

Cancer care statewide health service strategy

2014



Acknowledgments

This document was prepared by the Statewide Health Service Strategy and Planning Unit, Health Commissioning Queensland Department of Health in collaboration with the Statewide Cancer Clinical Network. It is intended to provide guidance for Hospital and Health Services in partnership with communities, Medicare Locals and other service providers undertaking local health service planning in Queensland. The Health Commissioning Queensland would like to acknowledge the assistance of stakeholders from public cancer care services across Queensland, Department of Health, clinician associations, societies and colleges, Mater Health Service, Cancer Council Queensland, CanSpeak Queensland and others who contributed in the development of the strategy.

Cancer care statewide health service strategy 2014

Published by the State of Queensland (Queensland Health), July 2014

This document is licensed under a Creative Commons Attribution 3.0 Australia licence.

To view a copy of this licence, visit creativecommons.org/licenses/by/3.0/au

© State of Queensland (Queensland Health) 2014



You are free to copy, communicate and adapt the work, as long as you attribute the state of Queensland (Queensland Health).

For more information contact:

Health Commissioning Queensland Department of Health, GPO Box 48, Brisbane QLD 4001,
email Statewide.planning@health.qld.gov.au, phone (07) 3234 1451.

An electronic version of this document is available at

<http://www.health.qld.gov.au/hsp/>

Refer to Page vii for Important Disclaimer

Disclaimer:

The content presented in this publication is distributed by the Queensland Government as an information source only. The State of Queensland makes no statements, representations or warranties about the accuracy, completeness or reliability of any information contained in this publication. The State of Queensland disclaims all responsibility and all liability (including without limitation for liability in negligence) for all expenses, losses, damages and costs you might incur as a result of the information being inaccurate or incomplete in any way, and for any reason reliance was placed on such information.

Photos: Queensland Government Image Library, Tourism Queensland.

QH283 07/14



Cancer is a major cause of illness in Queensland and Australia and has a substantial impact on individuals, families, society and the healthcare system. Despite a decline in cancer mortality and an increase in survival, it is estimated one in two Australians will develop cancer and one in five will die from it before the age of 85.

Given the widespread effect of cancer on people—either by directly developing the disease, or indirectly through family and community members—the Queensland Government places great importance on the quality of cancer care services that are available to the community.

The *Cancer care services statewide health service strategy 2014* provides public sector cancer care services with a 10 year vision for cancer care across Queensland.

The strategy embraces the themes of the *Blueprint for better healthcare in Queensland* and focuses on:

- improving care services for people with cancer
- empowering the health workforce to drive the strategy
- improving the efficiency of services
- planning for the future.

The 10 year strategy will provide continuous improvements in the capability of cancer care services in Queensland and is vital to ensuring the assessment and care of people affected by cancer is timely, well-integrated and of consistent high quality.

A handwritten signature in black ink, appearing to read 'L. Springborg'. The signature is fluid and stylized, with a large loop at the end.

Lawrence Springborg
Minister for Health

Contents

Summary	5
Part A: The strategy.....	6
1. Introduction	6
2. Health service needs and issues.....	6
3. Vision of a quality cancer service.....	8
4. Service directions	9
Service direction 1	10
Service direction 2	12
Service direction 3	13
Service direction 4	17
5. Implementation, monitoring and review	20
Part B: Supporting information.....	23
6. Background to the strategy	23
7. Overview of Queensland's population	26
8. Summary of cancer in Queensland.....	27
9. Cancer care services in Queensland.....	28
10. Utilisation of cancer care services	30
Appendix.....	32
Glossary	34
References.....	38



Summary

Cancer is a major cause of illness in Australia—placing a significant burden on individuals, families, society and the health-care system. Cancer was declared a National Health Priority Area by the Australian Health Ministers in 1996. Despite a decline in cancer mortality and an increase in survival rates, in 2012 it was estimated that one in two Australians will develop cancer and one in five will die from it before the age of 85.¹ The health burden caused by cancer is increasing as the population ages.

Cancer care is complex and requires a range of diagnostic, specialist and community based services to meet the health needs of people affected by cancer. Cancer care is truly multidisciplinary. It requires coordination from prevention through screening and specialised diagnostics, management through the coordinated mechanism of the multidisciplinary team through to survivorship or palliative care. With the increasing incidence of cancer—driven by a growing and ageing population demanding quality services that are accessible and safe—cancer care services will need to deliver an efficient and effective service over the long term with limited resources.

The *Cancer care statewide health service strategy 2014* provides public sector cancer care services with a 10 year vision for cancer care arrangements across Queensland. The strategy embraces the themes of the Blueprint for better health care in Queensland by focusing on improving cancer care services for people with cancer, empowering the health workforce as drivers of the strategy, improving the efficiency of the service and planning for the future.² The vision is for quality cancer care services to provide safe, timely and integrated multidisciplinary assessment and care for people affected by cancer as close to home as is safe and practical to do so.

The strategy was developed in close collaboration with members of the Statewide Cancer Clinical Network (SCaCN) and a range of key stakeholders. The outcomes of previous planning activities were considered together with contemporary information to develop the strategy which is aligned with the objectives in the *Department of Health Strategic Plan 2012–2016 (2013 update)*.³

The four service directions are:

1. Promote consistency of care across the state.
2. Provide services through a network of integrated, coordinated, efficient service partners.
3. Continuously improve the accuracy and timeliness of cancer diagnosis, access to timely evidence-based cancer treatment services, access to support programs and/or end of life care services with the quality of care sustained over time.
4. Support improvement through information systems, research and education and measures of quality. Services are supported by a sustainable, credentialed, well trained and integrated workforce across the disciplines.

The Department of Health anticipates to work collaboratively with Hospital and Health Services (HHS), SCaCN and other providers of cancer care services using this strategy to guide local planning to meet the population's health needs. The Department of Health will monitor, evaluate, report and share progress towards achievement of the service directions outlined in this strategy.

Part A: The strategy

1. Introduction

This strategy articulates a vision for quality public sector cancer care services across Queensland. The service directions in this strategy broadly indicate how services will need to develop throughout the planning horizon (2024) to meet health needs. The service directions focus on the areas of cancer diagnosis, treatment and management services provided by the public sector. The service directions incorporate adult, adolescent and young adults and children's cancer services and consider the role of private sector and non-government support agencies in the network of services across Queensland.

The strategy builds on previous clinical stream service planning activities undertaken by the Statewide Cancer Clinical Network (SCaCN). It provides statewide service directions to guide enhancements where necessary thereby improving local service delivery. The strategy may also be used to guide Departmental purchasing and performance management for cancer care services, and to inform service enabler functions such as workforce, information management, support services, assets, and infrastructure.

The strategy does not provide service directions specific to private sector cancer care services. It does however, consider the role of the private sector in the network of services across Queensland and the interface between the public and private sectors. The strategy also does not provide service directions specific to cancer prevention activities, cervical and bowel cancer screening not provided through Queensland public health services, or detailed service planning of diagnostic (endoscopy, pathology and imaging) and palliative care services, although access to these services is considered.

2. Health service needs and issues

The issues and needs to be addressed by the strategy were identified through stakeholder consultation drawn from previous Queensland cancer planning activities (2010 to 2012). They were reviewed and re-validated by key stakeholders from the SCaCN and representatives from surgical services. Service needs representing a national perspective from the *National Service Improvement Framework for Cancer (2006)* were considered and incorporated where necessary.⁵ Service needs and issues were supported by an evaluation of the service environment.

The strategy has been developed to address the identified health service needs and issues below:

Quality cancer service

There is a need for a clear description of a vision for quality cancer services.

Multidisciplinary care

Multidisciplinary care models (reflecting 'critical intervention points') supported with evidence-based pathways should be implemented as standard elements of service delivery. Uptake of effective multidisciplinary team (MDT) meetings across the full range of cancer types and service capability levels should be improved to ensure correct assessment and management that is cost effective, equitable and consistent in care for all cases.



Patient centric care

Communication among health care professionals, people affected by cancer and their families, needs to improve, as does the linkages to locally based post treatment self-management programs, follow-up services or end of life care which can be provided concurrently with ongoing active management.

Service delivery models

Referral and standardised care pathways need to be aligned with a statewide service delivery/clinical framework to enhance integrated networks. Implementation of care coordination models and further development of standardised treatment protocols alongside clinical trials are needed to enhance the quality of protocols in place.

Service networks

Networks of public and private services including non government partners and cross border arrangements need to be strengthened. Formal linkages between cancer services and rural and remote service providers should be established.

Timely access

Services need to expand screening, diagnostic, treatment capability and capacity. Improvements in efficiency and effectiveness and/or have defined referral pathways into multidisciplinary care service models to provide timely access to meet (or exceed) national benchmarks or standards.

Surgical oncology access

Surgical oncology services in regional areas require ongoing capacity building to reduce waiting times and sustain the provision of surgical services to patients with cancer safely and if feasible, close to home or via formal links and pathways for timely referral to an appropriate surgical oncology service (including low volume, highly specialised solid cancers) to improve cancer survivorship.

End of life care

The possibility of whether any cancer/disease is incurable needs to be addressed with patients early, so that the full range of end of life care needs can be identified and addressed. Where teams have limited capacity to manage end of life and specialist palliative care needs (including sensitive communications), timely referrals to specialist palliative care teams need to be considered standard practice and not discretionary. All health professionals have a role in identifying needs and supporting the delivery of high quality end of life care which can be provided concurrently with ongoing active management. Strong links between services in different settings are needed to reduce the rate of unplanned hospitalisation at the end stages of illness (last 6–12 months of life).

Information systems

Access to statewide cancer information requires enhancement to share patient information between services. This includes private sector and cross border services to support timely referral and communication of patient information, monitor and report on service quality and safety, support research and enable benchmarking and performance measurement.

Quality and safety

According to the Queensland Health *Clinical Services Capability Framework for Public and Licensed Private Health Facilities* (CSCF), cancer care quality and safety systems need to be strengthened to provide assessment and reporting of service capability and gaps in capability and provide information to support monitoring of quality and safety against appropriate benchmarks.

Research

Access to research and education needs improvement so that practice continues to be evidence-based and to increase opportunities for patients to access clinical trials.

