Quality-Based Procedures Clinical Handbook for Systemic Treatment

Ministry of Health and Long-Term Care & Cancer Care Ontario

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Ontario

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Quality-Based Procedures Clinical Handbook: Systemic Treatment

1.0 Purpose

This clinical handbook has been created to serve as a compendium of the evidence-based rationale and clinical consensus driving the development of the policy framework and implementation approach for funding of Systemic Treatment. Please note that the content of this handbook will continue to evolve as further clinical feedback is incorporated into the Systemic Treatment funding model.

This clinical handbook is intended for a clinical audience. It is not, however, intended to be used as a clinical reference guide by clinicians and will not be replacing existing guidelines and funding applied to clinicians. Evidence-informed pathways and resources have been included in this handbook for your convenience.

2.0 Introduction

Quality-Based Procedures (QBP) are an integral part of Ontario's Health System Funding Reform (HSFR) and a key component of the Patient-Based Funding (PBF). This reform plays a key role in advancing the government's quality agenda and its Action Plan for Health Care. HSFR has been identified as an important mechanism to strengthen the link between the delivery of high quality care and fiscal sustainability.

Ontario's health care system has been living under a global economic uncertainty for a considerable period of time. At the same time, the pace of growth in health care spending has been on a collision course with the provincial government's deficit recovery plan.

In response to these fiscal challenges and to strengthen the commitment towards the delivery of high quality care, the Excellent Care for All Act (ECFAA) received royal assent in June 2010. ECFAA is a key component of a broad strategy that improves the quality and value of the patient experience by providing them with the right care at the right time, and in the right place through the application of evidence-informed health care. ECFAA positions Ontario to implement reforms and develop the levers needed to mobilize the delivery of high quality, patient-centred care.

Ontario's Action Plan for Health Care advances the principles of ECFAA reflecting quality as the primary driver to system solutions, value and sustainability.

2.1 What are we moving towards?

Prior to the introduction of HSFR, a significant proportion of hospital funding was allocated through a global funding approach, with specific funding for some select

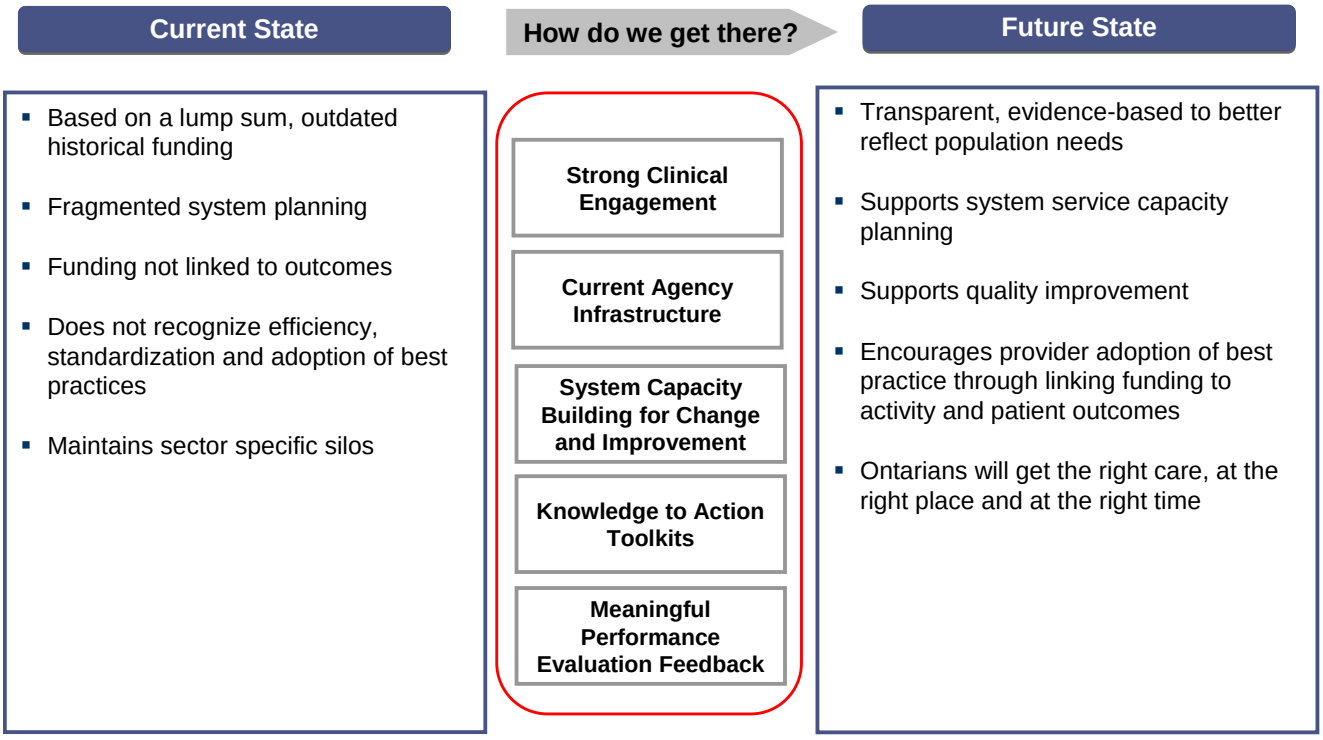
provincial programs and wait times services. A global funding approach reduces incentives for Health Service Providers (HSPs) to adopt best practices that result in better patient outcomes in a cost-effective manner.

To support the paradigm shift from a culture of 'cost containment' to 'quality improvement,' the Ontario government is committed to moving towards a patient-centred funding model that reflects local population needs and contributes to optimal patient outcomes (Figure 1).

Internationally, PBF models have been implemented since 1983. Ontario is one of the last leading jurisdictions to move down this path. This puts the province in a unique position to learn from international best practices and lessons learned by others to create a funding model that is best suited for Ontario.

PBF supports system capacity planning and quality improvement through directly linking funding to patient outcomes. PBF provides an incentive to health care providers to become more efficient and effective in their patient management by accepting and adopting best practices that ensure Ontarians get the right care, at the right time and in the right place.

Figure 1: The Ontario government is committed to moving towards patient-centred, evidence-informed funding that reflects local population needs and incents delivery of high quality care



2.2 How will we get there?

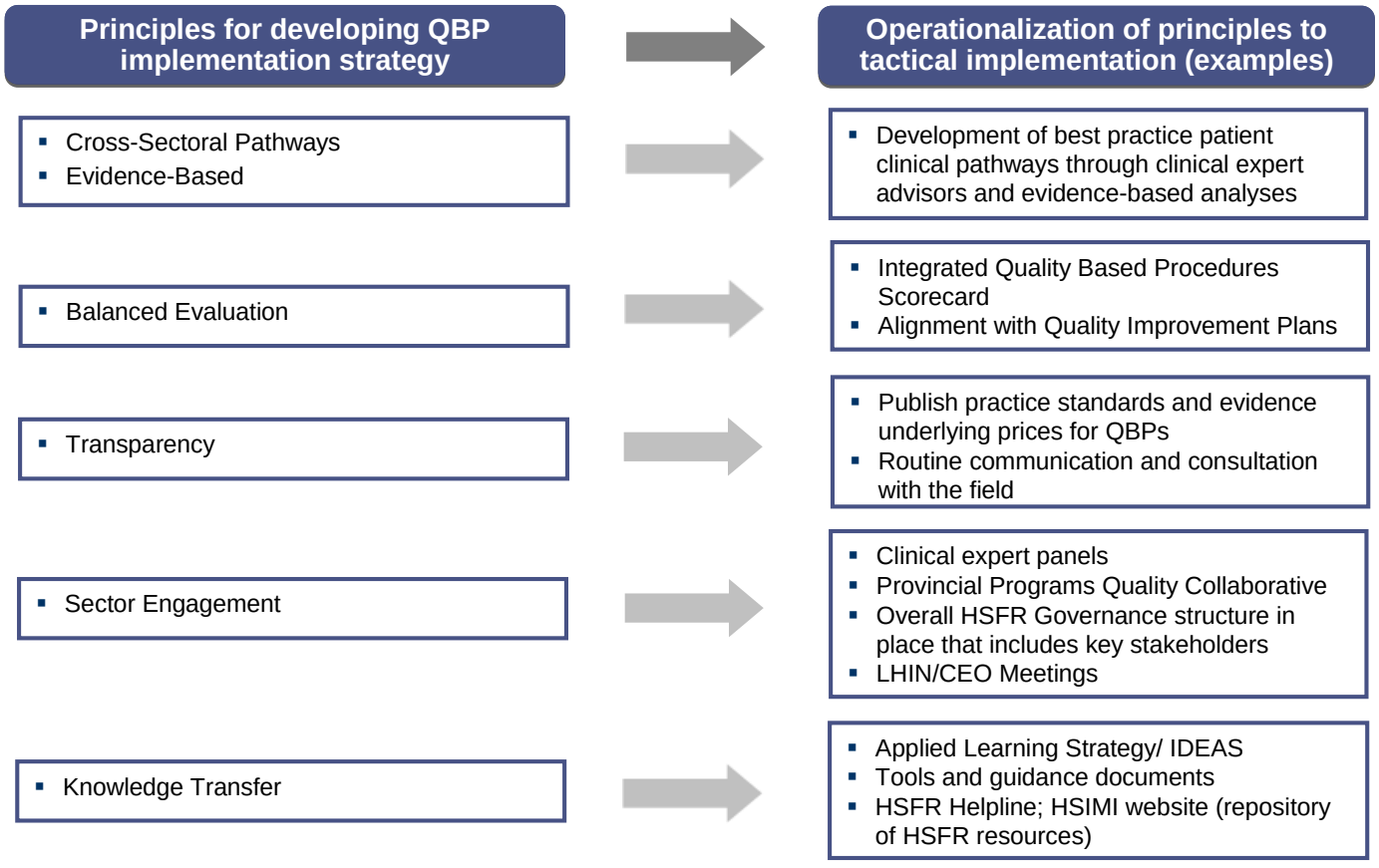
The Ministry has adopted a three-year implementation strategy to phase in a PBF model and is making some funding shifts starting in fiscal year 2012/13. A three-year

outlook has been provided to the field to support planning for upcoming funding policy changes.

