

**Quality
Person-Centred
Systemic Treatment
in Ontario**
2014-2019

**SYSTEMIC TREATMENT
PROVINCIAL PLAN**



Ontario

Cancer Care Ontario
Action Cancer Ontario

In This Report

Systemic Treatment Provincial Plan
2014-2019

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Foreword

In Ontario, the incidence of cancer continues to rise as the population ages, with 45 percent of men and 41 percent of women now expected to have a cancer diagnosis during their lifetimes. Once diagnosed, the majority of those affected will undergo chemotherapy as part of their treatment plan. With improving survival rates, the population of patients living after a cancer diagnosis (prevalence) is also rising. These factors all contribute to an increasing demand for accessible, high-quality care and a need to continue focusing provincial efforts on building a sustainable system in which patients feel safe and appropriately supported.

Following the implementation of the first Systemic Treatment Provincial Plan in 2009, regional systemic treatment programs were established across the province to create a coordinated approach to patient-focused care. Since then, the first plan has helped us make improvements in the areas of Chemotherapy Standards, Service Planning, Health Human Resources, and a new Systemic Treatment Funding Model. *Quality Person-Centred Systemic Treatment in Ontario: Systemic Treatment Provincial Plan 2014-2019* will build on existing strengths and partnerships to consolidate and extend the efforts of the first plan to improve the safety, quality and accessibility of systemic treatment in the province. It focuses on the changing needs of the system, and areas in which quality gaps and opportunities for progress exist.

This plan was built with healthcare providers, administrators, and patient and family advisors. The overarching goals are to extend the quality and safety agenda while strengthening and enabling care models with an emphasis on person-centred care. We want to focus on moving beyond the walls of the cancer centre and into the community to ensure that patients have access to safe, high-quality care in all settings. Additionally, the exploration of new and innovative models of care will help ensure the long-term sustainability of the system, and enable care that is more responsive to the needs of our patients and their families.

Though we have laid out an ambitious plan for the next four years, we believe that through continued

collaboration with our regional partners, community providers, and patients and their families, we can achieve the goals of this plan, and advance Cancer Care Ontario (CCO)'s mission to improve the performance of our health systems by driving quality, accountability, innovation and value.

Sincerely,



Dr. Leonard Kaizer MD, FRCP(C) – *Provincial Head, Systemic Treatment Program, Cancer Care Ontario*



Garth Matheson BComm, MBA – *Vice President, Planning & Regional Programs, Cancer Care Ontario*



Dr. Robin McLeod MD, FRCS(C) – *Vice President, Clinical Programs & Quality Initiatives, Cancer Care Ontario*

A Voice for Systemic Treatment Patients in Ontario

Quality Person-Centred Systemic Treatment in Ontario: Systemic Treatment Provincial Plan 2014-2019 is focused on improving the safety, quality and accessibility of systemic treatment across Ontario through a person-centred approach.

From our perspective as both a patient and a caregiver, the diagnosis of cancer was just the beginning of a long path filled with numerous tests, uncertainty and fear. Our involvement as Patient and Family Advisors in the Systemic Treatment Provincial Plan is an opportunity to bring our insight and voice to the table to inform the clinical and administrative team about the challenges experienced by the patient and caregiver during treatment and follow-up care. Through our engagement with CCO, we hope to improve the quality of patient care in the future.

During the busyness of life at cancer treatment centres, the individual can feel like a cog in a wheel – not as someone with a multitude of needs that go beyond cancer treatment. Patients and their families need to be engaged in the entire process from diagnosis to treatment to outcome. We must be active partners in our care and treatment.

Contributing to this plan has helped us recognize that there is value in the unfortunate experience of being diagnosed with cancer and undergoing systemic treatment. We hope that our contribution helps others during a very challenging period in their lives. We know that the results of the plan will not occur overnight as it takes time for change and improvement in the system; however, this plan is a significant step into an improved future.

It is our belief that the strategic priorities outlined in this plan will serve as a tool to advance quality and safe care in the province through a person-centred approach.

We are excited about the potential of this plan to improve the future of systemic treatment in Ontario.

Person-centred care is an approach to the planning, delivery and evaluation of healthcare that involves mutually beneficial partnerships between healthcare providers and patients and their families

Sincerely,

Catherine C. and Donna E.
Patient and Family Advisors

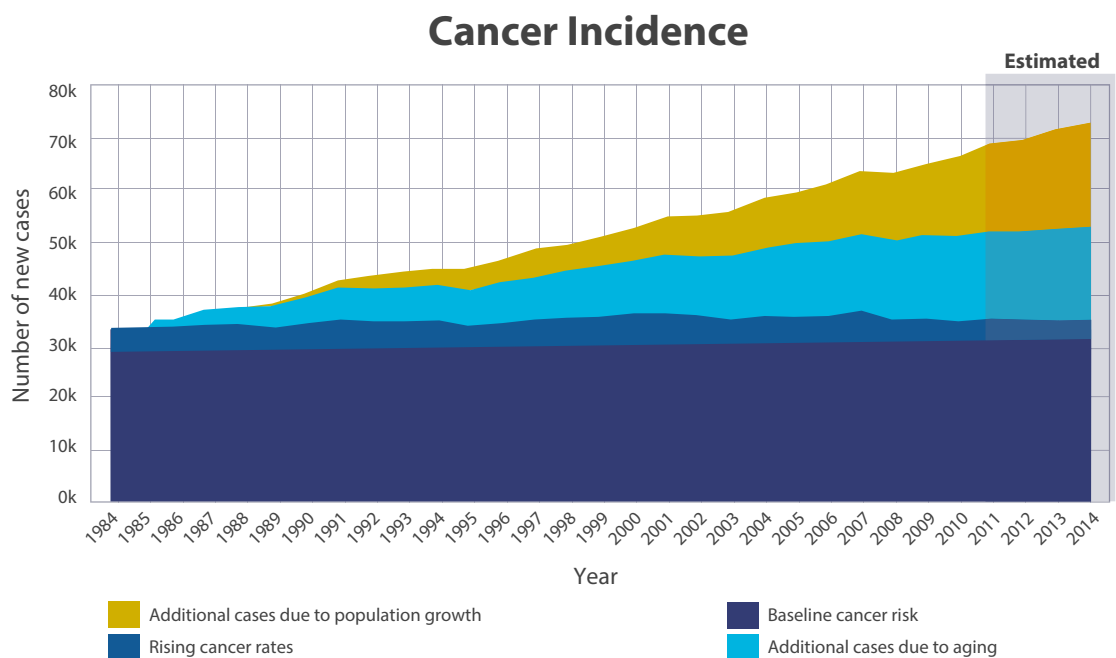


Systemic Treatment in Ontario

While significant progress has been made in the area of cancer treatment and prevention, it is projected that the number of people living with cancer in Ontario will continue to rise. Since 1984, the number of new cancer cases diagnosed in Ontario each year has more than doubled and it is estimated that in 2014, there will be 73,400 new cancer cases in the province. Among these new incident cases, the majority are cancers of the prostate, breast, lung and colon and rectum (colorectal). The key drivers of the increase in new cases are population growth and population aging (Figure 1).

Improvements in detection and treatment have resulted in more Ontarians living after a diagnosis of cancer (prevalence), with many individuals cured and many others surviving longer with the disease being managed as a chronic condition. Demands on the system will increase as a number of these patients may return for treatment related to either second cancers or disease recurrence. All of these pressures will challenge our healthcare system as incremental resources and services will be required to meet the increasing number of new cases, as well as the ongoing needs of people living with and beyond cancer.