Workforce

Further development of workforce recruitment, training and retention strategies is required so a specialised and flexible workforce is available to support service growth and efficiency. This should reflect the complexity of cancer care within a multidisciplinary model and include maximising opportunities to take advantage of changing scope of practice for role development of the nursing and allied health workforce.

3. Vision of a quality cancer service

The SCaCN has developed a vision for Queensland services:

A quality cancer service provides safe, timely, integrated, multidisciplinary assessment and care for people affected by cancer as close to home as is safe and practical to do so. Services should incorporate cancer treatment models (including national service improvement directions) which combine critical components of the overall care pathway from diagnosis and treatment through supportive and/or end-of-life care; and each step is considered important to support. The service should facilitate multidisciplinary assessment and care.

Services should be supportive of and responsive to all people affected by cancer (patients and their carers and families) and to those who deliver care. Services should incorporate enabling features to facilitate engagement with individuals and groups to better understand their experiences, for the purposes of planning, implementing and improving cancer services across Queensland. Services need to be particularly cognisant of those disadvantaged through location and geographical distance from treatment centres; cultural and linguistic needs; geriatric population care needs and the needs of Aboriginal and Torres Strait Islander peoples.

Services should support the integration of care both within and across multiple facilities and sectors in order to ensure that people affected by cancer are offered the best treatment in the most appropriate place. To achieve this, partnerships need to be formed between and across remote, regional, urban and tertiary centres. Patients, staff and business processes need to engage in this level of integration and ensure best practice in both collaborative and supportive care is priority driven, evidence based and as cost effective as possible.

Services will advocate for a culture of education, training and research with peer support across all disciplines and across the State; will access high quality data that allows for the assessment and benchmarking nationally and statewide creating continuous quality improvement which will be evidenced by excellence in care and optimal patient safety and satisfaction.

4. Service directions

The service directions presented are broad statements about the future state of cancer care services delivered by HHSs with the support of the Department of Health and SCaCN. Service directions reflect the areas where solutions, supported by evidence-based practice are needed in order to achieve the vision of ‘a quality cancer service’.

Although four overarching service directions have been developed, these are not mutually exclusive. Actions within individual service directions may contribute to the achievement of multiple objectives within other service directions.

Each of the service directions include:

Objectives

Statements of achievement or specific statements about what the service system needs to work towards.

Signs of success

Performance indicators to monitor the success of accomplishing the service direction or meet the intent of the planning. They provide a measure on which to assess the extent the objectives have been achieved.

Service actions

Statements of action or ‘how’ the service system may work toward meeting the statements of achievement set out in the objectives. Each HHS may choose to implement these actions—or to identify and implement other actions—to achieve the objectives detailed in this section.

Time frames

Service actions identified for implementation in the short to medium term (1–5 years) are designed to be completed within existing resources. Some of the service actions identified for implementation in the long-term (6–10 years) require additional resources. Placement of these actions in the outer years allows for both the HHSs and the Department of Health to explore options for resourcing these prior to implementation.

Responsibility

Organisations with lead responsibility for implementing service actions are identified for each action. Other organisations may participate, assist or guide the lead organisation as necessary to implement and complete the action. The lead organisations with prime responsibility are:

- Hospital and Health Services (HHS)
- Department of Health, Health Service and Clinical Innovation Division:
 - Statewide Cancer Clinical Network (SCaCN)
 - Chief Health Office (CHO)
 - Office of the Principal Medical Officer (OPMO)
 - Allied Health Professions’ Office of Queensland (AHPOQ)
 - Nursing and Midwifery Office Queensland (NMOQ)
- Department of Health, Health Commissioning Queensland (HCQ)
- Department of Health, Health Services Information Agency (HSIA)
- Metro South HHS, Queensland Cancer Control and Analysis Team (QCCAT).

Service direction 1

Cancer care services promote consistency of care across the state through the use of multidisciplinary teams, evidence-based treatment protocols, guidelines and standards and ensure people affected by cancer are well informed throughout their cancer journey.

Objectives

- 1.1 Improve cancer care delivery to patients, with each new case having their stage of cancer accurately assessed and recorded, and a documented evidence-based treatment plan developed, reviewed and implemented by MDT members.
- 1.2 Improve cancer care decision making by involving patients and their general practitioner as active partners in decisions about their care and keeping them and their carers informed throughout their cancer journey.
- 1.3 Continue to promote consistency of care by making evidence-based referral and treatment protocols, guidelines and standards, as well as supporting education that is accessible across the state for all providers.
- 1.4 Promote the adoption of the Statewide Clinical Cancer Care Framework* so it is used by all services.
- 1.5 Continue the implementation of a cancer care coordination model across all services incorporating psycho-social support.

Signs of success

- Cancer patients undergoing treatment have a documented evidence-based treatment plan accessible by the treating MDT members and provided to patients and their general practitioner.
- The proportion of treatment plans developed by a MDT for patients with breast, colon and lung cancer continues to improve across the state.
- Each cancer service (within their capability or via formal referral pathways) operates in alignment with a statewide clinical cancer care framework.
- Compliance with evidence-based standards and guidelines is evaluated and monitored.

Service actions

Short-term (1–2 years)	Responsibility
Seek Department of Health endorsement of a statewide clinical cancer care framework* for cancer services in line with national service improvement frameworks.	Department of Health (SCaCN)
Develop a methodology to support oversight and provide consultative leadership to HHS in the implementation of an endorsed statewide clinical cancer care framework*.	Department of Health (SCaCN)
Incorporate into local health service planning appropriate actions and strategies to align services with a statewide clinical cancer care framework*.	HHS
Review and evaluate clinical protocols and processes to transition the safe transfer of paediatric cancer patients to adult treatment and follow-up services if required.	Department of Health (SCaCN)
Evaluate the existing care coordination models, including the implementation or enhancement of psycho-social and peer support, and recommend future development and implementation of a statewide model.	Department of Health (SCaCN)
Advise (on) and support the publication of recommended evidence-based standards, policies, guidelines and protocols reflecting current evidence and safe practice (including identification of those which may be in use but are no longer considered to be of clinical benefit). Where possible these should align to national directions, for example managed through eviQ (information system).	Department of Health (SCaCN)
Monitor the service provision for young people living with cancer to ensure treatment is provided in age appropriate facilities according to CSCF and where appropriate, in conjunction with the Queensland Youth Cancer Service.	HHS
Enhance access for service providers to evidence-based MDT pathways that include: <ul style="list-style-type: none"> • links between cancer services in primary and acute settings such as communicating treatment plans to a patient's general practitioner using tools like the Personally Controlled Electronic Health Record • clinical support services such as diagnostic and interventional radiology, histopathology and medical genetics • use of tumour boards (including medical and surgical sub-specialties as required) • statewide paediatric shared care model • age relevant evidence-based pathways for adolescent and young people living with cancer • high quality management of end of life care • referrals to oral health services during and post treatment to prioritise access to treatment. 	HHS
Improve the access to evidence-based patient treatment plans for so they can be viewed by all MDT members, the patient and their general practitioner.	HHS
Medium-term (3–5 years)	Responsibility
Each service to measure patient satisfaction throughout the patient's journey including treatment, psycho-social support including peer support, rehabilitation and palliative care. This tool is to include measures for assessing involvement in patient-centred decision making, account for patient preferences, access to evidence-based information and education resources.	HHS
Implement recommended evidence-based standards, policies, guidelines, protocols (e.g. Radiation Oncology Practice Standards 2011) and multidisciplinary team pathways supported by appropriate training.	HHS
Long-term (6–10 years)	Responsibility
Monitor and audit the uptake of recommended evidence-based standards, policies, guidelines, protocols and multidisciplinary team pathways, including identifying obstacles and implementing ways to improve uptake if required.	Department of Health (SCaCN)

* Appendix A – Clinical Cancer Care Framework – illustrates the key elements of the optimal patient care pathway

Service direction 2

Cancer care services are provided through a network of services linked to form an integrated, coordinated, efficient service partnering with private sector and non-government support services where practicable.

Objectives

- 2.1 Improve system governance arrangements to oversee and guide the development of cancer care services in Queensland.
- 2.2 Conduct local health service planning to integrate and coordinate cancer care services including establishing service partnerships and implementing appropriate clinical and business/service governance arrangements.
- 2.3 Enhance service networks so they are more clearly defined, encompassing both public and private sector services including rural and remote service providers and provide formal links between CSCF defined cancer services, cancer units and cancer centres.

Signs of success

- Every public sector health service has a clearly defined referral pathway to a cancer care service.
- Each public cancer care service has formal links with another service (higher or lower) and works in partnership within a service network.
- Increasing numbers of patient's intended treatment plans communicated to the patient's primary care provider by public sector cancer service.
- Evidence of links with private sector.

Service actions

Short-term (1–2 years)	Responsibility
Explore options for collaborative service structures between rural, regional, private providers, cross-border and CSCF level 6 (tertiary/quaternary) services in the use of evidence-based cancer care pathways and further develop service networks for the delivery of services requiring coordination at network or statewide level such as low volume, highly specialised solid cancers requiring surgery.	HHS/ Department of Health (SCaCN)
HHSs consider using the SCaCN as the peak advisory body to guide and oversee development and planning for cancer care services.	HHS
Continue to improve relationships and partnerships with primary care providers in developing integrated or shared care service delivery.	HHS
Maximise opportunities to contribute to the development of national initiatives aimed at improving cancer services e.g. actively support Queensland to contribute advice and expertise to expert working groups (as appropriate over time).	Department of Health (HSCI/ SCaCN)
Medium-term (3–5 years)	Responsibility
Work with non-government organisations to further develop support services for cancer patients, survivors and their families, building on existing successful models.	HHS
Continue to strengthen service networks across HHS boundaries and private sector services by formalising referral pathways and planning for service sustainability and capability at senior clinician and executive level, within and across HHS and private services where appropriate.	HHS
Identify and implement strategies to reduce barriers to cross-border integration of services such as patient referral pathways, timely transfer of patient information and diagnostic results to improve patient safety and service quality.	HHS
Long-term (6–10 years)	Responsibility
Implement mentoring and coordination of training programs in collaboration with major teaching hospitals and the higher education sector to improve local service sustainability and capability including those for surgical-oncology.	HHS
Monitor and propose improvements at a statewide level in collaboration with HHSs and the higher education sector which includes mentoring and coordination of programs to improve local service sustainability and capability including those for surgical-oncology.	Department of Health (SCaCN)

Service direction 3

Cancer care services continuously improve capability to support accuracy and timeliness of cancer diagnosis, access to timely evidence-based cancer treatment services with quality of care sustained over time and access to support programs and/or high quality end of life care services as appropriate.