The Ministry has released a set of tools and guiding documents to further support the field in adopting the funding model changes. For example, a Quality-Based Procedure (QBP) Interim list has been published for stakeholder consultation and to promote transparency and sector readiness. The list is intended to encourage providers across the continuum to analyze their service provision and infrastructure in order to improve clinical processes and where necessary, build local capacity.

The successful transition from the current, 'provider-centred' funding model towards a 'patient-centred model' will be catalyzed by a number of key enablers and field supports. These enablers translate to actual principles that guide the development of the funding reform implementation strategy related to QBPs. These principles further translate into operational goals and tactical implementation, as presented in Figure 2.

Figure 2: Principles guiding the implementation of funding reform related to Quality-Based Procedures



2.3 What are Quality-Based Procedures?

QBPs involve clusters of patients with clinically related diagnoses or treatments. Systemic Treatment was chosen as a QBP using an evidence and quality-based selection framework that identifies opportunities for process improvements, clinical re-design, improved patient outcomes, enhanced patient experience and potential cost savings.

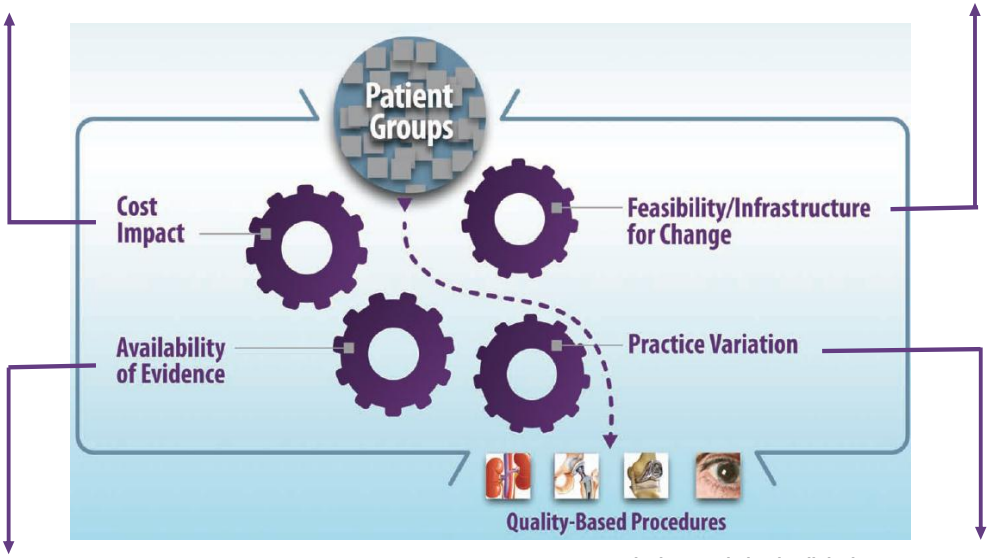
The evidence-based framework used data from the Discharge Abstract Database (DAD) adapted by the Ministry of Health and Long-Term Care for its Health Based Allocation Methodology (HBAM) repository. The HBAM Inpatient Grouper (HIG) groups inpatients based on the diagnosis or treatment responsible for the majority of their patient stay. Day Surgery cases are grouped within the National Ambulatory Care Referral System (NACRS) by the principal procedure they received. Additional data was used from the Ontario Case Costing Initiative (OCCI). Evidence such as publications from Canada and other jurisdictions and World Health Organization reports were also used to assist with the patient clusters and the assessment of potential opportunities.

The evidence-based framework assessed patients using four perspectives, as presented in Figure 3. This evidence-based framework has identified QBPs that have the potential to both improve quality outcomes and reduce costs.

Figure 3: Evidence-Based Framework

- Does the clinical group contribute to a significant proportion of total costs?
- Is there significant variation across providers in unit costs/ volumes/ efficiency?
- Is there potential for cost savings or efficiency improvement through more consistent practice?
- How do we pursue quality and improve efficiency?
- Is there potential areas for integration across the care continuum?

- Are there clinical leaders able to champion change in this area?
- Is there data and reporting infrastructure in place?
- Can we leverage other initiatives or reforms related to practice change (e.g. Wait Time, Provincial Programs)?



- Is there a clinical evidence base for an established standard of care and/or care pathway? How strong is the evidence?
- Is costing and utilization information available to inform development of reference costs and pricing?
- What activities have the potential for bundled payments and integrated care?

- Is there variation in clinical outcomes across providers, regions and populations?
- Is there a high degree of observed practice variation across providers or regions in clinical areas where a best practice or standard exists, suggesting such variation is inappropriate?

1. Practice Variation

The DAD has every Canadian patient discharge, coded and abstracted for the past 50 years. This information is used to identify patient transition through the acute care sector, including discharge locations, expected lengths of stay and readmissions for each and every patient, based on their diagnosis and treatment, age, gender, co-morbidities and complexities and other condition specific data. A demonstrated large practice or outcome variance may represent a significant opportunity to improve patient outcomes by reducing this practice variation and focusing on evidence-informed practice. A large number of 'Beyond Expected Days' for length of stay and a large standard deviation for length of stay and costs, were flags to such variation. Ontario has detailed case costing data for all patients discharged from a case costing hospital from as far back as 1991, as well as daily utilization and cost data by department, by day and by admission.

2. Availability of Evidence

A significant amount of research has been completed both in Canada and across the world to develop and guide clinical practice. Working with the clinical experts, best practice guidelines and clinical pathways can be developed for these QBPs and appropriate evidence-informed indicators can be established to measure performance.

3. Feasibility/ Infrastructure for Change

Clinical leaders play an integral role in this process. Their knowledge of the patients and the care provided or required represents an invaluable component of assessing where improvements can and should be made. Many groups of clinicians have already formed and provided evidence and the rationale for care pathways and evidence-informed practice.

4. Cost Impact

The selected QBP should have no less than 1,000 cases per year in Ontario and represent at least 1 per cent of the provincial direct cost budget. While cases that fall below these thresholds may in fact represent improvement opportunity, the resource requirements to implement a QBP may inhibit the effectiveness for such a small patient cluster, even if there are some cost efficiencies to be found. Clinicians may still work on implementing best practices for these patient sub-groups, especially if it aligns with the change in similar groups. However, at this time, there will be no funding implications. The introduction of evidence into agreed-upon practice for a set of patient clusters that demonstrate opportunity as identified by the framework can directly link quality with funding.

2.4 How will QBPs encourage innovation in health care delivery?

Implementing evidence-informed pricing for the targeted QBPs will encourage health care providers to adopt best practices in their care delivery models, and maximize their efficiency and effectiveness. Moreover, best practices that are defined by clinical

consensus will be used to understand required resource utilization for the QBPs and further assist in the development of evidence-informed prices. Implementation of a 'price X volume' strategy for targeted clinical areas will incent providers to:

- Adopt best practice standards;
- Re-engineer their clinical processes to improve patient outcomes; and
- Develop innovative care delivery models to enhance the experience of patients.

Clinical process improvement may include the elimination of duplicate or unnecessary investigations, better discharge planning, and greater attention to the prevention of adverse events, i.e. post-operative complications. These practice changes, together with adoption of evidence-informed practices, will improve the overall patient experience and clinical outcomes, and help create a sustainable model for health care delivery.