FIGURE 1 | Growth in new cases of cancer in Ontario, 1984-2014



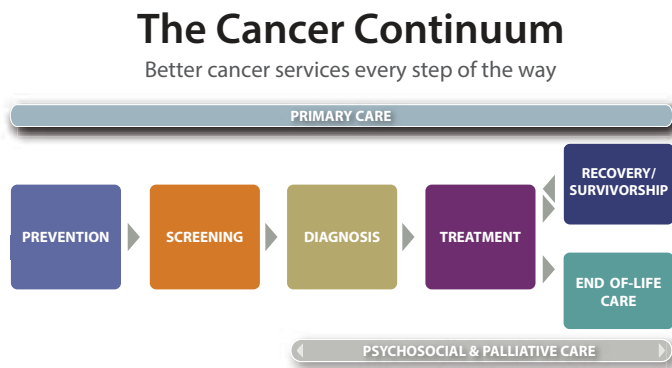
Source: CSQI, 2014

Treatment

Following a cancer diagnosis, most individuals move forward to treatment (Figure 2). The treatment options are determined by the type and stage of cancer, as well as patient needs and preferences. The three main ways to treat cancer are through surgery, radiation, or systemic treatment. Most commonly, systemic treatment is administered in the form of chemotherapy, while hormonal therapy and immunotherapy are other methods of systemic treatment. Administration of chemotherapy is primarily intravenous (IV), and while this remains the most common route of administration, effective

oral therapies are becoming more widely used in Ontario. Systemic treatment may be administered in addition to planned radiation or surgery (referred to as adjuvant or neo-adjuvant treatment), for the purposes of completely eliminating cancer (curative intent), or for the purposes of reducing cancer symptoms and improving quality of life (palliative intent). CCO recognizes that treatment of cancer must involve more than physical care and interventions. We must treat the whole person, which includes their emotional, functional, social and relational health.

FIGURE 2 | The Cancer Continuum



Cancer Delivery in Ontario and Cancer Care Ontario's role

CCO is the government agency responsible for the planning and continuous improvement of the provincial cancer system, which includes enabling the delivery of person-centred care. The Ontario Cancer Plan serves as a roadmap for how CCO, healthcare professionals and organizations, cancer experts and the provincial government work together to reduce the risk of Ontarians developing cancer while improving the quality of care and treatment for current and future patients. For the purpose of cancer care delivery, Ontario is divided into 14 regions which include a network of hospitals working together to deliver a quality regional care model (Figure 3).

FIGURE 3 | Systemic Treatment Facilities across Ontario

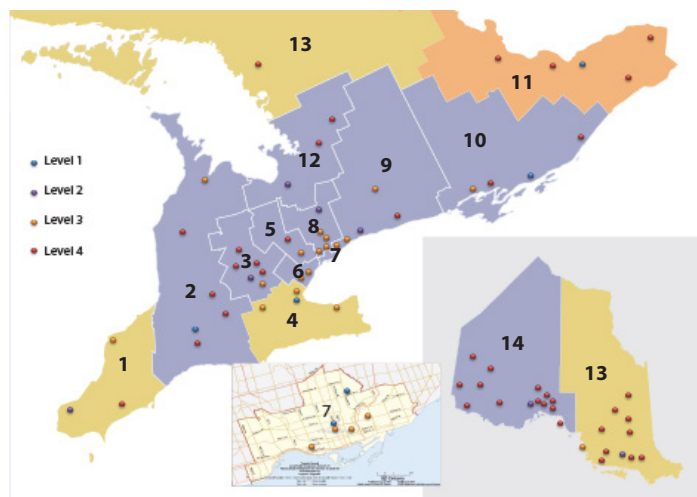


FIGURE 4 | Some Key Differences between Facility Levels Based on Complexity of Care

| Complexity | Level 1 (RCC) | Level 2 (RCC) | Level 3 (Affiliate) | Level 4 (Satellite) |
|--|---------------|---------------|---------------------|--|
| Experimental Investigational New Drug Program | ✓ | ✗ | ✗ | ✗ |
| High complexity procedures including: Concurrent Head and Neck Chemorads and/or Radiolabelled Conjugates | ✓ | ✓ | ✗ | ✗ |
| Medical oncologist on site determines treatment plan | ✓ | ✓ | ✓ | ✗ |
| 1 st dose of high risk systemic treatment | ✓ | ✓ | ✓ | 1 st dose if approved by the RSTP |
| All other systemic treatment | ✓ | ✓ | ✓ | ✓ |

✓ = Yes ✗ = No Chemorads = chemotherapy in combination with radiation therapy; RCC = regional cancer centre

CCO supports the Regional Cancer Programs through guideline development and implementation of quality priorities through funding and performance management. Further, it enables collaboration across facilities through the establishment of provincial quality and safety networks.

When receiving systemic treatment in Ontario, patients may receive all treatments at one facility, or they may receive treatment in a shared care model, for example a patient may have consultation at one facility and treatment at another location closer to their home.

In Ontario, treatment is organized around four hierarchical levels of care (Level 1-4) and there are currently 77 facilities providing systemic treatment across the province. Levels of systemic treatment service range from the ability to provide complex highly-specialized chemotherapy to the provision of low-risk treatment under the direction of a medical oncologist (Figure 4). The Provincial Drug Reimbursement Programs Unit at CCO administers the cancer drug funding to the facilities according to established funding criteria for patient eligibility.



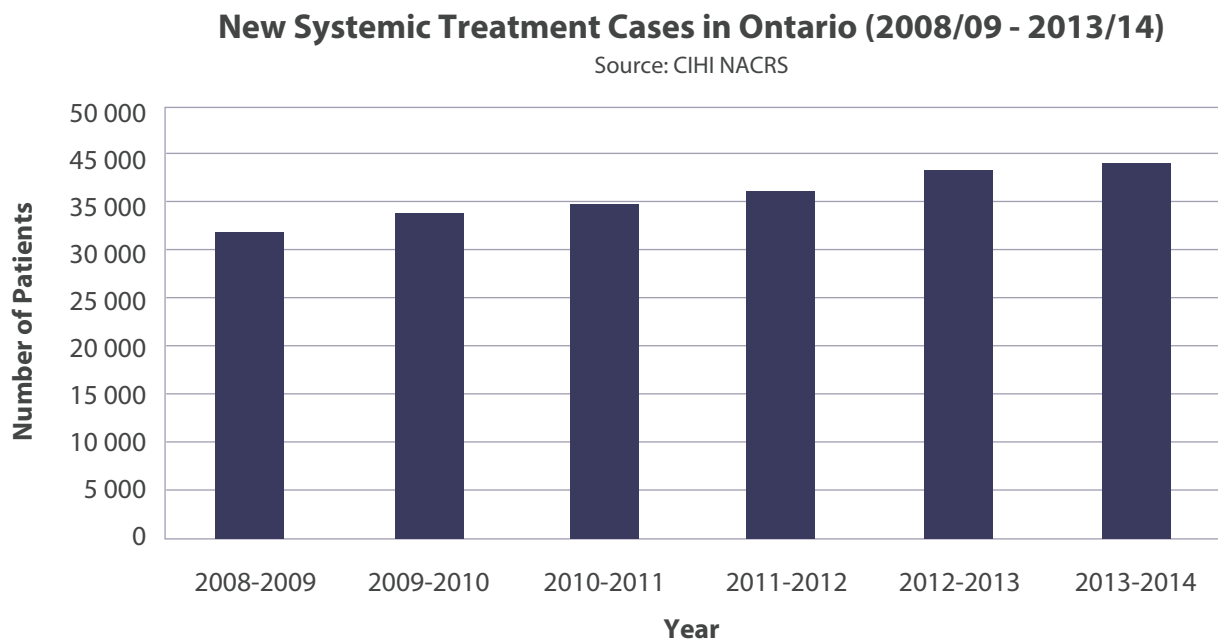
Ongoing Need

As the incidence of cancer increases, so does the demand for high-quality, accessible, person-centred systemic treatment across the province (Figure 5). To provide effective care, there is a need to enable multi-disciplinary approaches (such as combined modality treatment) while also ensuring that advances in treatment (such as oral treatment) are delivered as safely and effectively as more traditional treatment delivery methods. There is also a need to realize the benefits of shifting the model and setting of care from the clinic to the community, while ensuring the necessary quality and safety precautions are in place in all settings.

