent to which an anticipated outcome is achieved or the quality of the processes leading to the outcome. Performance indicators are one source which informs an evaluation process and may help to identify or flag further issues or questions.

Staging systems

- TNM Classification of Malignant Tumours (UICC) and American Joint Committee on Cancer (AJCC) Cancer Staging Manual
- Durie & Salmon for multiple myeloma staging
- French-American-British (FAB) for leukaemia classification
- Australian Clinico-Pathological Staging (ACPS) System for colorectal cancer
- International Federation of Gynecologists & Obstetricians (FIGO) for gynaecological cancers
- Dukes/Modified Dukes for colorectal cancer
- Ann Arbor staging system for lymphomas
- Binet Staging Classification for chronic lymphocytic leukaemia
- Rai staging system for chronic lymphocytic leukaemia
- Chronic Myeloid Leukaemia (CML) staging system
- International Staging System (ISS) for myeloma
- WHO grading system Grades I – IV for CNS tumours

Supportive care

Supportive care includes five inter-related domains of care: physical, social, psychological, spiritual and information (Department of Human Services, 2009). Physical domain includes a wide range of physical symptoms that may be acute, relatively short-lived or ongoing, requiring continuing interventions or rehabilitation (NBCC and NCCI 2003). Social domain includes a range of social and practical issues that will impact on the individual and family such as the need for emotional support, maintaining social networks, and financial concerns (NICE 2004). Psychological domain includes a range of issues related to the person's mental health wellbeing and personal relationships (NBCC and NCCI 2003). Spiritual domain focuses on the person's changing sense of self and challenges to their underlying beliefs and existential concerns (NICE 2004). Information domain transects the above domains with people needing to access information about their disease and treatment, support services and the health system overall (NBCC and NCCI 2003).