Objectives

- 3.1 Improve uptake of effective cancer screening programs, especially in regional, rural, remote and Aboriginal and Torres Strait Islander communities.
- 3.2 Improve access to highly specialised diagnostic (endoscopy, imaging, genetics and pathology), specialist services (medical and surgical sub-specialties) and pharmacy in line with evidence-based guidelines for the early diagnosis and treatment of cancer.
- 3.3 Improve processes to enable timely access to multidisciplinary teams to reduce variation in cancer outcomes.
- 3.4 Improve the sustainability, capability, efficiency and capacity of surgery, radiation and chemotherapy services to lower patient waiting times to within evidence-based guidelines.
- 3.5 Reduce variations in cancer outcomes in Queensland between metro, regional and rural areas as well as between socio-economic groups.
- 3.6 Improve access to support programs for cancer survivors, including young people living with cancer and their families.
- 3.7 Improve access to high quality end of life and specialist palliative care for those patients with identified life limiting disease (regardless of care model or setting).

Signs of success

- Variations in cancer outcomes are reduced between metro, regional, rural and remote areas as well as between socio-economic groups, with each HHS measuring and reporting access criteria (such as improvement in achieving evidence-based time targets or lower waiting times) for cancer diagnoses, cancer treatment services and post treatment support programs.
- The five-year relative survival ratio of Queenslanders diagnosed with invasive cancer is higher than the ratio for Australia as a whole (five-year relative survival proportions is a national performance indicator under the National Healthcare Agreement).
- Each service audits and reports their capability annually using the CSCF as a guide.
- Multidisciplinary teams routinely incorporate members from core specialists including a palliative medicine physician for advanced stage cancer.
- Sufficient cancer service capacity that is measured against endorsed guidelines and at appropriate CSCF levels, within each service network.

Service actions

Short-term (1–2 years)	Responsibility
Establish targets and benchmarks in line with evidence-based guidelines to measure access to services including diagnostic services, outpatient clinics (medical and surgical sub-specialties), multidisciplinary teams and surgery for cancer patients.	Department of Health (SCaCN)
Evaluate and build upon cancer support services in the acute setting, together with community organisations to further improve or enhance access to cancer survival resources, and support and self-management programs (with emphasis on young people living with cancer and their families).	HHS
Regularly (at least annually) assess and report CSCF levels (including maintaining oversight of requirements related to minimum annual volumes) and address gaps in requirements to strengthen cancer care quality and safety.	HHS
Establish and implement integrated service models that promote the role of all health professionals (across settings) in supporting timely access to high quality end of life care to: <ul style="list-style-type: none"> • identify needs as early as possible (considering families and carers) • accommodate active medical and supportive management as appropriate • promote the sensitive delivery of high quality information to support planning for end of life • increase the capture of individual preferences within plans of care (including advanced care directives) • deliver care in adherence wherever possible with individual choices and preferences. 	HHS
Undertake health service planning to inform/identify options and determine timelines in relation to developing sustainability, capability and increasing capacity within the HHS whilst considering collaborative service structures and service networks between rural, regional, private providers, cross-border and CSCF level 6 (tertiary/quaternary) services and the use of evidence-based cancer and supportive care pathways.	Department of Health (HCQ)/HHS
Medium-term (3–5 years)	Responsibility
Monitor, report and conduct local planning as necessary to improve access to clinics, diagnostic, medical and surgical sub-specialties, multidisciplinary teams, support care and treatment services that are in line with established targets and benchmarks for: <ul style="list-style-type: none"> • diagnostic technology (imaging, pathology, endoscopy) • treatment (surgical-oncology, radiation and chemotherapy) • supportive services, end of life and specialist palliative care. 	HHS
Regularly review referral pathways to include, where possible, the adoption of appropriate shared care models which: <ul style="list-style-type: none"> • enables patients to benefit from ongoing monitoring and treatment as close to home as possible—such as those living in regional, rural and remote areas • is safe to do so within CSCF minimum requirements • uses technology such as telehealth in line with guidelines and protocols underpinned by a sound education program (e.g. chemotherapy treatment in rural setting supervised via telehealth). 	HHS
Develop methodologies that allow the ongoing identification of future service requirements and provides capacity to inform health service planning and purchasing to ensure rigour, transparency and efficiency in the provision of services, both between public sector providers and across the public-private interface.	Department of Health (HCQ)
Implement strategies to enhance patient access to evidence-based resources about cancer survival and self-management programs—in particular implement strategies to promote awareness to young people living with cancer of the late side effects of treatment, and second malignancies or other chronic diseases which can develop in adult life.	HHS
Develop and implement strategies that target disadvantaged populations, Aboriginal and Torres Strait Islander people and remote communities to improve access to appropriate cancer services.	HHS

Long-term (6–10 years)	Responsibility
Increase uptake of breast screening including genetic testing for BRCA genes and cervical cancer screening programs provided by the HHS with programs to reach all rural, remote and disadvantaged communities, targeting Aboriginal and Torres Strait Islander people.	HHS
Improve access to diagnostic technology such as endoscopy, imaging and pathology to meet evidence-based guideline targets for the early diagnosis of cancer. Consider options such as prioritising access to public services and accessing private providers.	HHS
Each service network improves capacity and capability to provide services using endorsed methodologies to identify service requirements.	HHS
Expand imaging and pharmacy sustainability, capacity and capability in line with cancer care service development.	HHS
<p>Address the gap between established targets and reported access to services in collaboration with service partners (such as pathology and medical imaging) so that cancer services achieve improved outcomes by employing strategies such as:</p> <ul style="list-style-type: none"> • collaborating within and with other service networks for access to services • accessing private service providers supported by evidence-based cancer care pathways • increasing service sustainability, capability and capacity within allocated resources. 	HHS

Service direction 4

Cancer care service improvement is supported by information systems, clinical and basic research, education and measures of quality and services are supported by a sustainable, credentialed, well trained and integrated workforce across the disciplines.

Objectives

- 4.1 Improve the ability of the HHS to monitor access, waiting times, education and teaching, and research activities.
- 4.2 Strengthen quality and safety systems in relation to service capability, credentialing, support for clinical decision making, service monitoring and performance evaluation.
- 4.3 Increase the use of statewide cancer information systems to enable sharing of patient information between services.
- 4.4 Improve the identification of workforce requirements to support models of care that combine hospital inpatient and outpatient care, multidisciplinary teams and other care services.
- 4.5 Optimise the use of existing human resources available to provide safe, quality and sustainable services.
- 4.6 Improve and streamline appropriate patient access to clinical trial participation opportunities.

Signs of success

- Information systems are capable of reporting defined formal performance measures and evaluative cancer clinical activity.
- At a minimum, five per cent of the cancer patient population undergoing treatment are participating in a clinical trial to completion.
- The implementation towards an integrated oncology information solution that is accessible by all cancer care service providers, provides end-to-end patient data management following the patient's entire cancer journey and includes a mandatory clinical data set.

Service actions

Short-term (1–2 years)	Responsibility
Establish formal Queensland cancer performance measures linked to clinical outcomes that align with national benchmarking.	Department of Health (SCaCN)
Continue the implementation of the Queensland Cancer Education Program to standardise and provide comprehensive education across all disciplines specialising in cancer care.	HHS
Clinical and basic researchers involved in improving cancer care communicate their activity to the public through electronic media, public presentations, patents and papers in peer-reviewed journals.	Department of Health (CHO and NMOQ)/HHS
Strengthen system capacity to enable appropriate patient access to clinical trials (e.g. implement strategies to increase service capacity to conduct clinical trials) and reduce obstacles that limit access or capability for participation in clinical trials. Strategies to be implemented should consider: <ul style="list-style-type: none"> • appropriate staffing of research units • remove barriers within sight to engage research • access to the necessary training and certification required for clinical trial involvement • recognition of research as part of core business. 	Department of Health (SCaCN)/HHS
Support training and peer support for clinical streams.	HHS
Strengthen the mechanisms to report formal Queensland cancer performance measures and cancer care management information (including imaging, pathology and treatment activity information) as well as expanding access, use and availability of the information to: <ul style="list-style-type: none"> • improve patient safety and quality of care provided • improve and enable more efficient treatment • monitor the use of multidisciplinary teams and impact on care • share information between services to support timely referral • strengthen cancer research • allow monitoring and reporting of service delivery, quality and safety • guide improvement in cancer services. 	Department of Health (SCaCN)/QCCAT (Metro South HHS)
Medium-term (3–5 years)	Responsibility
Facilitate collaboration between public and private cancer services, tertiary education institutes, specialist colleges, specialised workforces and unions to enable sustainable cancer workforce planning in the HHS.	HHS
Influence and contribute to planning for clinical support services such as imaging and pharmacy workforce.	Department of Health (CHO, OPMO, AHPOQ and SCaCN)
Review and strengthen cancer workforce skills—at all levels—with a focus on enhancing regional and rural services to manage and treat patients close to home where it safe and sustainable (such as chemotherapy and surgical-oncology), on improving quality of care, and improving outcomes for patients.	HHS
Investigate and systematically remove obstacles that limit access to research and education and provide training and peer support for clinical streams, so that practice continues to be evidence-based.	HHS
Develop and implement processes to identify, acquire, manage and govern information systems to enable more effective and efficient service delivery.	HHS

Long-term (6–10 years)	Responsibility
<p>A solution, or an option to be explored for the implementation of an integrated oncology information solution that incorporates:</p> <ul style="list-style-type: none"> • a range of capabilities that could support patient referral, outpatients, scheduling, training, clinical handover and peer support • data capture and provision of critical patient information for the entire journey through the health system • mandatory information collection for diagnosis, staging, treatment and research • all aspects of treatment including surgical, medical and radiation oncology as well as clinical haematology • access by rural, remote and cross-border settings • system inter-operability with other health systems for information sharing. 	Department of Health (HSIA)/HHS
Explore opportunities to enable access to cancer activity information for all service providers in the public, private and non-government sectors.	Department of Health (SCaCN)/QCCAT (Metro South HHS)
Explore and implement alternative models of care to enable better use of scarce clinical skills e.g. nurse-led clinics, nurse practitioners, radiation therapy and other allied health models.	Department of Health (OPMO, AHPOQ and NMOQ)/HHS
Encourage, facilitate and continue to support collaboration and communication across the health research community to improve awareness of clinical trial opportunities, increase participation across multiple services boundaries and appropriately maintain resources such as the Database of Research Activity (DoRA).	Department of Health (CHO and NMOQ)

5. Implementation, monitoring and review

5.1 Implementation

This strategy outlines the statewide service directions for public sector cancer care services. Further local HHS planning and action is required to convert these service directions into service enhancements.