There will always be a need to improve the safety, effectiveness, equity and accessibility of treatment, while improving the experience of patients and their families and the sustainability of the system.

There is also a need to realize the benefits of shifting the model and setting of care from the clinic to the community, while ensuring the necessary quality and safety precautions are in place in all settings.

FIGURE 5 | New Systemic Treatment Cases in Ontario



Our Progress to Date

The first Regional Systemic Treatment Program Provincial Plan, introduced in 2009, built upon a series of individual regional plans. The plan identified a number of provincial strategies that supported the regions in areas of chemotherapy quality standards, planning, funding, and health human resources to meet the increasing demand for ambulatory systemic treatment in Ontario (see Appendix A for the main recommendations from the 2009 RSTP Provincial Plan). Since the release, there have been a number of improvements in the safety, delivery, access, and quality of systemic treatment across Ontario. Progress can be seen in the following areas:

- Making Strides in Chemotherapy Safety and Quality Standards
- Progress in Service and Health Human Resource Planning
- Funding for the Future

For more detailed highlights of our progress, please see Appendix B.

The Regional Systemic Treatment Program within Planning and Regional Programs as well as the Systemic Treatment Program within Clinical Programs and Quality Initiatives have worked closely together to support implementation of the plan while also identifying gaps for further improvement. The recommendations from the first plan have now been implemented to the fullest extent possible. There is once again an opportunity to review the priorities laid out in the first plan to identify key successes and persisting quality gaps, and to ultimately help shape and develop a new set of recommendations to guide the delivery of high-quality systemic treatment across the province.

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Next Steps: About this Plan

Paving the way for the next 5 years of systemic treatment

Quality Person-Centred Systemic Treatment in Ontario: Systemic Treatment Provincial Plan 2014-2019 builds on the demonstrated progress achieved under the first plan. While this plan is ambitious, it is also practical, setting out a roadmap for the delivery of systemic treatment across the province for the next five years.

The 2014-2019 Systemic Treatment Provincial Plan

The creation of a new plan has allowed CCO and regional partners to collectively reflect on past successes, challenges and opportunities to drive forward the agenda for high-quality systemic treatment in Ontario. This plan refocuses provincial efforts to ensure that they are relevant to the changing clinical landscape. The five-year implementation effort will result in impactful changes in key priorities, with a predetermined evaluation framework and measurable targets. Furthermore, the plan will also be an important tool for regions in their planning efforts over the next five years and beyond.

This plan is intended to ensure that improving the quality of care and experience of patients and family members throughout the treatment process is a leading priority. Therefore, embedded throughout this plan is a focus on person-centred care. This ensures that patients and family members are at the core of all efforts described within the strategic priorities.

Building the plan

This plan was created through extensive consultation and collaboration with clinicians, administrators, regional partners, and patients and families. Working groups aligned with the strategic priorities were formed and met over the course of several months to develop the recommendations. To ensure alignment between the working group recommendations and cohesion across topics, an internal project team was established and met regularly. Clinical and administrative leadership were also engaged throughout the planning process to ensure that relevant, achievable and measurable goals and recommendations were developed. In addition, patients and family members were involved during the entire process through inclusion in working groups, and participated in the review process to ensure the plan is focused on the person and their family. More than 150 stakeholders were involved throughout the planning process. To ensure an integrated approach, the development of recommendations was done in alignment with CCO corporate strategy goals and the next Ontario Cancer Plan (OCP IV).

To develop the recommendations, working groups applied the following guiding principles:

Structure of the Plan



Guiding Principles for Recommendation Development

- Can the recommendation be achieved by 2019?
- Is it implementable?
- Is the achievement of the recommendation measurable?
- Does the recommendation enable the objectives of the plan?
 - Does it enable safe delivery of systemic treatment?
 - Does it enable high-quality systemic treatment?
 - Does it enable access to systemic treatment?
- Does the recommendation support person-centered care?
- Does the recommendation enable the greatest benefit for patients and the cancer system?
- Does the recommendation leverage the use of technology (where appropriate)?
- Is the recommendation aligned with OCP IV goals, as well as broader system goals?

This plan is guided by two overarching goals:


- Extend the Quality and Safety Agenda
- Strengthen and Enable Care Models

To help us realize these goals, 9 strategic priorities have been developed for 2014-2019:

1. Extend the quality and safety focus from parenteral to oral chemotherapy
2. Improve emergency room utilization through enhanced toxicity management
3. Ensure consistency in access and quality of chemotherapy in the Home
4. Ensure standardization within community pharmacies
5. Expand the system's ability to monitor and evaluate
6. Enhance coordination and communication to improve person-centred care
7. Enable new models of care
8. Strengthen regional capacity
9. Develop and implement patient based funding model



Strategic Priorities



Strategic priorities will be addressed through targeted initiatives over the duration of the plan. Yearly progress on the initiatives as well as a summary of the next year's activities will be included within an annual Systemic Treatment Operating Plan. In all things we do, we will take a collaborative approach with our partner programs at CCO and external stakeholders.

While the initiatives that enable each strategic priority are unique, two overarching themes were identified throughout the development process which cut across various priority areas: education for patients and providers and standardization of care models and practices. As such, there will be an emphasis placed on ensuring synergy across initiatives that touch on these themes.