3.0 Description of Systemic Treatment

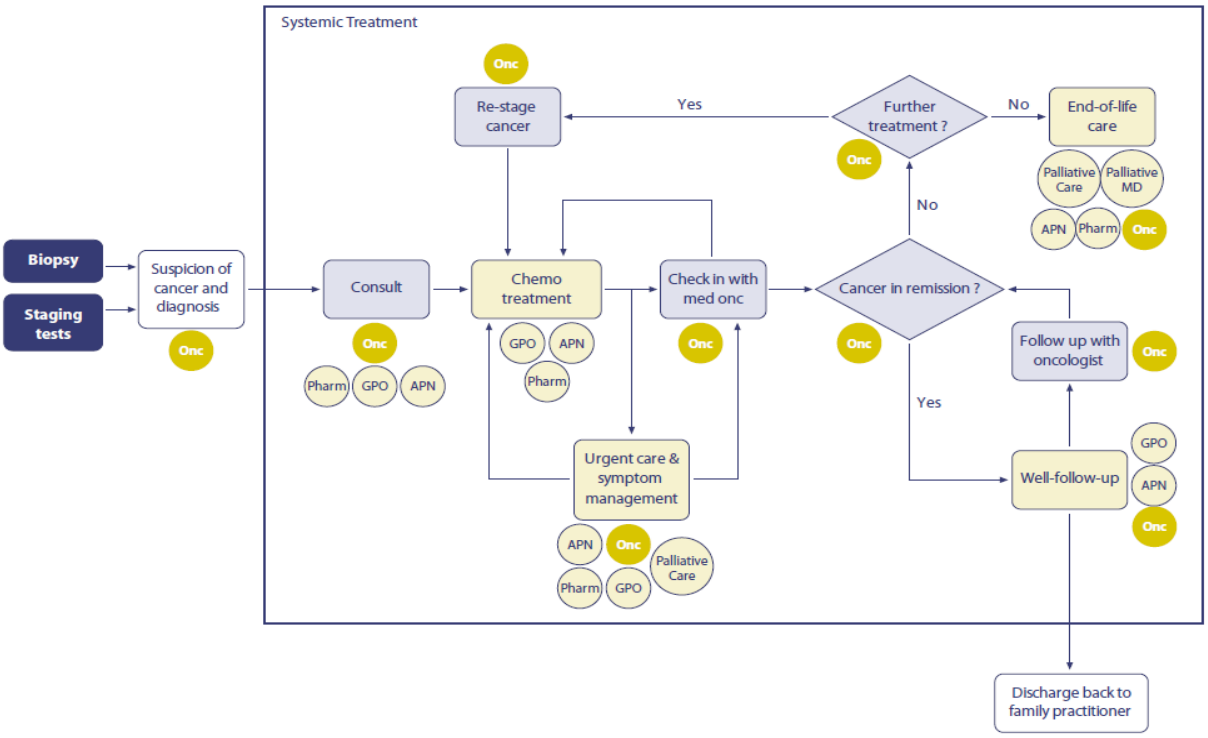
Systemic Treatment is used to treat cancer throughout the entire body. This includes chemotherapy, hormone therapy, immunotherapy and supportive care treatments, which may be administered by pill, injection, or intravenously. Treatment provided by injection or intravenously is defined as parenteral treatment. Treatment provided by pill is referred to as oral treatment. Systemic treatment may be provided in addition to planned radiation or surgery (referred to as an adjuvant or neo-adjuvant treatment and is delivered with curative intent), for the purposes of completely eliminating the cancer, or for the purposes of reducing cancer symptoms and improving quality of life (palliative intent).

Systemic treatment typically involves a combination of cancer fighting drugs, referred to as a regimen. Currently there are in excess of 350 treatment regimens which are selected on the basis of evidence for specific types and stages of cancer.

3.1 Systemic Treatment Clinical Pathway

Systemic Treatment is delivered by a multi-disciplinary team of healthcare providers who ensure that the patient receives safe, high quality care. This team includes medical oncologists, hematologists, gynecology oncologists, pharmacists, nurses, dieticians, social workers, psychologists as well as others. An overview of the systemic treatment clinical pathway including the role of the relevant providers can be seen in figure 4 below:

Figure 4: Systemic Treatment Clinical Pathway



3.2 Background on New Funding Model Development

In May 2007, Cancer Care Ontario (CCO) and the Program in Evidence-Based Care published “Regional Models of Care for Systemic Treatment: Standards for the Organization and Delivery of Systemic Treatment” (Organizational Standards), to guide the standardized delivery of evidence-based systemic treatment province-wide. The primary goal of this document was to provide a framework for safe, patient-centered evidence-based systemic /cancer treatment delivery, maximizing the efficient use of resources with an emphasis on providing care as close to home as possible.

Following the release of the Organizational Standards, the Regional Systemic Treatment Program (RSTP) was launched as a provincial strategy to implement the standards and improve patient access to high quality systemic treatment in Ontario. The program is seen as a mechanism to ensure the goals of the Organization Standards are met. Additionally, the RSTP aims to ensure the same standard of care is met, regardless of where in the province a patient receives systemic treatment. In order to make sure that patients were able to receive care closer to home, the Organizational Standards supported the shift of some systemic treatments out of the Regional Cancer Centres (RCCs) and into community hospitals (non-RCCs), with requirements for non-RCCs outlined within the Organizational Standards. As of April 2012, systemic treatment is delivered at 78 hospitals across the province.

Building on the Organizational Standards, a Provincial Plan was produced by CCO in 2009. The Provincial Plan was created through collaboration with regional partners, clinicians, administrators, as well as professional groups and associations. The

Provincial Plan reviewed the current state of systemic treatment in the province, articulated the need to find new solutions to make the most of resources and laid out actions needed for program development. It focused on goals and action items designed to improve patient safety in the delivery of systemic treatment throughout the province and to improve timely access to high-quality systemic treatment as close to home as possible. The Plan encouraged collaboration to build strong and responsive Regional Systemic Treatment Programs in Ontario, in accordance with the Organizational Standards. It also provided recommendations for target setting and measurement of the cancer system's performance. A key recommendation of the Provincial Plan was to develop a coordinated approach to fund systemic treatment that takes into account resource intensity associated with delivery of the treatment.

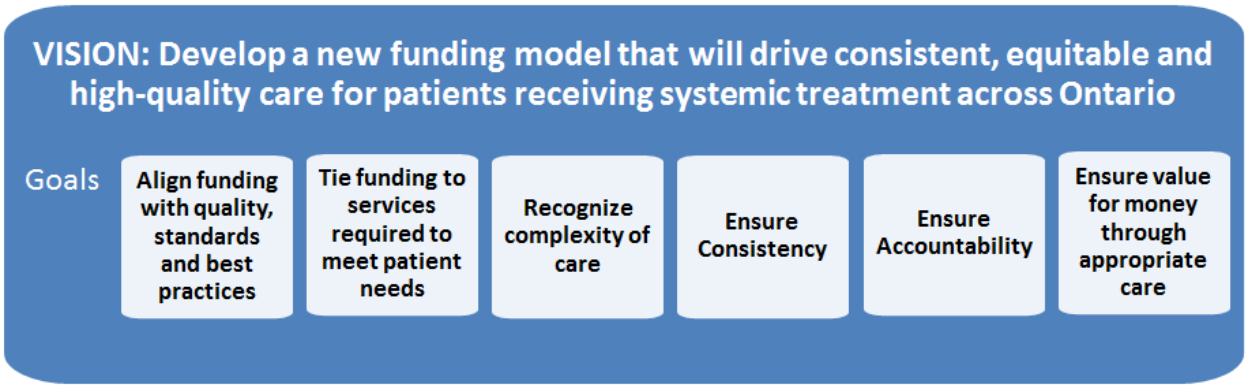
3.3 Systemic Treatment Funding Model Vision and Goals

The systemic treatment funding model was developed by the Systemic Treatment Expert Panel (the "Working Group"). The development of the new systemic treatment funding model is driven by the following vision:

> *Develop a new funding model that will drive consistent, equitable and high-quality care for patients being treated with systemic treatment across Ontario*

When compared to the current method of per case funding for the lifetime of the patient, the new systemic treatment funding model will improve the quality of care by allowing funding to better follow the patient, reduce/eliminate inequities in funding, support patients to receive care close to home, and incent high quality care by funding care according to best practice. This will be further accomplished by recognizing complexity of care, incident and prevalent cases and ensuring appropriate funding begins at consultation, and continues through treatment (both parenteral and oral chemotherapy) and follow-up. The vision, goals and objectives are outlined in figure 5.

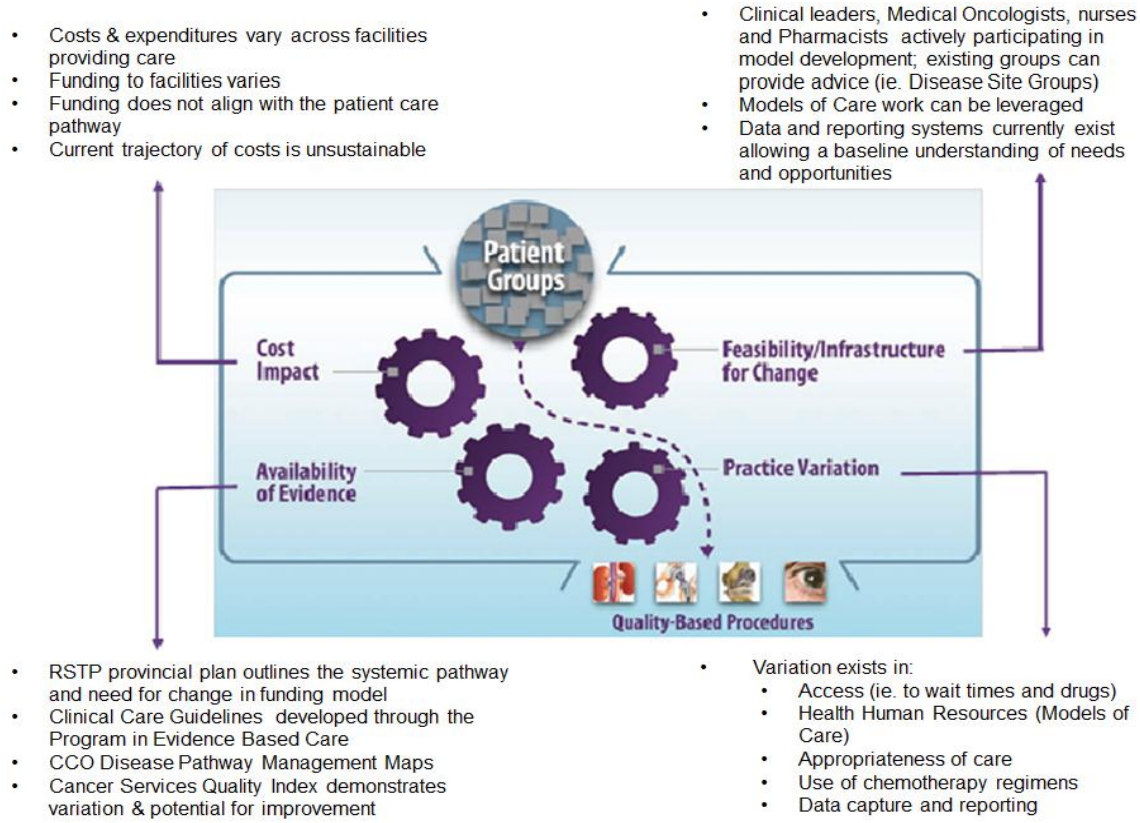
Figure 5: Vision & Goals



3.4 Evidence-Based Rationale for Systemic Treatment as a QBP

In addition to the need for changing the funding model as outlined in the RSTP Provincial Plan, systemic treatment has been identified as a QBP using the evidence-based selection framework as presented in Figure 6. This figure demonstrates that systemic treatment is in strong alignment with the overall requirements for QBPs as there is high variability in costs, strong feasibility and infrastructure for change, significant evidence for change and practice variation which can be reduced by the new funding model.