5.1.1 Hospital and Health Service responsibilities

In accordance with the *Hospital and Health Boards Act 2011* (the Act), once the Department of Health has endorsed the strategy, the responsibility to ‘undertake further service planning that aligns with the statewide plans’ rests with each HHS.⁴ Health service planning at the local level will assist HHSs to respond to local health service needs and will establish a platform for negotiation with the Department of Health around particular community issues not addressed within the strategy.

Local health service plans should align with the service directions and service objectives in the strategy. For the actions suggested in the strategy, each HHS is positioned to consider the suitability of these for their local population and make decisions regarding whether to adopt the actions, or develop others designed to meet the service directions and objectives. Subsequent to the development of local health service plans, each HHS should prepare a detailed implementation plan that helps to translate the local health service plan into actions, with achievements being monitored against the statewide service directions, service objectives and signs of success.

5.1.2 Risks to successful implementation

The success of the strategy relies on each HHS determining how to implement the key elements contained within Section 4 of this document. The key risks of not having a local cancer care health service plan in place include the:

- inability to achieve benchmarks for timely access, quality and safety
- inability to meet health service demand for the ageing population, including increasing numbers of cancer incidence and the associated increased demand for cancer treatment
- inability to accurately inform service enablers, including workforce, support service and information technology requirements
- inability to plan the allocation of future resources related to cancer care services.

5.1.3 Resource implications

The process of planning, carefully considered resource implications of the strategy. Service actions were prioritised for inclusion based on the principles of cost neutrality and/or cost effectiveness.

Service actions identified for implementation in the early years of this strategy (1–5 years) are designed to be completed with existing resources. They will require no (or minimal) resources and in many instances may lead to service efficiencies and result in cost savings. Some of the service actions identified for implementation in the outer years of the strategy (6–10 years) require additional resources and placement of these actions in the outer years allows for HHSs and the Department of Health to explore options for resourcing these prior to implementation.

Decisions regarding the resource implications for each service action were made using knowledge of current resources for services, plus an assumption that these resources would not diminish significantly over the period 2014–2024. Further consideration will need to be given to the resource implications of each service action—at the commencement of implementation and at regular intervals throughout the implementation process—to ensure any changes in the service environment are captured and considered.

5.2 Monitoring and review

Monitoring, evaluating, reporting and reviewing implementation of the strategy, including reporting on and reviewing progress towards achieving the identified objectives, completes the cycle of the health service planning. These processes also allow changes in direction during the implementation of the strategy to ensure ongoing relevance and provide information upon which future service planning may be based.

5.2.1 Monitoring and evaluation

Under the Act, the Department of Health is responsible for the monitoring of service performance and HHSs are required to provide service performance data to the Department of Health.⁴ Monitoring and evaluating the implementation and progress will be the responsibility of Health Commissioning Queensland, Department of Health. It will involve collection and analysis of quantitative and qualitative data at a number of points in time—before, during and after implementation.

Evaluation will consider both the process of implementation (i.e. progress towards implementing the local service strategies) and the impact of implementation (i.e. progress towards achieving each objective).

5.2.2 Indicators

Successful implementation of the strategy will be measured against criteria for success (to demonstrate the achievement of outcomes of the strategy) and signs of success (performance indicators set against each service direction) to demonstrate accomplishing the service directions and objectives. Measurement against these indicators will provide the information to enable monitoring, evaluation and reporting.

Criteria for success

The criteria for success for meeting the intent of the strategy will be demonstrated by improved health outcomes for Queenslanders with cancer and working towards reducing inequities in health outcomes within Queensland. Overall success of the outcomes of the strategy will be indicated by three criteria:

1. Improved five year relative survival rate for all invasive cancers for the Queensland population and the five year relative survival rate remains better than the Australian rate.

2. Increased HHS five year survival rates for all invasive cancers where a HHS rate is more than 10 per cent lower than the Queensland average rate.
3. Reduction in HHS cancer mortality rates per 100,000 population (age standardised to the Australian 2001 population) where a HHS rate is more than 10 per cent higher than the Queensland average rate.

Signs of success

The signs of success will measure performance against service directions and objectives. Information for these indicators will be evaluated as collection and reporting systems are implemented by cancer care services in the HHSs. As well as HHSs establishing reporting mechanisms to provide data to the Department of Health, some service actions will need to be implemented before full reporting against the signs of success can be achieved by the first review point.

5.2.3 Reporting and review

Reporting on the progress of implementation (i.e. reporting on the criteria of success via the monitoring and evaluation process detailed above) is required on an annual basis where data is reported and available. The Policy and Planning Branch will prepare annual progress reports in collaboration with SCaCN as the conduit between the Department of Health and HHSs. These reports will be prepared for the Department's Executive Management Team for consideration, shared with HHSs and published accordingly.

In addition to the annual progress reporting, there will be three formal review points for implementation, conducted as a collaborative project between Health Commissioning Queensland and SCaCN. The review points will be in the third year (2017), fifth year (2019) and tenth year (2024).

Reviews will take into consideration not only the progress to date, but also any changes to the key elements informing the development of the original strategy, including any significant changes in health need, health services, and the service environment. Based on the outcomes of the review, a revision of this strategy may be considered, to ensure the service directions remain current and continue to provide for the identified needs, and the actions being implemented are achieving the objectives.

Part B: Supporting information

6. Background to the strategy

6.1 Purpose

The strategy aims to provide service directions for the Hospital and Health Boards and Hospital Service Chief Executives to oversee the delivery of safe and sustainable cancer care health services. It is intended to guide further HHS and Departmental planning by exploiting current strengths and improving cancer care services in aligning with patient needs and Queensland and Commonwealth Government strategic priorities. The strategy builds on previous clinical stream service planning activities undertaken by SCaCN.

The purpose of the strategy is to:

- articulate a vision for a quality cancer service
- provide statewide service directions for the HHS to guide service enhancements where necessary thereby improving local service delivery to meet population health need
- guide Department of Health purchasing and performance management for cancer care services
- inform service enabler functions such as workforce, information management, support services, assets, and infrastructure.

6.2 Scope

The following considerations were included in the scope of the strategy:

- delivery of public cancer care services for the next 10 years, in particular:
 - early detection and screening—including breast screening and the impact of screening on the public sector services, as well as the referral processes and pathways as the result of positive detection from cancer screening programs
 - referral—including linkages supporting referral and transition to and from primary health and acute care and linkages to diagnostic services (imaging and pathology), and pharmaceutical services
 - treatment—access to multidisciplinary care, surgical, radiotherapy, medical oncology, allied health, chemotherapy and supportive therapy services for cancer treatment including those delivered via telehealth
 - follow-up care—linkages supporting referral and transition to survivorship or end of life care as required
- build upon previous health service planning activities, in particular those for Queensland cancer services strategic directions and statewide cancer treatment services plan
- service networks, models of care and service delivery models described in the CSCF v3.1
- analysis of background environmental information that reflect the health service needs of the population, the changing burden of disease and current service delivery
- access to services for residents in metropolitan, regional, rural and remote geographical locations, and associated patient flows
- private sector and/or non-government service delivery activity where services are provided through partnership or contracted arrangements by the public sector
- oncology and clinical haematology services for children, adolescents and young adults, and adults.

The following were not included in the scope of the strategy:

- cancer prevention activity, and cervical and bowel cancer screening—assumed to be led by, or primarily a Commonwealth responsibility
- service planning of palliative care services—development of a statewide ‘end-of-life’ strategy (incorporating palliative care services) is expected to be completed in 2014
- detailed objectives and actions for the assisting and support functions (including workforce, funding, support services such as imaging, pathology and pharmacy, assets, infrastructure and information management)
- detailed models of care, clinical practice guidelines and pathways, protocols or clinical benchmarks for health service delivery.

6.3 Methodology

The strategy was prepared following a comprehensive planning process in close collaboration with the SCaCN, key stakeholders in HHSs, and the Department of Health. The planning process, guided by the Queensland *Health Guide to Health Service Planning Version 2* was supported by an evaluation of the service environment that included:

- a scan of current and previous cancer planning conducted in Queensland and Australia
- a profile of current cancer services in Queensland and the types of services provided
- an analysis of the current and future Queensland population demographics
- consideration of evidence-based models of care and service delivery mechanisms
- a profile of the current burden of cancer disease on the Queensland population as well as reviewing cancer screening activities and treatment outcomes in terms of relative survival.

The prioritised list of health service needs and issues for public sector cancer care services in Queensland were identified and confirmed from stakeholder review, validation of the service environment scan and previous planning work. In consultation with key stakeholders, as well as Departmental workforce planning areas and the Department’s End of Life Planning Project, the service directions in the strategy were formed to address these priority service needs and issues.

6.4 Policy context

Hospital and Health Boards Act 2011

The *Hospital and Health Boards Act 2011* sets the agenda to deliver stronger local control and decision making, better governance and stronger engagement with clinicians for better health outcomes.⁴ The Act achieves this by:

- strengthening local decision-making and accountability, local consumer and community engagement and local clinician engagement
- providing for statewide health system management including health system planning, coordination and standard setting
- balancing the benefits of the local and system-wide approaches.