1

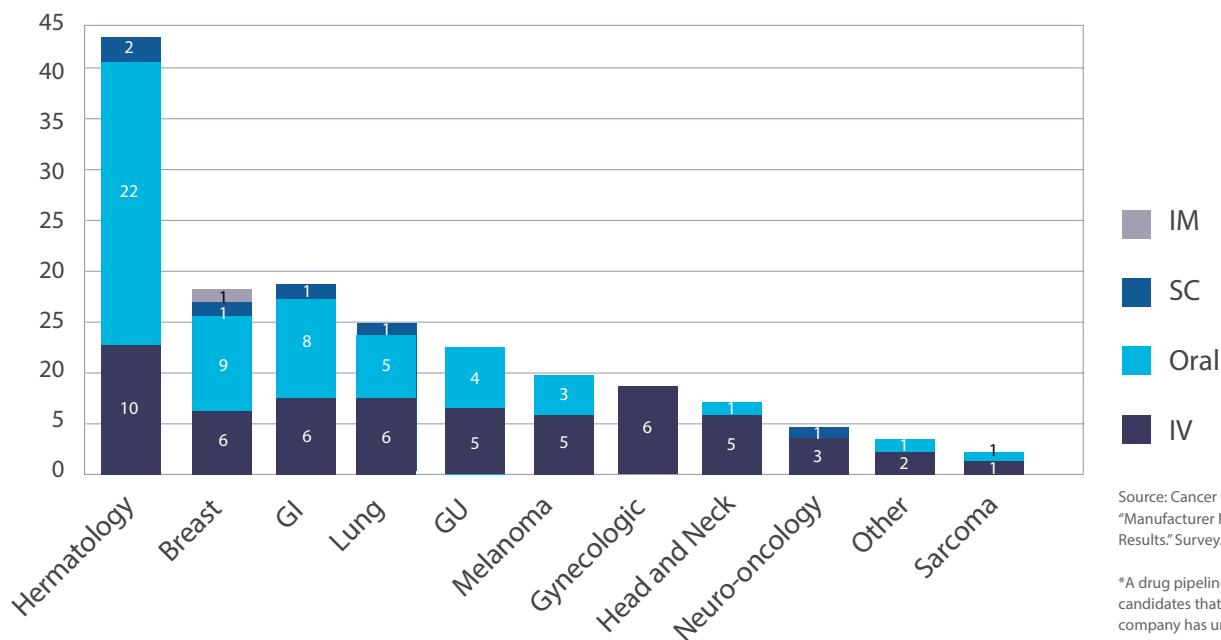
STRATEGIC PRIORITY 1.0

Extend the quality and safety focus from parenteral to oral chemotherapy

The use of oral chemotherapy medications has grown in recent years and will continue to increase. It is estimated that 46 percent of emergent cancer therapies will be oral¹ (see Figure 6 for pipeline drugs by disease site). Quality and safety guidelines and standards, such as those in place for the delivery of intravenous chemotherapy in Ontario, are less well defined for the delivery of oral systemic therapy. In 2012, CCO undertook an environmental scan of oral chemotherapy practices at Ontario cancer centres, focusing on issues related to medication prescription and dispensing, approaches to patient education, and strategies implemented to promote adherence to therapy. There was significant variation in approach across the province (see Figure 7 for the pathway for delivery of oral chemotherapy), demonstrating the need for greater standardization in all of these areas and better education for patients and family members.

The oral chemotherapy strategic priority aims to standardize prescribing practices, develop tools and strategies to enable assessment of patient adherence to treatment, and promote the availability of high-quality, standardized educational materials for patients and family members. The implementation of these recommendations will provide patients on oral chemotherapy with safer, high-quality care across the province.

FIGURE 6 | Pipeline Drugs by Disease Site and Route of Administration

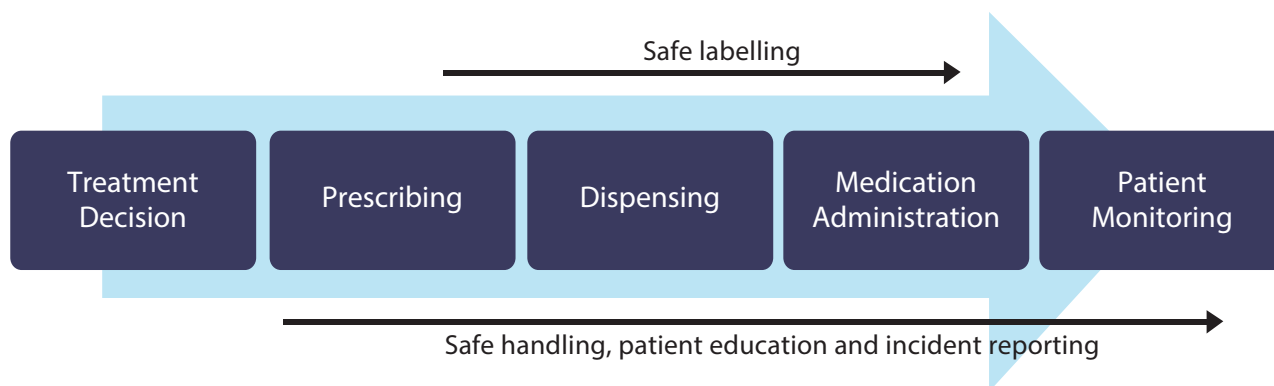


Source: Cancer Care Ontario, "Manufacturer Pipeline Survey Results." Survey, July 2013

*A drug pipeline is the set of drug candidates that a pharmaceutical company has under discovery or development at any given point in time.

¹ 2014 Pan-Canadian Oncology Review

Figure 7: Pathway for the Delivery of Oral Chemotherapy



1.1 Prescribing


By 2019, all patients will receive a prescription in a standardized electronic or pre-printed order (PPO).

- CCO, in partnership with the regions, will identify the key elements which should be included in an oral chemotherapy prescription. These standards will inform and align with national recommendations being developed by the Canadian Association of Provincial Cancer Agencies (CAPCA).
- CCO will identify opportunities to have PPOs readily accessible for each evidence-informed regimen.
- CCO will identify opportunities to improve the capability of the Oncology Patient Information System (OPIS) to support oral chemotherapy orders. Additionally, CCO will work with other Computerized Prescriber Order Entry (CPOE) vendors on similar enhancements.
- CCO will explore opportunities to use information technology as a means to improve safety of prescribing (e.g. e-prescribing, drug interactions).

1.2 Monitoring and Adherence

By 2019, all patients on oral chemotherapy will receive an individualized, proactive monitoring plan to enable regular assessment of patient adherence and monitoring, and drug interactions with other substances, for side effects and toxicity.

- Best Possible Medication History (BPMH) will be conducted at each initial consult as well as change of systemic treatment regimen.
- Regions will ensure that at each dose modification, or as otherwise needed, the monitoring plan will be reassessed and modified.
- CCO, in partnership with the regions, will assess and endorse validated tools to support adherence to treatment, such as:
 - Patient calendars
 - Call-back programs
 - Electronic tools
 - Tools to assess risk factors/ risk levels



46%
of emergent cancer therapies is estimated to be oral

“My cancer prognosis requires me to undergo treatment for the rest of my life so I am encouraged that advances happening right now in the healthcare system will result in a vastly improved experience. These advances will afford the opportunity for some patients to take their medication as an oral prescription in their own home. The reduction in traveling to a treatment center and allowing for a more normal lifestyle will be an important step to improving my treatment plan. Patients selected for self-medication will be accepting a heightened responsibility for their own care so changes in systems and programs that prescribe and track dosing adherence will be required, universal standards of support for patients, clinicians, pharmacists and community care health providers will need to be educated in how to provide service to oral chemo patients.”

Andrew C., Patient and Family Advisor

1.3 Education

By 2019, patients and families will experience high-quality education with consistent messaging on the safe handling, storage, administration, adherence, and disposal of oral anti-cancer medication.

- CCO, in partnership with the regions, will identify, assess and endorse existing validated tools and key components of oral chemotherapy education.
- Regions will employ validated tools, and have a plan in place for identifying who provides the education, as well as when and how frequently it is provided.
- Regions will have defined processes for measuring patients’ and/or caregivers’ comprehension of education. CCO will measure implementation and effectiveness of the education and tools provided.

“There is no doubt, orals are here to stay. They are forever changing the oncology landscape, primarily in how we care for our patients. Now patients go home with pills in their pockets and take their chemo medications without our supervision. Monitoring for both toxicity and adherence takes center stage. Our goal should be to reach out to every patient receiving oral treatment and offer both initial education and timely follow up.”