Figure 6: Evidence-Based Framework for Systemic Treatment



3.5 Phased Approach to Implementation

The funding model will be developed and implemented in a three-year phased approach with funding changes starting in 2013/2014. Funding will be provided based on bundled services, including consultation, treatment (oral and parenteral by treatment intent) and follow-up bundles, as well as a minimum number of unbundled services (exact list of services to be determined). The bundled payment approach, based on best practice, will cover the costs of systemic treatment services and those activities required by a standard patient. The new funding model will embrace the whole provincial funding

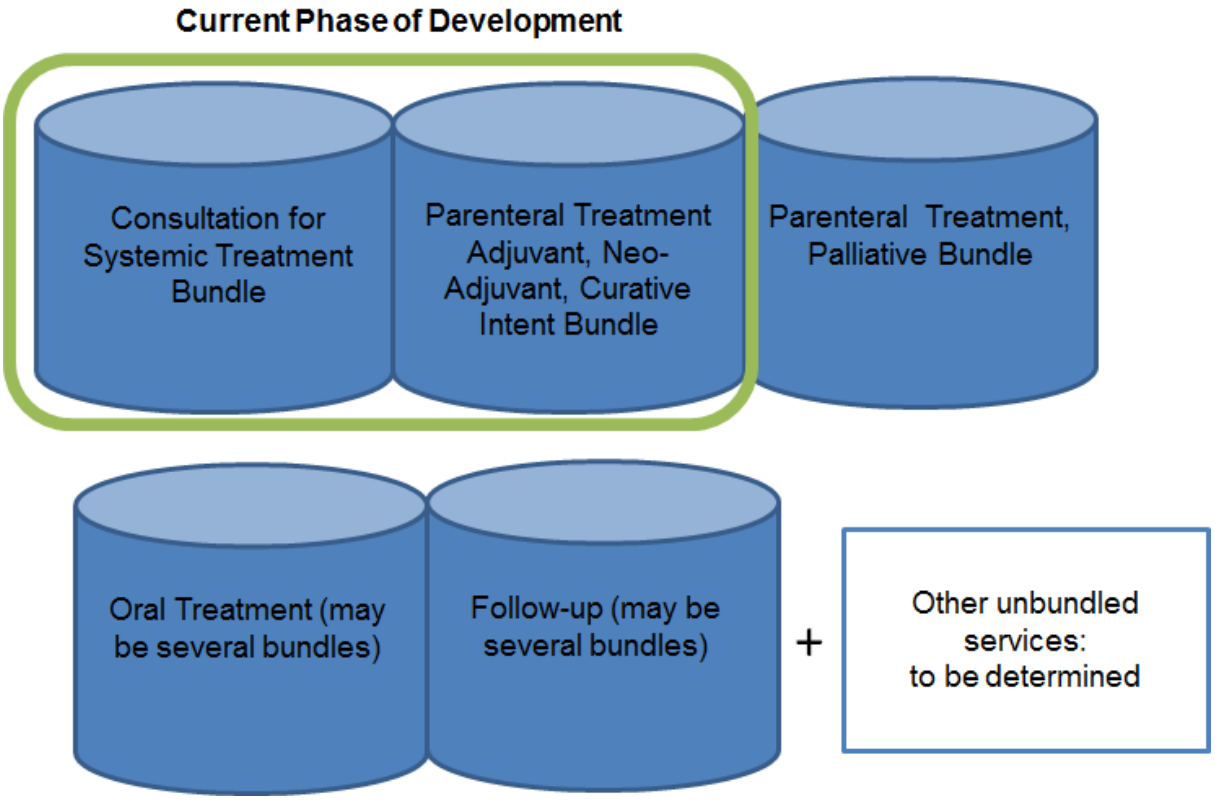
envelope for ambulatory systemic treatment with the exception of pediatric oncology and certain specialized services such as stem cell transplantation.

The first phase (2013/14) will include a hospital carve-out for all ambulatory systemic treatment activities except pediatric treatments. For 2013/14, CCO is proposing an implementation approach where the carve-out is equal to the funding that flows back to the hospitals. There would therefore be no reductions in hospital funding related to systemic treatment except where there is a decrease in overall volumes. Where regimen-level data is available, CCO will provide "shadow funding" data in order to allow hospitals to better understand impacts of funding changes in the following year and plan business models accordingly.

Additionally, this first phase will focus on implementing the defined best practice for consultation for systemic treatment and parenteral treatment for adjuvant, neo-adjuvant, and curative intent. This will be accomplished via quality requirements in funding agreements and a thorough knowledge transfer and exchange strategy. Finally, this phase will focus on developing and implementing a detailed data collection plan and defining best practices for the remaining bundles.

The next phase (2014/15) will see the implementation of a fully bundled payment model including the parenteral treatment for adjuvant, neo-adjuvant, curative intent bundle as well as bundles which focus on palliative parenteral chemotherapy, oral chemotherapy and follow-up care, with the goal of covering all aspects of the continuum of ambulatory systemic treatment. This bundled payment approach is depicted in figure 7.

Figure 7: Systemic Funding Model Development



The following figure outlines the high level, overall implementation plan from April 2012 through July 2015.

Figure 8: Systemic Treatment QBP Implementation Plan

3.6 Scope Clarifications

The new systemic treatment funding model is to be applied to all hospitals that provide adult systemic treatment ambulatory services.

The following areas or services are out of scope, for now: pediatrics, physician compensation, out of hospital activities, inpatient systemic treatment and home care. Clinical trials are currently being reviewed to determine whether they will be included in the current phase or a future phase.

3.7 Systemic Treatment Population Group

The new systemic treatment funding model will be applied to patients 18 years of age and older who receive a consultation with a medical oncologist, gynecology oncologist or hematologist for the purposes of considering a treatment plan for systemic treatment, regardless of whether or not the patient proceeds to treatment.

Treatment is defined as chemotherapy for neoplasm (CACS E802)

3.8 Documentation of Systemic Treatment as a QBP

The implementation of the new systemic treatment funding model will require detailed data collection related to the consultation with medical oncologist/haematologist, treatment and follow-up.

The Data collection strategy will be developed with the following guiding principles:

- Data will not be collected unnecessarily
- Data collected should support management of the new funding model and hospital decision making
- The data collected should be consistent across the province
- Inconsistencies should be limited & eventually eliminated
- The data collection strategy will use CCO-managed tools (ALR, eClaims)
- The data collection strategy will collect data for the entire model (where possible) rather than just data elements required for year 1
- The data collection strategy should ensure mechanisms for ongoing data collection improvements to data quality through data quality verifications and audits

Cancer Care Ontario has undertaken a project to review all potential data sources. The primary focus is on CCO data collection systems, outlined in further detail below. However, other sources, such as NACRs, will also be considered as potential options.

A data collection sub-group has been launched which includes representation from across CCO and members of the systemic treatment Working Group. The data collection sub-group will be reviewing all available data collection systems to determine: the data quality of each system, the current coverage by each system of the data elements required to support the funding model work, technical requirements, associated costs and feasibility of each system for expansion (if required) and use. Once the data collection strategy is finalized, this will be communicated to all hospitals and stakeholders through a knowledge transfer and exchange strategy.

Cancer Care Ontario's Activity Level Reporting

CCO currently collects a set of data elements at the activity level. This data set is referred to as Activity Level Reporting (ALR). Data currently collected includes new consults with medical oncologists (C1S), other consults (C2S), number of visits, treatment regimen and treatment intent (adjuvant, neo-adjuvant, curative, palliative). The ALR data set may need to be expanded in order to collect the data required to support the new funding model. Level 3 hospitals that do not submit data though ALR submit the Minimum Data Set (MDS). Information collected through MDS is related to patient information, referral date and consult date.

Using ALR would require an assessment of data quality at level 3 and 4 facilities and a potential expansion of the data set. For those facilities that do not report through ALR, efforts would be required to complete an ALR implementation.

Cancer Care Ontario's eClaims System

CCO eClaims is a new web-based application currently being implemented and will be available to all facilities delivering systemic treatment. eClaims will be used by CCO and facilities for the collection and adjudication of treatment and enrolment data for Provincial Drug Reimbursement drug claims. eClaims uses an active data collection process and allows hospitals to see treatment activity from other hospitals.

The current eClaims form collects data related to New Drug Funding Program (NDFP), Evidence Building Program (EBP) funded drugs and associated visits with drug delivery. It does not collect data related to consultations, non-NDFP drugs, or treatment intent. The eClaims system would need to be expanded to collect this data requiring effort on the part of CCO to conduct privacy and technical impact analysis, and all facilities to deploy the system and train the required resources.