Under the Act, HHSs are established as independent statutory bodies to deliver services and ensuring these services are efficient, effective and economical. The Department of Health is required to develop statewide service plans and monitor service performance of HHSs against these plans. HHSs are required to contribute to, and implement, statewide service plans and undertake further service planning aligning with the statewide plans.

Blueprint for better healthcare in Queensland (February 2013)

The *Blueprint for better healthcare in Queensland* (the blueprint) sets the scene for structural and cultural improvement in the health system.² The blueprint has four principal themes:

- Health services focused on patients and people.
- Empowering the community and our health workforce.
- Providing Queenslanders with value in health services.
- Investing, innovating and planning for the future.

Department of Health Strategic Plan 2012–2016 (2013 update)

The *Department of Health Strategic Plan 2012–2016 (2013 update)* is a core planning document which outlines the Department of Health's strategies for supporting the achievement of the government's objectives, and the themes in the blueprint.³ The objectives for the Department of Health are:

- healthy Queenslanders
- accessible services
- safe services
- value for money
- governance and innovation
- partnerships and engagement.

6.5 Frameworks

Two frameworks guide Queensland cancer services in the provision and planning for optimal quality and safe service delivery for people with cancer.

National Service Improvement Framework for Cancer

The Australian Government *National Service Improvement Framework* for Cancer is a high level guide for health services on what needs to happen to achieve optimal care in cancer.⁵ The framework describes what is currently known about high quality care for cancer and outlines what care people affected by, or at risk of cancer should expect to receive irrespective of where they live. Opportunities for improving care or critical intervention points are identified in the framework of where resources might most usefully be invested to reduce death and distress from cancer.

Clinical Services Capability Framework

The Queensland Health *Clinical Services Capability Framework for Public and Licensed Private Health Facilities v3.1* (CSCF v3.1) provides a standard set of minimum capability criteria for service delivery and planning.⁶ The CSCF v3.1 outlines the minimum service requirements, staffing, support services and risk considerations for both public and private health services to ensure safe and appropriately supported clinical service delivery in Queensland. There are seven modules in the CSCF v3.1 related to cancer services: preamble to cancer services, medical oncology, haematological malignancy, radiation oncology, children's radiation oncology, surgical oncology (contained in the surgical services module) and children's cancer services. The preamble to cancer services module provides guidance on service networks, types of cancer services (cancer service, cancer unit and cancer centre), and models of care (multidisciplinary care and care coordination).

7. Overview of Queensland's population

Population profile

The preliminary estimated resident population of Queensland at 30 June 2012 was 4,565,530 persons, representing 20.1 per cent of the Australian population.⁷ In the 10 years prior to 2012, the Queensland population increased by 91,240 persons per year on average. This equates to an average growth of 2.0 per cent per annum, in comparison to the national average increase of 1.7 per cent per annum.⁷ Historical population growth rates in recent years have been volatile and have created uncertainty in population projections. Growth is expected to decline due to tightened entry conditions into Australia and relatively low levels of net interstate migration combined with stable levels of fertility and mortality. Queensland is projected to grow between 2011 and 2021 by 21.2 per cent (an average of 2.1 per cent per annum) or 976,173 people.⁸

Regional population growth

Gold Coast, Ipswich, Moreton Bay, Sunshine Coast, Fraser Coast, Gladstone, Mackay and Cairns were Queensland's fastest growing local government areas in the 10 years prior to 2012—greater than 2.8 per cent average per annum.⁹ The West Moreton HHS is expected to have the highest population growth of all HHSs to 2021 with an average annual increase of 5.2 per cent or an additional 130,000 people. Metro North, Metro South and Gold Coast HHSs are also expected to increase by more than 130,000 people each. Mackay HHS, the next highest growing HHS after West Moreton, is expected to grow by an average of 2.9 per cent per annum to 2021, with an additional 53,000 people.¹⁰

Ageing population

The age structure of Queensland's population is projected to change dramatically over the 10 year period from 2011 to 2021. The number of people aged 65 years or older is projected to grow by 53 per cent from 604,003 to 924,085, while the number of people aged 85 years and older is projected to almost double (to 153,094) by 2026.^{8,10} Ageing of the population is projected to result in a median age of Queenslanders rising from 36.2 years in 2012 to 39.3 years by 2026 and to 42.8 years by 2056.^{7,8}

Remoteness

As at 30 June 2012, almost 18 per cent of the Queensland population (810,003 people) lived in areas classified as outer regional, remote or very remote.⁹ This proportion was the third highest in Australia behind Northern Territory and Tasmania.

Aboriginal and Torres Strait Islander population

Based on 2011 census data, the Aboriginal and Torres Strait Islander population were estimated to account for 4.2 per cent (188,954 persons) of the total Queensland population. The majority (49 per cent) of the Aboriginal and Torres Strait Islander population lived in major cities or inner regional areas of the State. The Aboriginal and Torres Strait Islander population is projected to increase by 30.4 per cent in the 10 years from 2011 to 2021.¹²

8. Summary of cancer in Queensland

Burden of disease

Cancer is the largest component of total burden of disease and injury in Queensland—compromising 19 per cent of all DALYs (disability-adjusted life years lost) in 2007—similar to the national rate.^{13,14} On the assumption that past trends will continue into the future, cancers are projected to remain the leading burden of disease broad cause group in 2016.¹⁶

Screening

The success of population cancer screening programs in Queensland has seen breast cancer incidence rate remaining steady and death rates fall 1.7 per cent each year between 2000 and 2007, colorectal cancer death rates fall 36 per cent between 2000 and 2010 with a steady incidence rate and cervical cancer death and incidence rates remaining steady.¹⁸

Incidence

Incidence rates for cancer in Queensland are among the highest in the world and the highest in Australia. However, the underlying cancer rate has increased only slightly since 1982.¹⁷ The increase is, in part, due to available testing and screening programs for some cancers. Also, Queensland has the highest melanoma incidence rate in the world and this has not changed significantly over the past decade. The age standardised incidence rate for the five year average (2004 to 2008) was 515.6 cases per 100,000 population—only slightly higher (less than 0.1 per cent) than the Australian rate over the same five year period.¹⁴

For the number of new cancer cases in Queensland, the incidence was 23,696 in 2010. The number of new cancers has increased by 2.2 per cent each year between 1982 and 2008. This growth in new cases of cancer is largely being driven by population growth and ageing. The projected number of new cancers will increase by 48 per cent to 35,055 by 2021, an average increase of 4.4 per cent per year over the 11 years from 2010 to 2021.¹⁶

Relative survival

Overall cancer survival appears to be improving in Queensland where the average five-year relative survival in 2004–2008 was 67 per cent compared to 64 per cent in 1998–2002.¹⁷ Survival varies widely and depends on the type of cancer. Thus, five-year survival ratios for 2004–2008 vary from over 95 per cent for thyroid cancer to under 20 per cent for oesophageal, lung and pancreatic cancer. Queensland survival rates are similar to the average Australian five year survival rate (66 per cent in 2006–2010).¹⁴

Prevalence

The prevalence of cancer is increasing due to earlier diagnosis (aided by screening), extended survival and growth in the aged population. By the end of 2008, people living with cancer represented nearly 1.6 per cent of all Queenslanders—similar to the national rate. Prostate cancer followed by breast cancer and melanoma were the most prevalent cancers in Queenslanders.¹⁷

Mortality

The largest cause of premature death in Queensland was cancer (39 per cent in 2010) and the second largest cause of all deaths (30 per cent in 2010). Queensland has one of the lowest all-cancer death rates in the world and has been declining since the mid-1990s. In 2008, lung cancer was the most common cause of cancer death, accounting for 23 per cent of deaths in males and 16 per cent of deaths in females.¹⁷ The lung cancer death rate in males has fallen steadily since the 1980s, while for females the rate increased up until 2002 and has been steady since.¹⁸

9. Cancer care services in Queensland

Cancer care services incorporate diagnosis and care planning (which may start at the primary health care level), treatment in both ambulatory and inpatient settings followed by transition to supportive or palliative care as required. The clinical practice areas of oncology (medical, radiation and surgical) and haematology are the primary services that deal with cancer in the ambulatory and inpatient settings, with providers in the public and private sector.

Care for patients with cancer includes a range of treatment options depending on the type of cancer, the stage (size and extent of spread) of the disease, and patients' preferences. Treatment and management options may include surgery, chemotherapy (drug therapy), radiation therapy, multidisciplinary care, and monitoring and/or supportive care. Both the public and private health sectors offer all these options—though the extent of capability to provide options at individual cancer services may differ. The private sector, in some locations, may provide services to public patients.

Non-government organisations work closely with cancer care services to provide a range of services to support people affected by cancer.

9.1 Public sector

Cancer care services in the public sector are delivered through HHSs. Covering the whole of Queensland, there are 16 different geographical area HHSs each governed locally by a Hospital and Health Board. The Children's Health Queensland HHS provides specialist children's cancer care services across Queensland and public sector cancer care services are also provided by the Mater Health Service.

Cancer care services in the Queensland public sector according to the CSCF v3.1 are categorised as a

- cancer service providing limited or lower level services
- cancer unit providing a multidisciplinary service to manage most common cancers
- cancer centre providing a more specialised, multidisciplinary service to manage common cancers, as well as rare cancers and specialised interventions.⁶


Outpatient activity for haematology services may include non-cancer activity—haematology inpatient activity is only for activity where the principal diagnosis is related to cancer.

Adult cancer services

In 2013, there were three public adult cancer centres in Queensland located at:

- The Townsville Hospital with links to cancer units at Cairns and Mackay hospitals and to cancer services at Atherton, Bowen, Innisfail, Ingham, Proserpine and Mt Isa hospitals.
- Royal Brisbane and Women's Hospital with links to cancer units at Nambour, The Prince Charles and Redcliffe hospitals and to cancer services at Rockhampton, Bundaberg, Hervey Bay, Gympie, Maryborough, Gladstone and Longreach hospitals.
- Princess Alexandra Hospital / Mater Public Hospital with links to cancer units at the Toowoomba and Gold Coast Hospitals and to cancer services at Ipswich, Logan and Roma hospitals.