Biljana Spirovski, Senior Oncology Pharmacist, Humber River Regional Hospital

2

STRATEGIC PRIORITY 2.0

Reduce emergency room utilization through enhanced toxicity management

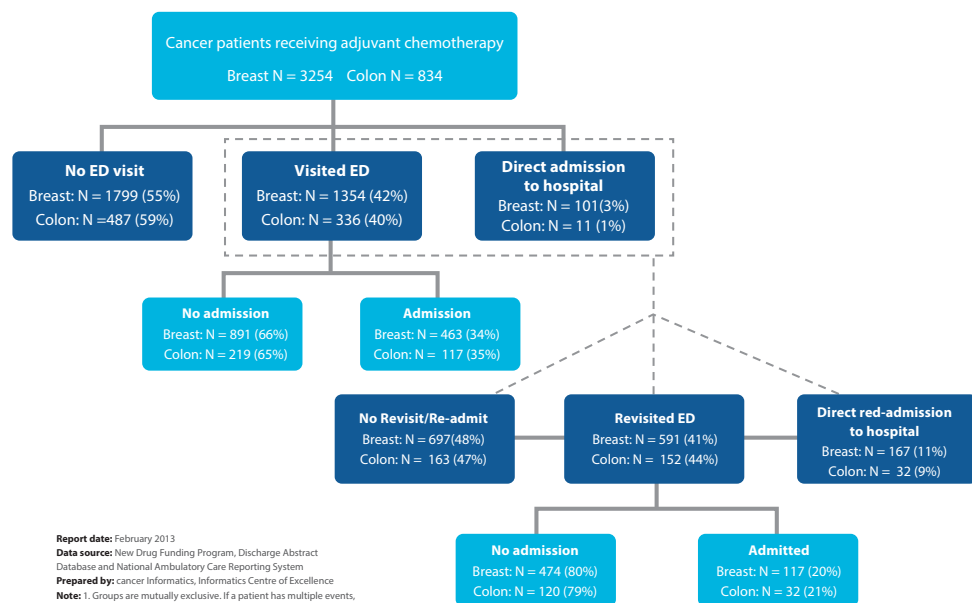
Almost half of all colon cancer and breast cancer patients who receive adjuvant chemotherapy regimens visit the emergency department or are admitted to hospital at least once within four weeks of receiving chemotherapy, and about half of those patients visit a second or third time² (Figure 8). For most of these patients, this is because of side effects from treatment: neutropenia, infection or fever. This result underscores the difficulty in managing side effects. A lack of preparation and alternative strategies for dealing with treatment toxicity magnifies the problem and results in added use of emergency departments and inpatient beds. Many of these drug-related side effects may be predictable and should be taken into account in setting individual treatment plans and in planning appropriate system resourcing to care for these patients during treatment (see Figure 9 for an example of a patient information sheet).

Proactive toxicity assessment and management with point of care decision support are possible solutions to decreasing patients' use of acute care facilities, while ensuring patient access to appropriate, timely and quality care. Other opportunities to improve the management of treatment toxicity include the need to improve real-time communication between care providers and the need to ensure patients have access to care, information and resources at any time of day.

Figure 8: Unplanned Hospital Visits after Adjuvant Chemotherapy

Unplanned Hospital Visits after Adjuvant Chemotherapy

Percentage of Stage I/II/III breast cancer and Stage III colon cancer patients receiving NDFP drugs who visit the hospital for acute care during a course of treatment, Ontario, 2011




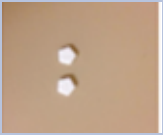

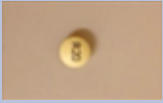



Report date: February 2013
Data source: New Drug Funding Program, Discharge Abstract Database and National Ambulatory Care Reporting System
Prepared by: cancer Informatics, Informatics Centre of Excellence
Note: 1. Groups are mutually exclusive. If a patient has multiple events, they are assigned to only one, in the following order:
 1) Admission through ED Visit
 2) ER Visit
 3) Direct Admission

² http://www.csqi.on.ca/ptjourney/treatment/visits_after_chemo/

Figure 9: Example of a Patient Education Tool – Patient Information Sheet

Sample Patient Information Sheet

| Medication | Picture | Frequency | When do I repeat |
|---------------------------------|---|--|--|
| Melphalan (Alkeran*) |  | Take ____ pills once daily x 4 days | Every six weeks |
| Prednisone |  | One in the morning and one in the afternoon around 4pm every day for 4 days | Every six weeks |
| Bortezomib (Velcade*) |  | Twice a week, either Monday/Thursday or Tuesday/Friday in the chemotherapy suite | Two weeks in a row and then one week off. Continues for 56 weeks |
| Dexamethasone Take 2 tablets |  | Take 2 tabs only when not taking prednisone. Take 1 hours before injection | With every injection of Bortezomib (Velcade) |
| Acyclovir *** |  | Take 400mg twice/day | Continue for 54 weeks (completion of chemotherapy)* |
| Rabeprazole (Parlet*) |  | Once daily x 4 | Take on days of prednisone, every 6 weeks |
| Prochlorperazine |  | Every 4 hours as needed | As needed only for nausea |

Source: Erie St. Clair Regional Cancer Program

Marla experienced a rare side effect to her chemotherapy treatment. “My side effect was missed because it was rare and I was in the emergency room without consultation of my oncologist.” One of the biggest lessons from Marla’s perspective is that providers need to listen to the patient. “It shouldn’t matter what day of the week or time of the night, when someone has a toxicity event, they should be able to see the appropriate care provider to determine the problem and get the correct treatment.”

Marla N., Patient and Family Advisor

2.1 Best Practices

By 2019, patients receiving systemic therapy will experience a standardized and proactive approach for preventing and managing treatment-related toxicity.

- CCO, in partnership with the regions, will establish current practices within the cancer system and elsewhere (emergency department (ED), primary care) for toxicity prevention and management.
- CCO, in partnership with the regions, will develop and share algorithms and/or best practices to inform the management of chemotherapy-related toxicities.
- Algorithms and/or best practices will be disseminated to regions, ED, and primary care with a Knowledge Transfer and Exchange (KTE) strategy to support uptake.
- CCO, in partnership with the regions, will explore opportunities for new approaches to improve patient access to providers when needed.

2.2 Roles and Communication

By 2019, patients receiving systemic therapy will experience safe, high-quality care focusing on toxicity prevention and management through timely and effective communication within the health care team.

- CCO will partner with community pharmacists, primary care providers, ED staff, and hospitals to explore and identify tools and systems to support improved communication for the circle of care.

- CCO, in partnership with the regions, will evaluate the most effective tools.
- Regional projects will be followed by an evaluation and a strategy for provincial implementation.
- Where possible, technology will be leveraged for tools, to maximize efficiencies and accessibility for patients.
- Patients will be empowered to self-manage toxicities, when appropriate, through optimizing education and decision support.

2.3 Leveraging Technology

By 2019, patients receiving systemic therapy will be supported by effective, easy to use technology solutions to enable proactive toxicity prevention and management.

- CCO will conduct an environmental scan to identify and assess existing technology solutions that can be applied to toxicity prevention and management.
- CCO, in partnership with the regions, will provide recommendations regarding which solutions to implement, which will support early intervention for symptom management.
- CCO, in partnership with the regions, will explore opportunities to recommend existing solutions, or to support development of new solutions.

3

STRATEGIC PRIORITY 3.0

Ensure consistency in access and quality of chemotherapy delivered in the home

In order to meet patient needs, it is expected that there will be an increased opportunity for chemotherapy treatment to be delivered in a patient's home rather than a hospital setting. This shift has already been witnessed in other jurisdictions as well as in substantial parts of Ontario. However, the home chemotherapy models that have been implemented within the province lack standardization, both intra- and inter-regionally, leading to concerns about the safety, quality and accessibility of care. A current state assessment undertaken by CCO demonstrated that there are a variety of different programs and frameworks that have been implemented across the province. This variation is evident in areas of patient choice and access, patient experience, education and support and community provider education and training. Additionally, results from the 2013 Ambulatory Oncology Patient Satisfaction Survey (AOPSS) show that while there are positive scores across the regions around information to manage care at home and home medications explained understandably, there remain opportunities to improve the safety and quality of chemotherapy in the home (Figure 10).

This strategic priority is aimed at creating and implementing a standardized home care model which will enable the safe delivery of chemotherapy in the home for patients, their families, and community providers. The implementation of these recommendations will enable a high-quality, safe and integrated approach for chemotherapy administration, improving the delivery model, potentially reducing patient costs and inconveniences, such as travel, and improving the overall patient experience.

3.1 Patient Choice and Access

By 2019, all patients eligible to receive continuous infusion of chemotherapy treatment in the home or community will be provided with the option of setting.

- CCO with RCPs, CCACs and other home/community providers will develop eligibility criteria for chemotherapy in the home.
- RCPs will work with CCACs, home care providers and partner hospitals to develop, implement and evaluate a regional framework for delivery of patient care in the home/community.