3.9 Changes to Clinical Documentation

CCO currently collects clinician-provided, patient level data related to treatment regimens that contain parenteral drugs funded by the New Drug Funding Program (NDFP regimens). However, limited information is collected related to treatment regimens that do not include NDFP listed drugs (non-NDFP treatment regimens). This information will be required in order to support the new funding model and will increase the data collection requirements for all facilities. Through a data collection impact analysis, CCO will implement the solution which will have the least impact on clinicians and facilities (expanding ALR, expanding MDS, expanding eClaims, or a hybrid approach).

A second change in clinical documentation is an increased need to accurately document administered treatment regimens. The best practice process described in section 4 will result in an evidence-based list of treatment regimens defined as appropriate by disease site experts. Providers will then be expected to record specific patient level data that describes the disease, intent and treatment regimen as a condition for funding an episode of care.

A detailed description of changes to clinical documentation will be included in the Systemic Treatment Data Collection plan which will be released in Spring 2013.

4.0 Best practices[1] guiding the implementation of Systemic Treatment

4.1 Systemic Treatment Expert Panel/Working Group

The systemic treatment funding model was developed by the Systemic Treatment Expert Panel (the "Working Group"). Membership in the group includes representation from all 14 LHINs, including academic and community hospitals with RCCs, and non-RCC facilities. Membership includes:

- Medical oncologists, gynecology oncologists and hematologists
    - Representing relevant disease site groups, OMA medical oncology/hematology section, and Ontario Medical Oncology Association (provincial alternate funding plan practice group)
- Other clinical expertise
    - Nursing and pharmacy representation
- Administrative leadership

For a full list of all members, please refer to section 11.

This group has been actively guiding the development of the systemic treatment funding model including the identification of best practices and where required strategies for additional verification of best practices

4.2 Additional Advisory Groups

In addition to the Systemic Treatment working group, several advisory groups were engaged in the process of developing the new funding model, as outlined in the following table:

Table 1: Systemic Treatment Advisory Groups

Group	Description
Systemic Treatment Program Committee	This group includes the Heads of Medical Oncology from each Regional Cancer Centre Across the Province and Systemic Treatment Regional Quality Leads (medical oncologists with a mandate to oversee and drive quality improvements within their region)
Disease Site Groups	Medical Oncologists who are experts within specific disease sites
Provincial Oncology Nursing Program	Nursing representatives from across the province

[1] Best practice refers to a combination of best available evidence and clinical consensus

Committee	
Nursing and Pharmacy Resource Intensity Working Groups	Working groups consisting of nurses and pharmacists who regularly meet in order to determine the resource intensity weights of regimens
Provincial Leadership Council	This group includes the Regional Vice President from each of the 14 LHINS. The Regional Vice President is generally the VP of Cancer Services within the Cancer Centre and also has accountability to Cancer Care Ontario for the performance of the region.
Regional Cancer Centre Directors & RSTP Organizational Delivery Team	Administrative leaders from across each of the 14 LHINS with a responsibility for Systemic Treatment

4.3 Systemic Treatment Best Practice Development

Best practice was determined in two phases: phase 1 focused on identifying best practice for the Consultation for Systemic Treatment Bundle while phase 2 focused on best practice development for the Parenteral Treatment Bundle (for adjuvant, neo-adjuvant, curative intent).

Best Practice Development for the Consultation for Systemic Treatment Bundle

Best practice for the Consultation for Systemic Treatment Bundle was determined by the Working Group and verified via a survey sent to all hospitals where a medical oncologist is on site.

Following discussion, it was determined that the consultation bundle should be split in two bundles:

1. Consultation for Systemic Treatment Bundle (current phase)
2. Diagnosis/Staging Bundle (future phase)

The consult bundle was split in two in order to separately capture the work associated with a systemic treatment consultation, enabling a treatment decision, from the work associated with the staging and diagnosis required for any oncologist (medical, radiation, surgical consult, diagnostic imaging, etc.) to assess the need for treatment. Often patients have concurrent multidisciplinary assessments at diagnosis.

The Working Group defined the parameters of the bundle (start and end) as well as the activities that are best practice for all patients who receive a consult with a medical oncologist for the purposes of determining a systemic treatment plan. Best practice within the Consultation Bundle was also verified with Pharmacy and Nursing working groups.

Best Practice Development for the Parenteral Treatment Bundle for Adjuvant, Curative & Neo-Adjuvant Intent

Under the direction of the Working group, an analysis was conducted of the current practice related to each regimen for each disease/cancer type. This analysis was intended to identify which regimens are currently administered to patients for each disease site and summarize all known information relating to these regimens. Figure 9 outlines the components of this analysis.

Figure 9: Regimen Analysis

Regimen Information	• Regimen Code • Regimen Description • Regimen Abstract	• NDFP/non-NDFP • # 2011/12 cases • # 2011/12 visits
Treatment Intent (cases by %)	• Adjuvant • Neo-Adjuvant • Curative	• Palliative • Unknown
Regimen Protocol	• # Cycles • # Chemotherapy Suite Visits • # Ambulatory Clinic Visits	• Diagnostic Imaging Requirements • Laboratory Requirements • Cardiopulmonary Requirements
Supportive Drugs	• Hypersensitivity Drugs	• Other Supportive Drugs
Vascular Access	• Interventional Radiology	• Blood Draw
Workload	• Average nursing time/visit	• Average pharmacy time/visit
Drugs Costs	• NDFP drugs	• non-NDFP drugs

In order to determine best practice, meetings have been conducted with each Disease Site Group (DSG). The DSGs are groups of experts whose practice is focused on a particular cancer type and who author guideline documents under the direction of the Program in Evidence Based Care (PEBC). These meetings clarified which cancer regimens were appropriate for each disease site, the treatment intent as well as the best practice protocol for each regimen. Regimen protocol includes the drugs (including supportive drugs) which should be provided as part of regimen, schedule of administration, diagnostic imaging, laboratory, cardiopulmonary requirements and vascular access. Further validation of the defined best practice will take place in Spring 2013 with a broader group of stakeholders.

The following table outlines the regimen break down based on the initial meetings with the Disease Site Groups. This table is based on all regimens that were administered in 2011/12. The table lists the number of regimens which have been identified as appropriate by treatment intent for each disease site and the number of regimens identified as inappropriate or not supported for each disease site.

Review of the regimens which have been identified as inappropriate/unsupported reveal that most are likely data entry errors, or related to data quality issues. For example, a patient who was originally treated for breast cancer and then later treated appropriately for gynecological cancer may still be identified in the database as a patient with breast cancer. When the patient is administered the appropriate regimen for gynecological cancer, it is reported under the breast disease site and appears as though an inappropriate regimen was administered for breast cancer. For this reason we are identifying these cases as “presumed miscoded”.

Table 2: Regimen Breakdown – Number of regimens by intent by Disease Site Group*

	Number of Regimens Identified as				
DSG	**Adjuvant/ Curative Intent**	**Adj./Cur. AND Palliative Intent**	**Palliative Intent**	**Presumed Miscoded**	**Total**
Breast	15	4	28	49	96
CNS	0	1	4	12	17
Gastrointestinal	2	22	35	56	115
Genitourinary	5	16	18	39	78
Gynecology	8	10	15	40	73
Hematology	35	2	51	47	135
Head & Neck	6	3	12	20	41
Lung	1	14	15	45	75
Sarcoma	0	6	15	25	46
Skin	1	0	12	31	44
Total	73	78	205	364	720
~ % of all Cases	**19%**	**39%**	**37%**	**5%**	**100%**

**Note: the above numbers are as of December 2012 and are subject to change due to additional feedback and work with the Disease Site Groups.*

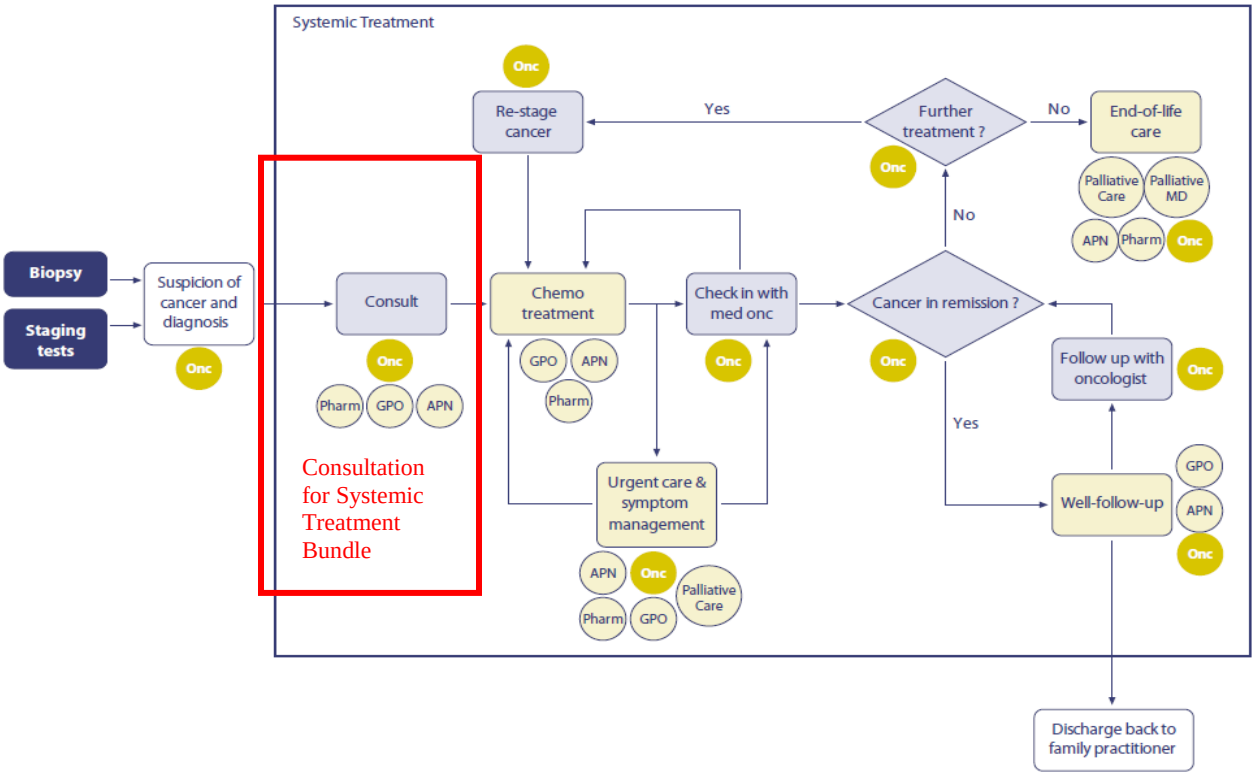
Once the list of appropriate regimens have been identified and finalized, only regimens that are determined to be appropriate care and best practice will be fully funded. Cases where regimens are not considered best practice but still may be appropriate, may be funded at a reduced rate or not funded entirely (please note, the approach to this scenario is still under development).