The Gold Coast University Hospital is providing comprehensive cancer services and working towards becoming a cancer centre. It is expected that during 2014–15, Rockhampton Hospital will become a cancer unit with on-site comprehensive care while the Sunshine Coast Public University Hospital is expected to provide comprehensive cancer services from approximately 2016.



Many patients require a range of treatment services based on their care needs, the phase of their treatment journey, and individual preferences. Not all public hospitals in Queensland provide cancer treatment services and there remains a need for patients to travel to cancer centres, cancer units or cancer services for specialised treatments.

Specialist children's cancer services

The Royal Children's Hospital provides specialist children's cancer services for Queensland. The service provides specialist outpatient consultative clinics at other Queensland hospitals and supports local non-specialist treatments at these hospitals. This service is anticipated to move to the Lady Cilento Children's Hospital in 2014. The service provides support for specialist and non-specialist services at other sites. Radiation therapy for children is provided almost entirely by this service except in circumstances such as palliation where radiotherapy may be provided to children in consultation with the specialist children's cancer service.

Outpatient services

Many hospitals across Queensland provide specialist outpatient consultative and treatment clinics (e.g. chemotherapy and radiotherapy) for medical oncology, radiation oncology, haematology and surgical consult for local residents. Where there are no local specialists, clinics are generally provided by visiting clinicians from cancer centres as well as increasingly being conducted via telehealth.

Surgical oncology

Surgery for solid organ cancers occurs in most HHS's where there is a CSCF v3.1 level four, five and six surgical services. Surgical oncology for low volume complex/specialised cancers (CSCF v3.1 level six surgical oncology) is provided at Princess Alexandra Hospital, Mater Adult Public Hospital, Royal Brisbane and Women's Hospital and the Townsville Hospital. These hospitals manage the highest level of risk and most complex surgical presentations across different tumour streams and include complex surgical oncology procedures such as pancreatoduodenectomy, oesophagectomy and major liver resections. The Prince Charles Hospital also provides CSCF v3.1 level six surgical services for complex/specialised thoracic cancers. The Gold Coast University Hospital is developing a level six surgical oncology service.

Multidisciplinary team review

Multidisciplinary team (MDT) reviews are becoming a standard model of care across many tumour streams. The Queensland Oncology On-Line (QOOL) tool allows among other benefits, clinicians to schedule patients for MDT review or case conference. In 2011, 51 per cent of public patients with cancer had a MDT review recorded—an increase of more than 30 per cent from 2004.¹⁹

Radiation treatment

In 2013, 19 linear accelerators provided radiation treatment in Brisbane, Cairns and Townsville as well as contractual agreements with private provider for radiation treatment on the Sunshine Coast. The Gold Coast University Hospital has begun radiation treatment with two linear accelerators operated by a private provider and an additional two linear accelerators are being completed at the Townsville Hospital. The Sunshine Coast Public University Hospital, when completed, is anticipated to provide radiation treatment. Linear accelerator bunkers are being built at Rockhampton Hospital to provide capacity for radiation treatment in the future.

BreastScreen Queensland

The BreastScreen Queensland Program has a marked impact on improving breast cancer survival through the early detection of cancer which is when treatment is most effective.¹⁸ BreastScreen Queensland is a nationally accredited breast cancer screening provider in Queensland offering free screening and assessment, to eligible women, using the latest digital mammography technology. The network includes 11 screening and assessment centres, 23 satellite screening centres and nine mobile vans covering more than 200 locations across the State.²⁰

9.2 Private sector

Private hospital medical oncology and haematological malignancy services are available throughout the state with CSCF v3.1 level five and six services in Brisbane and the Gold Coast, and level three and four services across the remainder of Queensland. In 2013, private radiation oncology services were available in Brisbane, Cairns, Gold Coast, Sunshine Coast and Toowoomba. Not including the two linear accelerators at Cairns Hospital—operated by a private provider and accounted for in the public sector services—there are 16 privately operated linear accelerators. There are expectations of additional linear accelerators to be privately operated in Bundaberg, Hervey Bay and at Springfield near Ipswich City in the near future.

9.3 Non-government organisations

Non-government organisations work closely with cancer care services and their patients to provide clinical and health education, psycho-social and supportive care and other practical support such as assistance with mobility and daily living aids, travel and accommodation. These organisations include Cancer Council Queensland, the Leukaemia Foundation, CanSpeak and other local or cancer-specific groups. Domiciliary nursing agencies also provide other specific health-care. A number of specialised community-based groups such as CanTeen and Red Kite work with children, young people and their families.

10. Utilisation of cancer care services

This section provides a snapshot of outpatient and inpatient service activity presented by four distinct service delivery modalities for cancer services in Queensland for the financial years 2007–08 to 2011–12.

Specialist public cancer outpatient clinic consults

The public sector occasions of service (OOS) for specialist outpatient clinic consults may include examinations, consultations or other services for patients requiring medical oncology, radiation oncology and haematology services. Those OOS which were identified as treatment (not consult) are included in the same day treatment section—clinic consults for surgical oncology is not included.

A summary of the public sector specialist cancer outpatient clinic consult activity for the 2011–12 financial year shows for:

- medical oncology there were 101,577 OOS—an increase of 20 per cent (17,204) in the four year period with ‘new patient’ clinic consults increasing by 57 per cent (3930) to 10,807 OOS
- haematology there were 74,418 OOS—an increase of 23 per cent (13,695) in the four year period with ‘new patient’ clinic consults increasing by 17 per cent (814) to 5600 OOS
- radiation oncology there were 58,284 OOS—an increase of 0.4 per cent (246) in the four year period with ‘new patient’ clinic consults increasing by 12 per cent (962) to 9034 OOS.²¹

Same day non-surgical cancer treatment

Same day non-surgical outpatient and inpatient treatment activity or treatment episodes is a combination of same day inpatient separations and public outpatient OOS for chemotherapy, non-chemotherapeutic treatment, radiotherapy, haematology and medical oncology. A summary of the Queensland same day treatment episodes for public and private facilities for the 2011–12 financial year shows:

- for medical oncology and haematology treatment (majority being chemotherapy), there were 102,767 public hospital episodes (56 per cent of the total for Queensland)—72 per cent of these were treated as outpatients—while there were 81,093 inpatient episodes for same day treatment in private hospitals (44 per cent of the total Queensland)
- public radiotherapy accounted for 139,085 same day treatment episodes (99.5 per cent were treated as outpatients)
- public medical oncology and haematology same day treatment increased by 28,521 episodes (38 per cent) over the recent four financial year period.^{21,22}

Overnight acute hospitalisation for people with cancer

A summary of Queensland inpatient activity for acute care patients requiring an overnight or longer stay in public and private hospitals—where the principal diagnosis was cancer—in the 2011–12 financial year shows:

- there were 41,507 overnight hospital separations occupying 266,463 bed days with an average length of stay (ALOS) of 6.4 days—approximately half of this activity (20,898 separations or 50.3 per cent) occurred in the public sector with similar lengths of stay
- over 5 financial years, overnight separations in Queensland increased by 2530 separations (7 per cent)—bed days remained relatively steady with declining lengths of stay—all the increase was in the public sector while private sector separations declined slightly
- in the public sector:
 - surgical oncology represented 47 per cent (9871) of overnight separations for cancer with ALOS of 5.5 days
 - medical oncology represented a further 32 per cent (6747) with ALOS of 6.1 days
 - haematology represented 11 per cent (2260) with ALOS of 10.7 days.²²

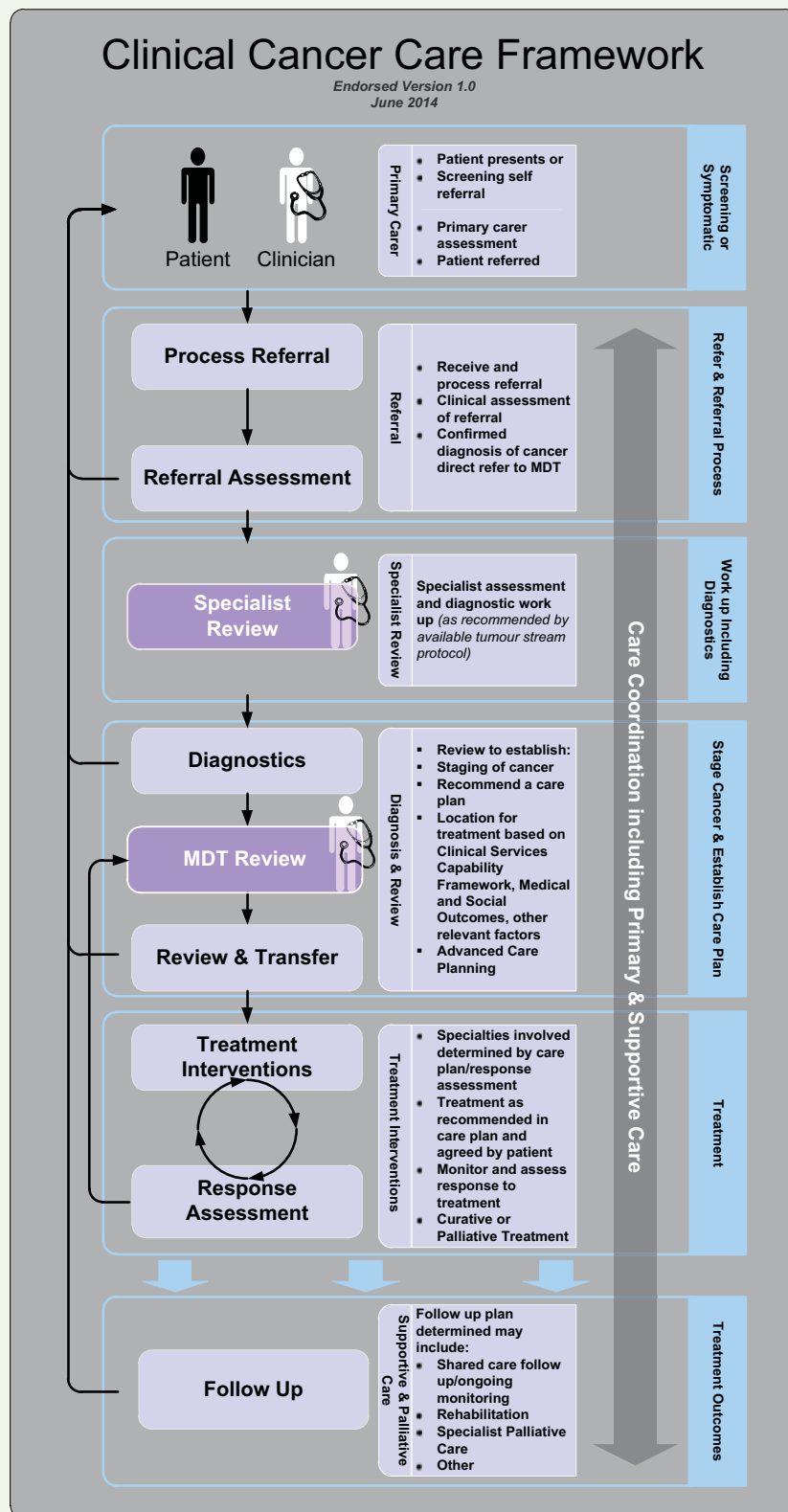
Surgical oncology

A summary of Queensland same day and overnight stay inpatient surgical oncology in public and private hospitals (excluding bone marrow transplants)—where the principal diagnosis was cancer—in the 2011–12 financial year shows:

- there were 49,658 hospital separations related to surgery, with 54 per cent (26,914) as same day surgical interventions
- in the public sector, there were 17,900 hospital separations (providing 36 per cent of total surgical oncology) with 8029 separations as same day stay interventions (45 per cent of total public)
- over 5 financial years in the public sector, surgical oncology separations increased by 16 per cent (2532 separations) with those requiring an overnight stay or longer increasing by 20 per cent (1653 separations)
- skin cancer (including melanoma) was the leading cancer type requiring surgical intervention in the public sector (7650 separations, 43 per cent of total, most—82 per cent—were provided with same day stay intervention) this was followed by breast cancer with 1605 surgical oncology separations.²²

Appendices

Appendix A: Clinical Cancer Care Framework



Appendix B: Developed by and contributors to the strategy

Dr Lizbeth Kenny, Chair, Statewide Cancer Clinical Network and Senior Radiation Oncologist, Royal Brisbane and Women's Hospital

Ms Colleen Jen, Senior Director, Policy and Planning Branch

Ms Maree Geraghty, Chief Executive Central Queensland Hospital and Health Service

Ms Maree Bransdon, Nursing Director, Central Integrated Regional Cancer Service

Dr Jeremy Wellwood, Haematologist, Division of Medicine, Gold Coast Hospital

Prof. Glen Kennedy, Consultant Oncologist, Department of Haematology, Royal Brisbane and Women's Hospital

Dr Sabe Sabesan, Director of Medical Oncology, Townsville Cancer Centre, The Townsville Hospital

Ms Terri Price, Director, Statewide Health Service Strategy and Planning Unit

Ms Mina Smith, Manager, Statewide Health Service Strategy and Planning Unit

Mr Bill Squire, Principal Planning Officer, Statewide Health Service Strategy and Planning Unit

Ms Colleen Parr, Senior Planning Officer, Statewide Health Service Strategy and Planning Unit

The following are acknowledged for their support:

Dr Euan Walpole, Medical Director, Cancer Services, Princess Alexandra Hospital

Dr Ian Irving, Director of Haematology and BMT, Townsville

Ms Aniko Cooper, Director, Radiation Therapy Services, Townsville Cancer Centre

Dr Ross Pinkerton, Executive Director, Division of Oncology, Royal Children's Hospital

Dr Jeremy Long, Clinical Director/Medical Oncologist, Cancer Care Services, Sunshine Coast HHS

Dr Roger Allison, Senior Staff Specialist, Radiation Oncology, Royal Brisbane and Women's Hospital

Ms Martine Waters, Allied Health Workforce Development Officer, Cancer Care Central Region

Ms Shoni Colquist, Manager, Queensland Cancer Control Analysis Team (QCCAT)

Ms Leonie Young, Consumer Representative, Kim Walters Choices Program

Appendix C: Acronyms

AHPOQ	Allied Health Professions' Office of Queensland
ALOS	Average Length Of Stay
CHOB	Chief Health Officer Branch
CSCF	Clinical Services Capability Framework
DORA	Database of Research Activity
HCQ	Health Commissioning Queensland
HHS	Hospital and Health Service
HSCI	Health Service and Clinical Innovation
HSIA	Health Service Information Agency
MDT	Multidisciplinary Team
NMOQ	Nursing and Midwifery Officer Queensland
OOS	Occasions Of Service
OPMO	Office of the Principal Medical Officer
QCCAT	Queensland Cancer Control and Analysis Team
QOOL	Queensland Oncology On-Line
SCaCN	Statewide Cancer Clinical Network

Glossary

A	
Access	Ability to use a service or the skills of a suitably qualified person—without difficulty or delay—via a variety of communication mediums. Access may be provided via documented processes with an off-site provider on an inpatient or ambulatory basis. (Source: Queensland Health. Clinical Services Capability Framework v3.1, Fundamentals)
Age-standardised incidence rate	A method of adjusting the crude rate to eliminate the effect of differences in population age structures when comparing crude rates for different periods of time, different geographic areas and/or different population sub-groups (e.g. between one year and the next and/or states and territories, Indigenous and non-Indigenous populations). Standardised rates are generally multiplied by 1,000 or 100,000 to avoid small decimal fractions. They are then called standardised rates per 1,000 or 100,000 populations. (Source: Australian Institute of Health and Welfare (AIHW), Metadata Online Registry. Standard 01/03/2005)
B	
Burden of disease	Disease burden: measured as disability adjusted life years (DALY). A measure of overall burden of disease and injury, where the DALY for a disease or condition is the sum of the years lost due to premature death (YLL) and years of healthy life lost due to disability (YLD). (Source: Queensland Health. Preventative Health Unit. Burden of Disease: A Snapshot in 2013)
C	
Cancer centre	A cancer centre provides a more specialised, multidisciplinary service to manage common cancers, as well as rare cancers and specialised interventions. Surgical oncology, medical oncology and haematological malignancy services at a cancer centre will be CSCF v3.1 level five for most common cancers and level six for low-incidence and highly specialised cancers. A cancer centre will have on-site, or access to, CSCF v3.1 level six radiation oncology. A cancer centre may provide outreach/consultative services, as well as other support, to cancer services and cancer units along networked lines. (Source: Queensland Health. Clinical Services Capability Framework v3.1, Preamble to Cancer Services)
Cancer service	A cancer service may consist of a single oncology service (such as surgical oncology, medical oncology, haematological malignancy or radiation oncology) and is delivered at a CSCF v3.1 level three or higher service. These types of services have links to other services and may have a combination of lower level services or services provided on an outreach / consultative basis. (Source: Queensland Health. Clinical Services Capability Framework v3.1, Preamble to Cancer Services)
Cancer unit	A cancer unit can provide a multidisciplinary service to manage most common cancers where the individual services (medical oncology, haematological malignancy, radiation oncology and, where relevant, surgical oncology) are either CSCF v3.1 level four or five. Radiation oncology may be provided on-site or accessed locally or via a clearly defined referral pathway to a CSCF v3.1 level five or six service (if not local). (Source: Queensland Health. Clinical Services Capability Framework v3.1, Preamble to Cancer Services)
Care coordination	Care coordination is a comprehensive approach to achieving continuity of care for patients. This approach seeks to ensure that care is delivered in a logical, connected and timely manner so that the medical and personal needs of the patient are met. In the context of cancer, care coordination encompasses multiple aspects of cancer care delivery including multidisciplinary team meetings, psychosocial assessment and the provision of required care, referral practices, data collection, and development of common protocols, information provision and individual clinical treatment. (Source: Cancer Services in Victoria. Care Coordination. Department of Health, Victoria. 2013)
Children's cancer services	These services focus on the overall care and management of children with cancer. They specifically incorporate systemic therapies used in the treatment of childhood cancers, including leukaemia and haematopoietic stem cell transplant. (Source: Queensland Health. Clinical Services Capability Framework v3.1, Children's Cancer Services)
Critical intervention points	Represents those aspects of care to reduce death and distress from cancer. Critical intervention points are based on consideration of whether the aspect of care is important in terms of death, suffering or health care costs, care is currently sub-optimal, given what is known about optimal services and about current care and care can be improved. (Source: Australian Government. National Services Improvement Framework for Cancer. 2006)

D	
Disability-adjusted life year (DALY)	Years of healthy life lost through premature death or living with disability due to illness or injury. (Source: Queensland Health. Queensland Burden of Disease and Injury. 2006)
E	
End of life care	Care is provided to people who are living with, and who are impaired by, a life limiting illness. It is not limited by prognosis or diagnosis. End of life care includes support and services delivered by all health care professionals. (Source: Palliative Care Australia. Health System Reform and Care at End of Life: A guidance document [internet])
eviQ	eviQ Cancer Treatments Online is a point of care clinical information resource managed by the cancer institute of NSW that provides health professionals with current evidence-based, peer reviewed, best practice cancer treatment protocols and information. (Source: Cancer Institute of New South Wales: Cancer Treatments Online)
I	
Incidence	Cancer incidence indicates the number of new cancers diagnosed during a specific period, usually one year. Only those cases where cancer was a primary invasive cancer are considered. The case must also be a 'new' primary cancer and not a recurrence of a previous primary cancer in the same site. (Source: Queensland Cancer Control Analysis Team (QCCAT) Cancer in Queensland: A statistical overview. 2012)
Inpatient	A patient who undergoes a hospital's formal admission process to receive treatment and/or care. Care may occur in hospital or in the home. (Source: Queensland Health. Queensland Health Admitted Patient Data Collection (QHADPC) 2013-2014 v 1.3)
M	
Medical genetics	A specialty of medicine that involves the diagnosis and management of hereditary disorders. As well as researching on the causes and inheritance of genetic disorders, medical genetics is also involved in the diagnosis, management and counselling of individuals with genetic disorders. (Source: Queensland Health. Genetic Health Queensland 2013)
Mortality (deaths)	The number of deaths in a defined population during a specified time period regardless of when the diagnosis was made. (Source: Queensland Cancer Control Analysis Team (QCCAT) Cancer in Queensland: A statistical overview. 2012)
Multidisciplinary care (MDC)	MDC is 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. There is increasing evidence that MDC improves patient outcomes. (Source: National Breast Cancer Centre. Multidisciplinary meetings for cancer care: a guide for health service providers. National Breast Cancer Centre, Camperdown, NSW. 2005)
Multidisciplinary team (MDT)	A multidisciplinary team should comprise the core disciplines integral to the provision of good care. Team membership will vary according to cancer type but should reflect both clinical and psychosocial aspects of care. Inclusion of a supportive care provider in the core team is essential—this may be a nurse specialist, oncology nurse, social worker or psychologist. The patient's general practitioner is also a member of the team. Additional expertise or specialist services may be required for some patients. (Source: National Breast Cancer Centre. Multidisciplinary meetings for cancer care: a guide for health service providers. National Breast Cancer Centre, Camperdown, NSW. 2005)
MDT meetings	MDT meetings aim to ensure that all patients receive timely diagnosis and treatment, that patient management is evidence-based, and that there is continuity of care. MDT meetings emphasise collaborative decision-making and treatment planning, where the core team members of relevant specialties participate through the MDT meetings to share their knowledge and make collective evidence-based recommendations for patient management. The MDT meeting provides an opportunity for education and learning to its members and trainee doctors and also improve the well-being and work satisfaction of individual team members. They are also viewed as an important opportunity to identify patients who are eligible for research trials.