3.2 Patient Experience, Education and Support

By 2019, all patients and families will be engaged and supported throughout their chemotherapy-at-home experience, ensuring care is coordinated and patients have access to education and support.

- CCO, CCACs, RCPs and other providers will define a standard care plan to support patients, families, and providers in transitions and care in the community.

- CCO, CCACs, RCPs, and other providers will develop standard patient and family member education to be implemented.
- RCPs, CCACs and providers will ensure patients have access to information and appropriate coordinated care 24/7.

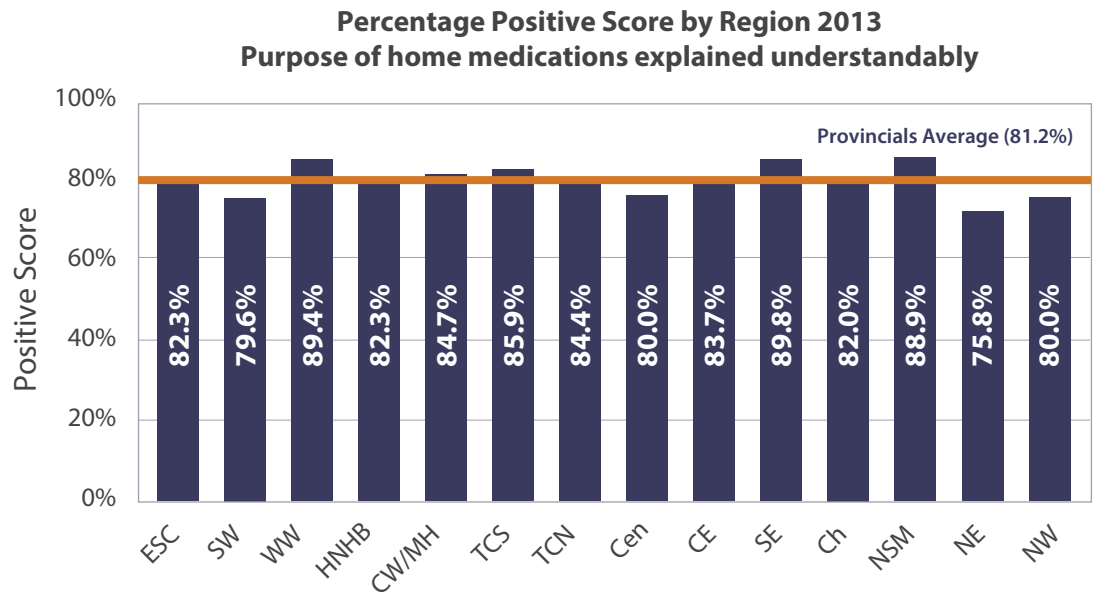
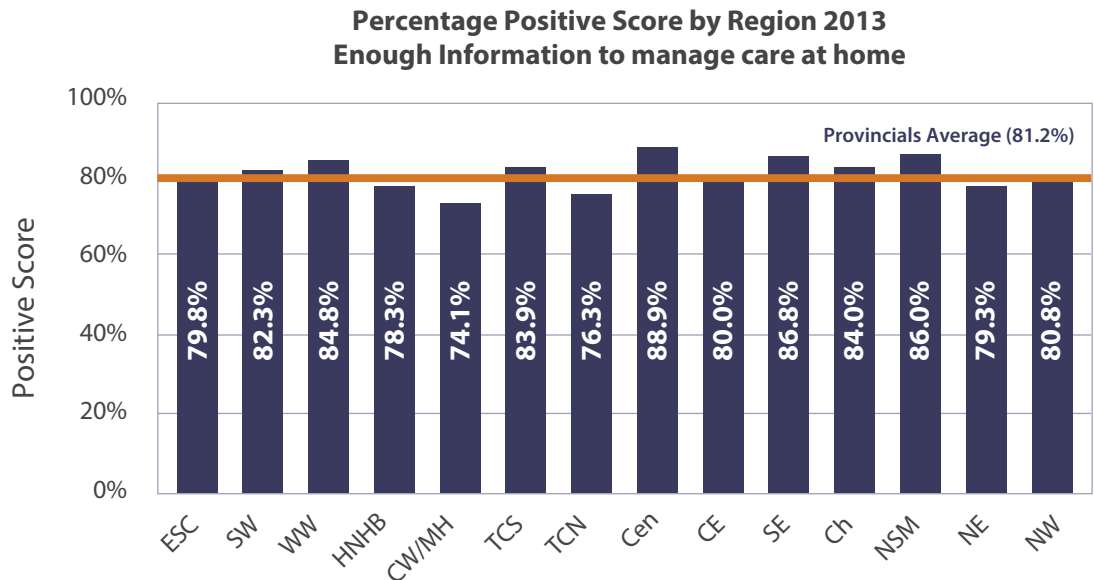
3.3 Education and Training for Providers

By 2019, patients will receive high quality, safe care as a result of standardized training and education of community providers delivering chemotherapy-at-home.

- All community nurses providing care to patients receiving chemotherapy in their home or the community will complete provincially standardized de Souza chemotherapy and biotherapy courses.*
- CCACs and home care providers will ensure all community nurses providing care to patients receiving chemotherapy in the home/community complete and are up to date on provincially

*The de Souza Institute's 'Provincial Standardized Chemotherapy and Biotherapy Course' (PSCB) ensures that every registered nurse receives standardized educational content that is evidence-based. This course was developed to ensure the consistency, credibility and comprehensiveness of the education being offered to nurses. The de Souza institute engaged CCO along every step of the development of this course, and has embedded all relevant CCO/PEBC guidelines into the course curriculum.

FIGURE 10 | AOPSS Results 2013



"Having the option of chemo in the home can offer benefits to patients and their families; however you can't forget that you are receiving a very strong and potentially toxic medication in your home. We need to ensure a quality of care that is equal to the care you would receive in a clinic setting – so ensure that patients and providers have the appropriate information and that safety precautions are in place to minimize risks to patients, their families, and providers who come into the home."

Catherine C., Patient and Family Advisor

4

STRATEGIC PRIORITY 4.0

Ensure standardization of chemotherapy dispensing practices within community pharmacies

The growth in oral chemotherapy medications has been reflected in the increase in dispensing of these medications in the community pharmacy setting. While the increased availability and use of oral chemotherapy medications has many positive benefits from a patient perspective, the rapid growth has resulted in an environment where there are few formal policies in place to ensure the safety of patients as well as pharmacists outside of a hospital setting. Results of a pan-Canadian study showed that only 24 percent of surveyed pharmacists were familiar with the common doses of oral chemotherapy and only nine percent were comfortable with educating patients on chemotherapy medications.³ CCO's environmental scan of oral chemotherapy practices in Ontario also showed that there was a significant lack of communication between hospitals and community pharmacies where patients filled their prescriptions, and that generally no formalized process was in place to share information or communicate between settings. Together these findings highlight the need for greater standardization of practices and improvements in communication at the community pharmacy level in order to ensure patient and provider safety.

The aim of this strategic priority is to ensure safe dispensing through appropriate verification of prescriptions, standardization of dispensing practices, and improvement in communication between clinic and community pharmacies. Implementation of the recommendations will support safe and high-quality care in community pharmacies, with the goal of ultimately addressing the challenges that have been identified by CCO and other literature.

“Community pharmacists are an integral component of a patient’s circle of care and have a major opportunity to assist cancer patients in symptom management as well as pre and post chemotherapy management. It is imperative that the pharmacists in the community setting feel confident in their ability to answer questions within their scope and know what questions /situations warrant escalation to the Oncology team. The risk of not adopting these recommendations is that there will continue to be inconsistency in the information, training and support of community pharmacists which impacts the quality and safety of patients on oral chemotherapy. Furthermore, the standardization of discussing safe handling and storage of oral chemotherapy will decrease anxiety for patients and their caregivers.”