4.4 Clinical Pathway

Best Practices for Consultation for Systemic Treatment

The following figure depicts the overall Clinical Pathway. The Consultation for Systemic Treatment Bundle is highlighted within the red box below.

Figure 10: Systemic Treatment Clinical Pathway & Consultaion for Systemic Treatment Bundle



The bundle will start at the time the patient has a consult with a medical oncologist for systemic treatment. The bundle will end at the start of treatment/supportive care or 28 days later. It was determined that best practice for the Consultation for Systemic Treatment Bundle consists of:

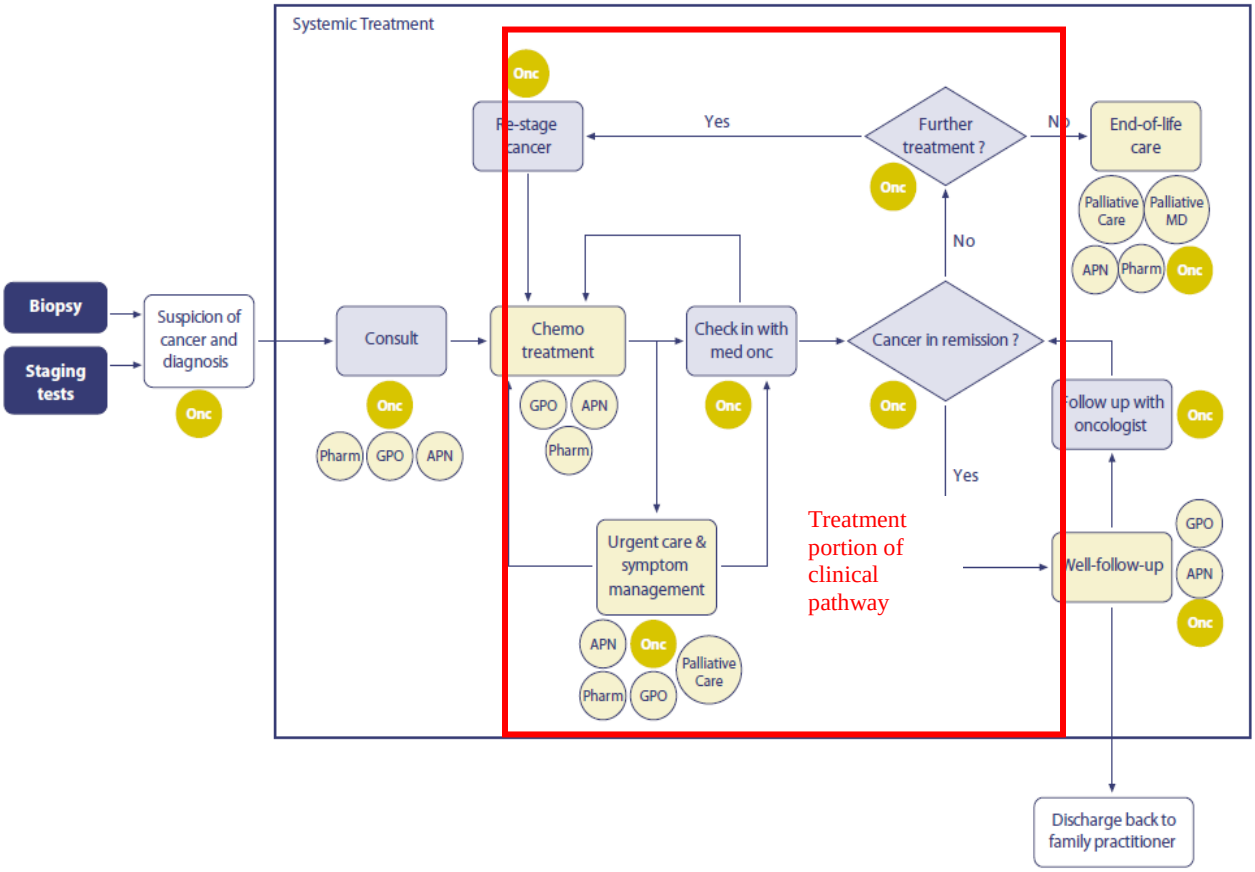
- 2 patient visits (Initial consultation & patient visit regarding decision to treat)
- Activities related to patient education (e.g group education, education about drug access and costs), psychosocial care (e.g. dietary, social work, psychology), medication reconciliation, and clerical work

In alignment with CCO Wait Times targets, 85% of patients should start treatment within 28 days of consulting with a medical oncologist.

Best Practices for Parenteral Treatment for Adjuvant/Neodjuvant/Curative Intent

The following figure depicts the overall Clinical Pathway. The Treatment portion is highlighted within the red box below. Treatment may be delivered as adjuvant/neo-adjuvant/curative or palliative intent.

Figure 11: Systemic Treatment Clinical Pathway & Parenteral Treatment Bundle



The working group determined that the Parenteral Treatment for Adjuvant, Curative, Neo-Adjuvant Intent bundle will be defined and funded as a regimen-based full course of treatment, based on the average number of treatment cycles delivered for a given disease and treatment intent. All regimens of treatment will be "banded" according to the cost/intensity of the regimen. The band may be adjusted based on modifying factors; disease factors such as disease site or stage, patient factors, or regimen specific factors such as standard resource intensity, etc.

A pricing model has been developed in order to band all parenteral adjuvant, neo-adjuvant and curative systemic treatment regimens. In early 2013, a document will be released outlining the best practice definitions and principles, elements included in the regimen costing, and the bands for all appropriate systemic treatment regimens by Disease Site.

Best practice for Parenteral Treatment for Adjuvant/Neo-adjuvant/Curative Intent bundle includes:

- Ambulatory clinic visits and chemotherapy suite treatment visits and associated nursing and pharmacy time as well as clerical work in support of these visits
- Non-NDFP Drugs & Supportive Drugs
- Patient education & support activities including follow-up phone calls

- Psychosocial Oncology/Supportive Care
- Diagnostic Imaging*
- Laboratory Workup*

* While diagnostic imaging and laboratory workup have been included in the development of clinical best practice, they are currently not included in the pricing model.

It is important to note that due to the rapid emergence of new technologies and best practice evidence, maintenance of regimen best practice and regimen bands will be required. This maintenance will be on ongoing effort on behalf of CCO.

Regimens will be reviewed on a regular/scheduled basis with disease site groups and other experts across the province. This will be done to ensure that regimens are still properly classified as “appropriate” and to ensure regimens with new evidence for appropriate use are included. Regimens will also be reviewed on an ad-hoc basis, as required, to ensure that regimens can be reviewed outside of the regular/scheduled review practice. As regimens are reviewed and changes are made, the regimens can be incorporated into the pricing model for costing.

4.5 Systemic Treatment as a QBP and Patient Outcomes

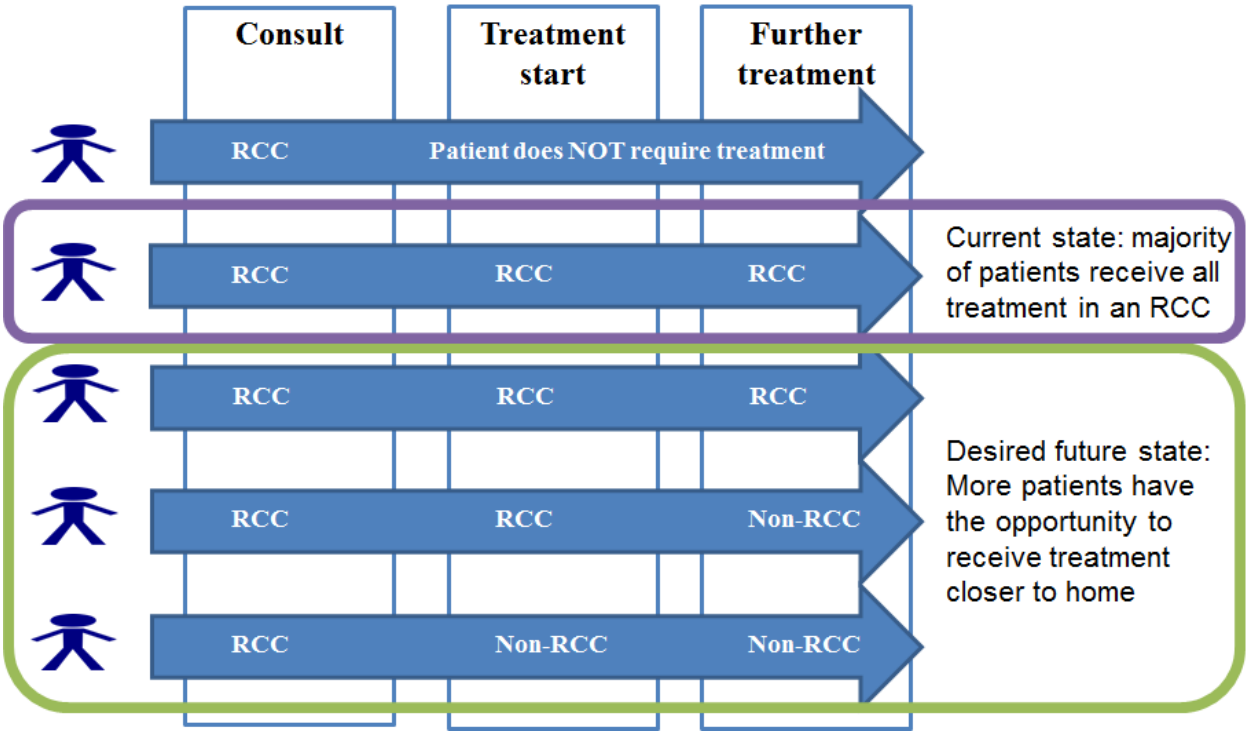
It is expected that the new systemic treatment funding model will have a positive effect on patient outcomes as funding that follows the patient will reduce inequities in funding and variation in treatment across the province.