N	
New patient	The first attendance under a new health professional's care would be classified as a 'new patient' occasion of service. (Source: Queensland Health. Monthly Activity Collection (MAC) 2013-2014 v 13.1)
O	
Occasions of service (OOS)	Occasions of service include any examination, consultation, treatment or other service provided to a non-admitted patient in each functional unit of a health service facility on each occasion such service is provided. (Source: Queensland Health. Monthly Activity Collection (MAC) 2013-2014 v 13.1)
Outpatient	Another term for a non-admitted patient who does not undergo a hospital's formal admission process to receive treatment and/or care. (Source: Queensland Health. Monthly Activity Collection (MAC) 2013-2014 v 13.1)
Overnight	An overnight (or longer) stay patient is a patient who is admitted to and separated from the hospital on different dates. (Source: Queensland Health. Monthly Activity Collection (MAC) 2013-2014 v 13.1)
P	
Palliative care	An approach that improves the quality of life of patients and their families facing the problem associated with life-threatening illness, through the prevention and relief of suffering by means of early identification and impeccable assessment and treatment of pain and other problems, physical, psychosocial and spiritual. (Source: World Health Organisation. Global Atlas of Palliative Care at the End of Life. 2014)
Prevalence	The number of Queenslanders with a diagnosis of cancer. (Source: Queensland Cancer Control Analysis Team (QCCAT) Cancer in Queensland: A statistical overview. 2012)
Psychosocial support	An approach by clinicians for people with cancer to foster resilience necessary to meet the challenges of cancer care. It also aims at easing resumption of normal life; facilitating affected people's participation in their convalescence and preventing pathological consequences as a result of the cancer care. (Source: Cancer Australia: Cancer learning. 2013)
Q	
Queensland Oncology On-Line system (QOOL)	A web-based application developed to assist the conduction of MDT meetings. QOOL enables clinicians to refer patients to multidisciplinary meetings, record critical information from each episode of care and build a profile of the patient's journey which can be updated and displayed at meetings. (Source: Queensland Cancer Control Analysis Team (QCCAT))
R	
Relative survival	The rate of survival of persons relative to the expected survival rate of the general population. Five-year relative survival represents the proportion of patients alive five years after diagnosis, taking into account age, gender and year of diagnosis. (Source: Queensland Cancer Control Analysis Team (QCCAT) Cancer in Queensland: A statistical overview. 2012)
Remoteness	The relative remoteness of residence at time of diagnosis, based on the Australian Standard Geographical Classification. In this report, remoteness is classified into five groups: Major City, Inner Regional, Outer Regional, and Remote and Very Remote. (Source: Queensland Cancer Control Analysis Team (QCCAT) Cancer in Queensland: A statistical overview. 2012)
S	
Same day	A same day patient is a person who is admitted and separated on the same date. (Source: Queensland Health. Monthly Activity Collection (MAC) 2013-2014 v 13.1)
Separation	The term used to refer to an episode of care for an admitted patient, which can be a total hospital stay (from admission to discharge, transfer or death), or a portion of a hospital stay beginning or ending in a change of type of care (for example, from acute to rehabilitation). (Source: Queensland Health. Queensland Health Admitted Patient Data Collection (QHADPC) 2013-2014 v 1.3)
Service networks	Service networks are relationships between participating services to integrate the different components of cancer care (screening, diagnostic, treatment and palliative care), as well as across the levels of service within individual components. Where cancer services are provided by both public and private healthcare facilities, care is shared according to the needs of the patient. There must be documented processes regarding links between the services. (Source: Queensland Health. Clinical Services Capability Framework v3.1, Preamble to Cancer Services)

Specialised diagnostic services	Refer to Level 6 services in the CSCF v3.1 modules Medical Imaging Services and Pathology Services. (Source: Queensland Health. Clinical Services Capability Framework v3.1)
T	
Telehealth / telemedicine	Occasions of service are consultations provided to non-admitted patients using videoconferencing technology. (Source: Queensland Health. Monthly Activity Collection (MAC) 2013-2014 v 13.1)
Tumour board	A group of specialists who meet regularly to discuss managing treatment for patients who have cancer. Through their collective knowledge, the best possible ideas relevant to each patient's care are thoroughly evaluated before treatment recommendations are made. Tumour boards also provide a forum to educate medical officers, nurses and other staff who provide care for cancer patients. (Source: Froedtert and Medical College of Wisconsin. Tumour Boards Focus on Best Treatments. Every Day. Aug-Dec 2006 Issue)
Y	
Youth Cancer Service	Youth Cancer Services are based in hospitals around Australia and offer specialised treatment and support to young people with cancer. The Queensland Youth Cancer Service provides support for 15–25 year old patients with a cancer diagnosis receiving treatment at Princess Alexandra Hospital, Royal Brisbane and Women's Hospital and the Queensland Children's Cancer Centre at the Royal Children's Hospital. (Source: CanTeen. Youth Cancer . [internet] www.youthcancer.com.au)

References

1. Australian Institute of Health and Welfare & Australasian Association of Cancer Registries. Cancer in Australia: an overview, 2012. Cancer series no. 74. Cat. No. CAN 70. Canberra: Australian Institute of Health and Welfare; 2012.
2. Queensland Health. Blueprint for better healthcare in Queensland. Brisbane: Queensland Government; February 2013.
3. Department of Health. Strategic Plan 2012-16 (2013 update). Brisbane: Queensland Health; 2013.
4. Queensland Government. Hospital and Health Boards Act 2011. Brisbane: Queensland Government; 2011.
5. National Health Priority Action Council. National Service Improvement Framework for Cancer. Canberra: Australian Government Department of Health and Aging; 2006.
6. Queensland Health. Clinical Services Capability Framework for Public and Licensed Private Health Facilities v3.1. Brisbane: Queensland Government Department of Health; 2012.
7. Government Statistician. Population growth highlights and trends, Queensland 2013-revised. Brisbane: Queensland Treasury and Trade; July 2013.
8. Government Statistician. Population projections to 2056: Queensland and statistical divisions 2011 edition. Brisbane: Queensland Treasury and Trade; 2012.
9. Australian Bureau of Statistics. Estimated Resident Population, Local Government Areas, Queensland, Regional Population Growth, Australia (cat. no. 3218.0) released 30 August 2013. Canberra: Australian Bureau of Statistics; 2013.
10. Government Statistician. Population projections, 2012 edition (medium series). Brisbane: Queensland Treasury and Trade; 2012.
11. Government Statistician. Population, Aboriginal and Torres Strait Islander Queenslanders, 30 Jun 2011. Brisbane: Queensland Treasury and Trade; 2013.
12. Australian Bureau of Statistics. Experimental Estimates and Projections Aboriginal and Torres Strait Islander Australians, 1991 to 2021 (cat. no. 3238.0) released September 2009. Canberra: Australian Bureau of Statistics; 2009.
13. Queensland Health: Bright M, Begg S, Harper C. Overview of the burden of disease and injury in Queensland, 2006. Queensland burden of disease and injury circular series 2, no. 1. Brisbane: Queensland Health; 2009.
14. Australian Institute of Health and Welfare & Australasian Association of Cancer Registries. Cancer in Australia: an overview, 2012. Cancer series no. 74. Cat. No. CAN 70. Canberra: Australian Institute of Health and Welfare; 2012.
15. Queensland Health: Endo T, Jardine A, Macleod S-L, Bright M, Begg S. Burden of disease and injury in Queensland projections, 2007 to 2016. Queensland burden of disease and injury circular series 2, no. 7. Brisbane: Queensland Health; 2010.
16. Queensland Health. Oncology analysis system (OASys): Queensland incidence extracted 18 March 2013.
17. Queensland Health. Cancer in Queensland: A Statistical Overview 2012. Brisbane: Queensland Health; 2012.
18. Queensland Health. The health of Queenslanders 2012: advancing good health. Fourth report of the Chief Health Officer Queensland. Brisbane: Queensland Health; 2012.
19. Queensland Health. Partnering for Safety and Quality: Impact & Achievements 2005–2011, Queensland Cancer Control Safety and Quality Partnership. Brisbane: Queensland Health; February 2012.
20. Queensland Government. About BreastScreen Queensland [internet]. 2013 [updated 9 Aug 2013; cited 4 Dec 2013]. Available from: <http://www.health.qld.gov.au/breastscreen/about-us.asp>
21. Queensland Health. Queensland public sector outpatient occasions of service, Queensland Health Monthly Activity Collection extracted 2 April 2013.
22. Queensland Health. Queensland Hospital Admitted Patient Data Collection extracted 22 February 2013.





For more information contact:
Department of Health, GPO Box 48, Brisbane QLD 4001.