Nevina Kishun, Senior Manager, Shoppers Drug Mart Specialty Health Network and Community Pharmacist

³Abbott, Rick, et al. “Are community pharmacists equipped to ensure the safe use of oral anticancer therapy in the community setting? Results of a cross-country survey of community pharmacists in Canada.” *Journal of Oncology Pharmacy Practice* 0 (0) (2014): 1-11.

4.1 Prescription Verification

By 2019, patients will receive oral chemotherapy medications that have been reviewed for clinical appropriateness and dispensing accuracy by registered pharmacists.

- CCO will work with key stakeholders and partner organizations to facilitate the development of continuing education programs for pharmacists.
- CCO will engage key stakeholders and partner organizations to investigate the reimbursement of cognitive services⁴ related to oral chemotherapy.
- CCO will develop tools to facilitate verification of an oral chemotherapy prescription.

4.2 Quality and Standardization of Dispensing Practices

By 2019, patients will be able to access high-quality and standardized care when filling prescriptions at cancer centre and community pharmacies.

- CCO will work with key stakeholders and partner organizations to develop key standards for the safe labeling, handling, and disposal of oral chemotherapy.
- CCO, in partnership with the regions, will develop KTE strategies to ensure adoption of standards.

4.3 Continuity and Coordination of Care with Community Pharmacies

By 2019, patients will receive coordinated care between a cancer clinic and their partnering community pharmacy.

- CCO will investigate establishing a database to capture key information from community pharmacies, including:
 - Drugs being dispensed
 - What education is being provided to patients
- CCO, in partnership with the regions, will evaluate tools and systems that enhance communication between clinic and community pharmacies.
- CCO will explore tools and systems to enable community pharmacists to access key information at the point of care (e.g. lab values, diagnoses).
- Regions will work with partnering community pharmacists to develop a database of educational resources for patients.

Note: Any modifications or changes to the current distribution model (centralized, decentralized or a hybrid) is to be further informed by recommendations from the Take-Home Cancer Therapy Think Tank, its stakeholders, and any emerging planning activities.



⁴ Cognitive services is defined as all clinical services performed to ensure that the medication prescribed is indicated, effective, safe and convenient for the patient. This is different than the actual dispensing services provided in a pharmacy. Cognitive services may include confirming the appropriate indication and dose with the evidence and patient factors, checking for drug interactions and assessing for adherence.

5

STRATEGIC PRIORITY 5.0

Expand the system's ability to monitor and evaluate the quality of systemic treatment

The need for effective monitoring and evaluation across the cancer system is recognized as a key method of ensuring that the system remains high-performing, and care remains safe and of high-quality. Within systemic treatment, quality standards based on evidence-informed guidelines have been some of the main tools used to monitor and evaluate the quality of care being delivered to patients. Many guideline documents now exist which contain multiple recommendations, and it can be difficult for facilities to implement each of the proposed recommendations. To address this challenge, the identification and prioritization of a key set of standards and guidelines, which all centres will need to align with, will help to focus regional efforts, ultimately providing patients with a common standard of care which they will receive everywhere in the province. A new focus being targeted with this strategic priority is the delivery of chemotherapy in the home. Unlike the delivery of chemotherapy within hospitals, currently there is no standard approach to the delivery of chemotherapy in the home, yet there is a need for better standardization of equipment, team roles and responsibilities.

Further, as a cancer system, the ability to monitor and act on systemic treatment-related incidents is sub-optimal. The documentation, collation, and analysis of medication incidents and near misses will help to direct and focus regional efforts towards improving patient and provider safety. Ultimately, there is an opportunity to improve the culture of safety in the Ontario cancer system through increased incident reporting and dissemination.

5.1 Standardization

By 2019, the administration of chemotherapy for patients will be in accordance with priority quality standards based on evidence-informed guidelines.

- CCO, in partnership with the regions, will identify the priority standards that must be met by all facilities. Additionally, CCO will facilitate the process to identify gaps in the priority standards and identify strategies to address gaps.
- Regions will lead the implementation of the priority standards.
- CCO will develop a comprehensive measurement and concordance strategy. This includes the development of a multi-year roadmap for activities associated with priority standards and other guideline recommendations.
- The implementation of quality standards will be aligned with funding. Systemic treatment volume funding will be made available to all facilities that meet the priority standards.

5.2 Safety and Quality Standardization

By 2019, patients receiving chemotherapy in the home will receive standardized care across the province based on evidence-informed guidelines and protocols.

- CCO, CCACs, RCPs and other providers will develop standard protocols/guidelines and care paths for chemotherapy in the home.
 - Minimum standards for chemotherapy in the home equipment will be created if not across the province, then across regions to ensure continuity.
 - Team roles and responsibilities, and communication will be standardized.
- Regions will support provider adherence to guidelines including CCO safe handling guidelines.
- CCO and regional partners will design and implement a standard protocol for reporting on adverse events.
- CCO, CCACs and RCPs will identify a collective strategy/position statement for management of patients who require subcutaneous injections of chemotherapy.

5.3 Incident Reporting

By 2019, patients' medication incidents and near-misses will be reported through a recognized system to ensure patient safety within both systemic treatment hospitals and community pharmacies.

- CCO will investigate existing integrated incident reporting systems.
- CCO will investigate opportunities to enable reporting of medication related incidents in integrated incident reporting systems.
- Upon implementation and adoption of an integrated incident reporting system, CCO will work with key stakeholders to formulate a plan to analyze and disseminate relevant medication-related incidents (actual or potential) to end-users.



"Patients on chemotherapy live in a world that is mainly grey. The process usually involves loss: hair, weight, energy – you name it. You just aren't all there. If chemo is successful, you emerge into the light. When the cure seems worse than the disease, it's nice to know that everyone is paying attention. Monitoring should include the patient in an active way both in having input and in hearing the results."

Bob T., Patient and Family Advisor

7 *out of* **14**
regions are reporting to National System for Incident Reporting (NSIR) on chemotherapy-related incidents.



13 *out of* **14**
regions are reporting to NSIR on medication related incidents.

910 incidents are in NSIR from CCO regions

91 of these (10%) relate to medication related incidents

5 "reportable circumstance"

17 "near miss"

21 "none"

39 "mild"

9 "severe and death"

6

STRATEGIC PRIORITY 6.0

Enhance coordination of care and communication strategies to improve person-centred care

For many patients undergoing cancer treatment, the transition points between different phases of their care path and between different providers has been described as periods of great anxiety due to the lack of coordination and communication between the care team and the patient. These are gaps within the system which create barriers for seamless communication within the circle of care. In the area of systemic treatment, the transitions for patients undergoing combined modality treatment, as well as for patients transitioning from disease management to palliative care were identified as two scenarios for which there are significant opportunities for improvement.

CCO believes the patient should be actively involved in decision making and have choice throughout their care. Personalized care plans were identified as an important tool to facilitate the necessary conversations between patients and providers around treatment decisions and next steps.

Ultimately these recommendations aim to improve the experience of patients transitioning within the system, through improved navigational models, improved communication, and support for patient decision-making and patient choice.

6.1 Transitions and Coordination

By 2019, patients and families receiving combined modality treatment (concurrent chemotherapy and radiation) as well as patients transitioning between disease management and palliative care will experience improvements in the communication and coordination of care to support their needs.

Concurrent chemo-radiation

- CCO will enable a number of regional projects to evaluate models of patient navigation (navigators and/or tools) to support patients receiving concurrent chemo-radiation.

Disease management to palliative care - Improving patient transitions

- CCO will identify gaps and opportunities for improving transition from disease management to palliative care by sponsoring a number of regional improvement projects, such as experience-based design initiatives.