Patient Experience Outcomes – Patient Pathway

The new funding model incents a shared care model by adequately funding cancer treatment outside of Regional Cancer Centres (when appropriate) thereby enabling patients to receive care closer to home. In addition, it is expected that reducing barriers to shared care within a region will have a positive impact on access to services.

Currently a large proportion of systemic treatment patients receive all their care (from consult through treatment) in a Regional Cancer Centre. The desired future state would be that, when appropriate based on Organizational Standards, more patients would have some or all of their treatment in a non-RCC closer to home, as outlined in the following figure.

Figure 12: Systemic Treatment Patient Pathway



Patient Treatment Outcomes

By identifying and funding regimens according to best practice, hospitals are incented to ensure that patients are only provided the regimens that are appropriate for their care. In addition, this definition supports clinicians in making appropriate clinical decisions in regards to treatment options. Further, the funding model identifies the best practice care for a given regimen. In combination, these elements act to ensure that the patient receives care that is appropriate and based on best practice, thereby ensuring that the patient receives the highest possible quality of care.

5.0 Implementation of best practices

The Systemic Treatment funding model is based on the following principles, ensuring the implementation of best practices:

- Align funding framework development with Ontario's Excellent Care for All Act & Patient-Based Payment policy
- Ensure model development process is transparent, multi-disciplinary and collaborative
- Promote equitable patient access to services
- Promote fair and equitable funding allocation to providers
- Promote value for money and improve efficiency (i.e., track and evaluate money spent by outcomes achieved)

- Improve outcome measurement and accountability for reported outcomes
- Balance implementation of funding framework with financial risk to organizations
- Ensure that ongoing governance structure (including clinical oversight) is supported by transparent dispute resolution processes
- Establish ongoing monitoring, reporting and evaluation of processes/outcomes
- Establish recognized and transparent performance management cycle
- Prevent sudden and significant annual changes to funding
- Align provider funding & incentives with funding provided to organization
- Promote access to clinical trials where appropriate
- Support new models of care development
- Respond to new evidence
- Support high quality care as close to home as appropriate

Modifying Best Practice Suit to the Local Context

Organizations will need to ensure that patients are receiving care according to the list of appropriate regimens and to provide care that aligns with best practice, however, organizations are encouraged to find innovative approaches to deliver the best practices in a way that is most relevant for the local context (e.g. innovation in the mix of Human Health Resource professionals involved delivering the care)

Data Management Implications

As described in section 3.7, the implementation of the new funding model will require tracking of consults, diagnosis, treatment intent and treatment regimen. This will be accomplished through CCO's ALR system and/or eClaims system. Other data sources, such as NACRs are also being considered for the data collection strategy. In some cases, hospitals may be required to track information that they were not previously tracking and therefore data management needs will be increased. Every effort is being made to ensure that only the most critical information is collected in order to ensure that data needs are not increased unnecessarily.

Knowledge Transfer and Exchange & Strategy Around Best Practice Care

Communicating the defined best practice surrounding systemic treatment regimens is critical for the implementation of the systemic treatment funding model which will be incorporated in the overall project implementation/knowledge transfer and exchange strategy. Please refer to section 9.1 for additional information.

6.0 What does it mean for multi-disciplinary teams?

Successful implementation of the new funding model requires collaboration on the part of all those involved in the patient's care delivery. Administrators, Medical Oncologists and Pharmacists should be aware of those regimens that are considered best practice and avoid ordering and/or preparation of those regimens that are not considered best practice. Nurses and other allied health professionals play a critical role in ensuring that the patient receives the best practice care (i.e. requirements around patient education and psychosocial support). Clerical staff are required to ensure accurate data entry and coding in order to ensure that the hospital is appropriately reimbursed.

6.1 How does Systemic Treatment as a QBP align with clinical practice?

The QBP for Systemic Treatment provides funding to promote the provision of evidence-informed, best practice care. Each patient will not require the exact type and amount of services provided in the bundles. The bundles within the funding framework are meant to provide payments aligned to the appropriate level of care for a patient requiring the average amount of services. In allocating funding for the average level of treatment defined by best practice, the funding framework will provide the appropriate counterbalance between patients requiring a greater or lesser amount of care.

6.2 What are the implications for clinicians?

The changes associated with the QBPs focus on identifying and implementing evidence-informed practice driven by clinical consensus. Clinicians will be tasked with identifying within their own practice standard treatment protocols and identifying where there are variances from such practice. Collaboration with hospital administration will assist the clinicians in identifying the challenges within the service, as well as opportunities and the feasibility for changes to the treatment protocol.

Clinicians will continue to play an essential role in guiding hospitals to meet the needs of their patient population and ensuring that the highest quality care is provided for all their patients.

At this time, physician payment models and OHIP fee schedules, as they relate to QBPs, will remain unchanged. Physicians currently working under fee-for-service will continue to submit claims to OHIP for consultations, treatment and follow-up.

6.3 Will this change current practice?

The Systemic Treatment patient-based funding framework may create change in current practice for certain clinicians in Ontario. CCO's Activity Level Reporting data demonstrates significant practice variation amongst Systemic Treatment care providers

throughout Ontario. Those who are currently delivering services beyond the identified best practice will need to alter treatment patterns in order to ensure the highest quality of care is provided to all patients.

7.0 Performance evaluation and feedback

Improving the quality and access to systemic treatment services is central to the implementation of the Regional Systemic Treatment Provincial Plan. Performance and evaluation will be an essential aspect of the new systemic treatment funding model.

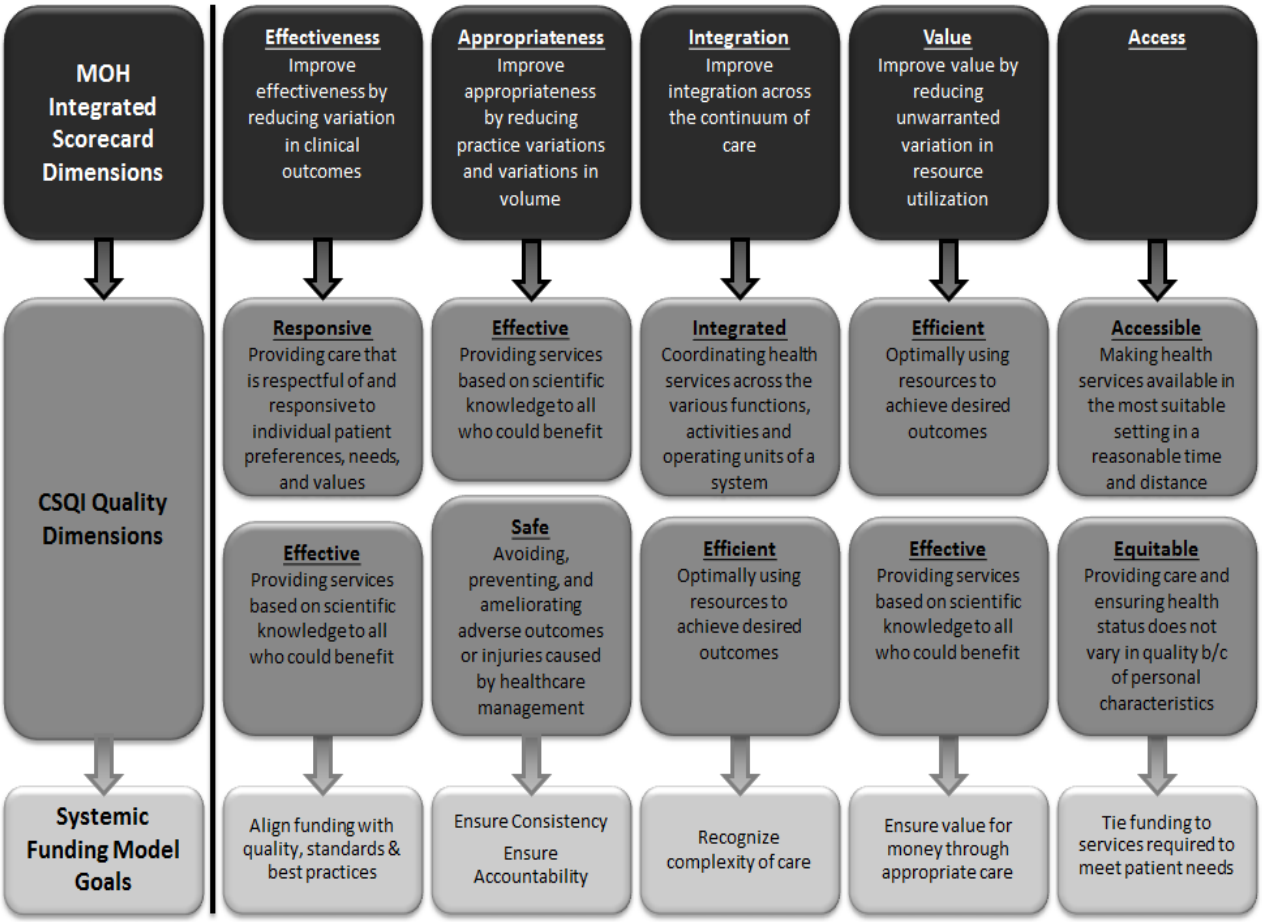
The MOHLTC has created an integrated Score Card with 5 dimensions which will be used to help measure the success of the funding model. The Systemic Treatment Funding Model overall indicators will be aligned with these dimensions.

The Cancer Quality Council of Ontario (CQCO) advises Cancer Care Ontario and the Ministry of Health and Long-Term Care in their efforts to improve the quality of cancer care in the province. In addition, they also monitor and publicly report on the performance of the cancer system, and provide international comparisons and benchmarking so Ontario can learn from other jurisdictions.

The CQCO developed the Cancer System Quality Index (CSQI) which is used to measure the overall performance of the cancer system and will also be used to help measure the success of the funding model; the Systemic Treatment Funding Model overall indicators will be aligned with these dimensions.

The following figure outlines how the Systemic Treatment funding model goals align with the MOHLTC Integrated Scorecard the CSQI.

Figure 13: MOH Scorecard Dimensions, CSQI Quality Dimensions & Systemic Funding Model Goals



In alignment with the MOHLTC Integrated Scorecard dimensions and the CSQI quality dimensions, a performance and evaluation indicators framework has been developed for the Systemic Treatment Funding Model. Three types of indicators have been identified and/or are being developed: direct indicators (developmental), indirect indicators (existing) and indirect indicators (developmental).

Direct indicators (developmental) are indicators which will measure processes or outcomes that are directly impacted by the funding model work and include indicators currently in development and new indicators. The purpose of these indicators is to ensure that the new funding model goals are being met and not resulting in unintended consequences/negative impacts. Five direct indicators (developmental) have been identified: Percentage of Patients Receiving Non-Standard Regimens, a metric to demonstrate that money Follows the Patient, Average Cost/New Patient, a Localization Index and proportion of systemic therapy sites operating within the funding model without a deficit.

Indirect indicators (existing) are indicators which could potentially be indirectly impacted by the funding model work and include existing CSQI indicators. The purpose of these indicators is to ensure that the new funding model is not resulting in unintended consequences/negative impacts. Three indirect indicators (existing) have been identified: Emergency Department Visits After Chemotherapy, Guideline Concordance,

and both Systemic Treatment & Patient Centered Wait Times (Diagnosis to Chemotherapy & Surgery to Chemotherapy).

Indirect indicators (developmental) are indicators that are indirectly related to the funding model work and include indicators currently in development and new indicators. The purpose of these indicators is to ensure that the new funding model goals are being met and not resulting in unintended consequences/negative impacts. Two indirect indicators (developmental) have been identified: Average Panel of Patients/FTE and 5 Year Stage Specific Survival (a CSQI indicator currently being developed).

In early 2013 a document will be released outlining the identified performance and evaluation indicators and definitions, the intended measures and the alignment of the indictors to the MOHLTC Integrated Scorecard dimensions, CSQI quality dimensions and the Systemic Treatment Funding Model goals.

8.0 Support for Change

Cancer Care Ontario will engage with stakeholders across the province in order to educate all stakeholders impacted by the new Systemic Treatment Funding Model. Stakeholder engagement will occur in two phases.

The first phase is currently ongoing and focuses on engaging with existing groups/standing committees, in order to support clinical knowledge transfer and exchange (KTE) and an understanding of the impacts of the revised funding model.

A second phase will be initiated in the spring of 2013 and will consist of conducting in-person visits/teleconferences/etc., to describe the specific impact of the new model on the region including financial impact and practice implications (including both clinical and administrative KTE).

8.1 Supports from Cancer Care Ontario

Cancer care Ontario will support hospitals in transitioning to the new funding model by the development and execution of a Knowledge Transfer and Exchange Plan. This plan will include (but not be limited to):

1. Providing a detailed impact analysis demonstrating the current state (based on current funding) and the future state (based on new model)
2. CCO, in partnership with the MOHLTC and Hospitals, will develop mitigation corridors; these are strategies intended to minimize adverse impacts relating to implementation of new model.
3. CCO will develop documents and tools (such as FAQs) to support the implementation of the new model
4. CCO will carefully monitor the new model and modify the model as required based on stakeholder feedback.

9.0 Frequently Asked Questions

In early 2013 a FAQ document will be released to support the implementation of Systemic Treatment as a Quality Based Procedure.

10.0 Contact Information

Please feel free to contact Cancer Care Ontario with any questions/concerns.

Contact Information:

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Manager, Regional Systemic Treatment Program

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11.0 Future Documents to Support Systemic Treatment as a QBP

Following is a list of documents which are currently being developed and will be released in 2013 to support Systemic Treatment as a Quality Based Procedure:

- Frequently Asked Questions (FAQs)
- Impact Analysis
- Systemic Treatment Best Practice Toolkit including regimen cost bands and associated best practice
- Performance & Evaluation Indicators outlining final indictors, definitions, and their alignment to MOHLTC, CSQI and Systemic Treatment Funding Model goals

12.0 Membership

The following table outlines the members of the Systemic Treatment Clinical Expert Panel

Table 2: Systemic Treatment Clinical Expert Advisory Group

Clinical Expert Advisory Group Membership		
NAME	**TITLE**	**ORGANIZATION**
Dr Leonard Kaizer (Chair)	**Provincial Head, Systemic Treatment, Cancer Care Ontario** **Medical Oncologist**	**Cancer Care Ontario, Credit Valley Hospital**
Dr. Bill Evans (Co-Chair)	**President, Juravinski Hospital & Cancer Centre at Hamilton Health Sciences** **Regional Vice-President, Cancer Care Ontario** **Medical Oncologist**	**Hamilton Health Sciences**
Ms. Sue Alderson	Director, Pharmacy Services (Hamilton Health Sciences including oversight for Juravinski Cancer Centre) Registered Pharmacist	Hamilton Health Sciences
Ms. Flay Charbonneau	Manager, Pharmacy, Odette Cancer Centre Registered Pharmacist	Sunnybrook Health Sciences Centre
Dr. Matthew Cheung	Hematologist Pharmacoeconomics Representative	Sunnybrook Health Sciences Centre
Mr. Michael Del Nin	Manager, Decision Support	Thunder Bay Regional Health Sciences Centre
Ms. Claudia Den Boer Grima	Regional Vice President, Windsor Regional Cancer Program Regional Vice President, Cancer Care Ontario	Windsor Regional Hospital
Ms. Tamara Dus	Director Regional Cancer Program Registered Nurse	Durham Region Cancer Centre at, Lakeridge Health
Dr. Craig Earle	Director, Health Services Research Program Medical Oncologist	Ontario Institute for Cancer Research; Cancer Care Ontario
Dr. Sheldon Fine	Medical Oncologist	Credit Valley Hospital
Mr. Shawn Gihuly	Chief Financial Officer	London Health Sciences Centre

Clinical Expert Advisory Group Membership		
Mr. Cory Gosnell	Clinical Administrative Director, Cancer Services	Kingston General Hospital
Ms. Mariela Gregory	Manager, Planning and Monitoring	Lakeridge Health Centre
Dr. Caroline Hamm	Regional Quality Lead, Systemic Treatment, Erie St. Claire Region Medical Oncologist	Windsor Regional Hospital
Mr. Mark Hartman	Regional Vice President, Northeast Cancer Centre Cancer Care Ontario.	Health Sciences North
Mr. Neil Johnson	Vice President Cancer Care Regional Vice President, Cancer Care Ontario	London Health Sciences Centre
Ms. Tracey Keighley-Clarke	Director, Simcoe Muskoka Regional Cancer Program Registered Nurse	Royal Victoria Regional Health Centre
Mr. Terry Kuula	Vice President, Finance	Southlake Regional Health Centre
Dr. Jacinta Meharchand	Medical Oncologist Chair, Section of Hematology and Oncology, OMA	Toronto East General Hospital
Dr. Malcolm Moore	Head of Medical Oncology and Hematology Medical Oncologist	University Hospital Network/Princess Margaret Hospital
Dr. Jonathan Noble	Medical Oncologist, and Medical Oncology Practice Group Representative	Health Sciences North
Ms. Janice Stewart	Director, Operations and Regional Planning, Odette Cancer Program Registered Nurse	Sunnybrook Health Sciences Centre
Ms. Terri Stuart-McEwan	Executive Director, Solid Tumor Oncology and Gattuso Rapid Diagnostic Centre Registered Nurse	University Health Network/ Princess Margaret Hospital
Ms. Donna Van Allen	Program Director of Systemic Therapy Registered Nurse	Grand River Regional Hospital
Dr. Vince Young	Medical Oncologist	the Ottawa Hospital Regional Cancer Centre