Concurrent chemo-radiation patients and patients transitioning from disease management to palliative care - Tools to support communication within the circle of care

- CCO will explore tools and systems to support improved communication across providers within a circle of care (medical oncologists, radiation oncologists, palliative oncologists, family physicians, other health care providers).
 - If tools are identified, CCO will implement and evaluate the tools.
 - If tools are not available, CCO will develop, implement, and evaluate new tools.



69% surveyed patients felt that doctors listened carefully

44% surveyed patients indicated that they were informed of their after treatment care plan



6.2 Decision Making

By 2019, patients will receive the right information at the right time in order to support patient decision making and patient choice.

- All patients will receive a personalized care plan at the start of systemic treatment and a revised plan at transition points. The care plan will be made available to patients in an electronic and paper format and will be available to be shared with other providers within the circle of care at the patient's request.
 - CCO, in partnership with patient representatives, will define the requirements that should be included within the care plan and evaluate adherence to the requirements.
 - Regions will implement processes/initiatives to ensure that care plans are made available at the start of treatment and at transition points which align with the defined requirements.

“I think a Personalized Care Plan is essential to supporting patients through their cancer care. It serves to keep the patient, family, and the health care providers informed of key issues thus enabling improved communication and care.”

Janet D., Patient and Family Advisor

7

STRATEGIC PRIORITY 7.0

Enable new models of care to improve sustainability

As the demand for healthcare resources continues to grow, there is a need to reconstruct the way in which we deliver care and use health human resources. In its current state, the system is not sustainable; innovative models are needed to ensure the sustainability of high-quality care into the future. Current care models are at times very complex, spanning multiple providers, and settings, supporting the need to explore new models of care (Figure 11). Within this plan, three patient cohorts have been identified for the exploration of new models of care: patients on active systemic treatment, hospitalized inpatients, and complex hematology patients (acute leukemia and stem cell transplantation). New care models will address provider roles, communication strategies and innovative technologies as a way of improving and sustaining access and quality of care. Our goal is to enable new models of care that ensure patients get the right care, at the right time, with the right team, in the right setting.

7.1 Patients on Active Treatment

By 2019, patients on active treatment will experience improvements in access and quality of care. This will be accomplished through the exploration and implementation of care models related to: provider roles, opportunities for transitioning patients from outpatient clinic to out-of-hospital settings, communication strategies and technologies.

- CCO will synthesize the work completed to-date with regards to the current state and opportunities assessment regarding models of care for patients on active treatment. This will result in the identification of a number of models or recommendations.
- CCO will support regions in the implementation of projects in the recommended areas including consistent evaluation and provincial strategies for implementation.

7.2 Inpatients

By 2019, patients that are receiving treatment in an inpatient setting will experience improvements in access and quality of care through the exploration and implementation of care models related to: provider roles, opportunities for transitioning patients from inpatient to outpatient settings, communication strategies and technologies.

- CCO will conduct a current state assessment of inpatient care models that are currently in place across the province, including physician models of care.
- CCO, in partnership with the regions, will identify opportunities for sharing best practices across inpatient care models.
- CCO, in partnership with the regions, will identify opportunities to transition patients to an outpatient setting.

7.3 Complex Hematology Patients

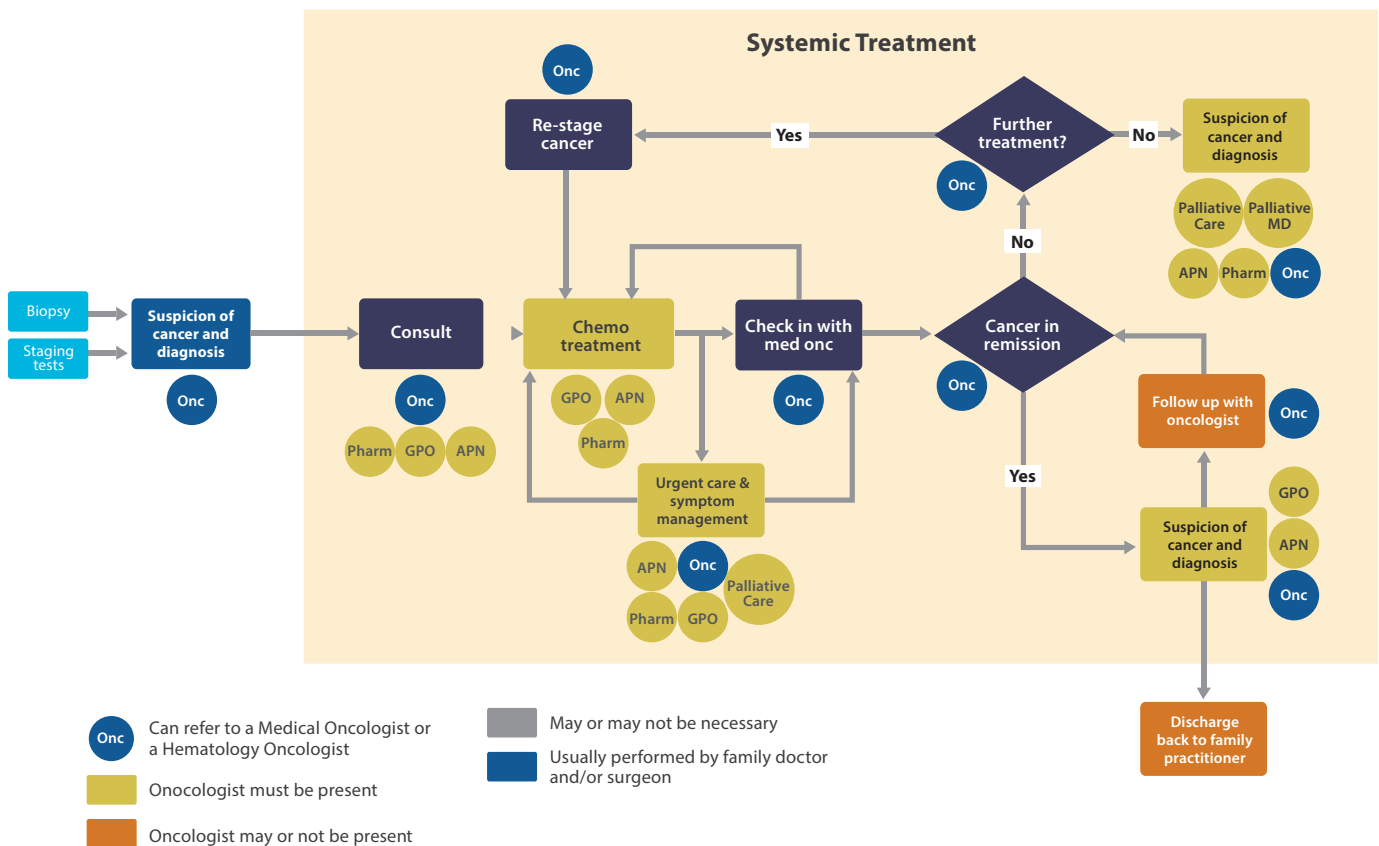
By 2019, patients that are receiving complex hematology care will experience improvements in access and quality of care through the exploration and implementation of care models related to: provider roles, opportunities for transitioning patients from inpatient to outpatient to out of hospital settings, communication strategies and technologies.

- CCO will conduct a current state assessment of complex hematology care models that are currently in place across the province.
- CCO will coordinate a community of practice or collaborative for facilities with a complex hematology program to identify and implement improvement in care models based on the current state assessment and identified opportunities.

“Because systemic treatment is something that is delivered and managed by a team rather than an individual - and patients benefit from a team – we need to be very creative in what the team does and how they work together. Patients need to be able to access the right professionals at the right time.”

Janice Stewart, Director, Operations and Regional Planning, Toronto Central (North) Regional Cancer Program

FIGURE 11 | Systemic Treatment Visits by Provider



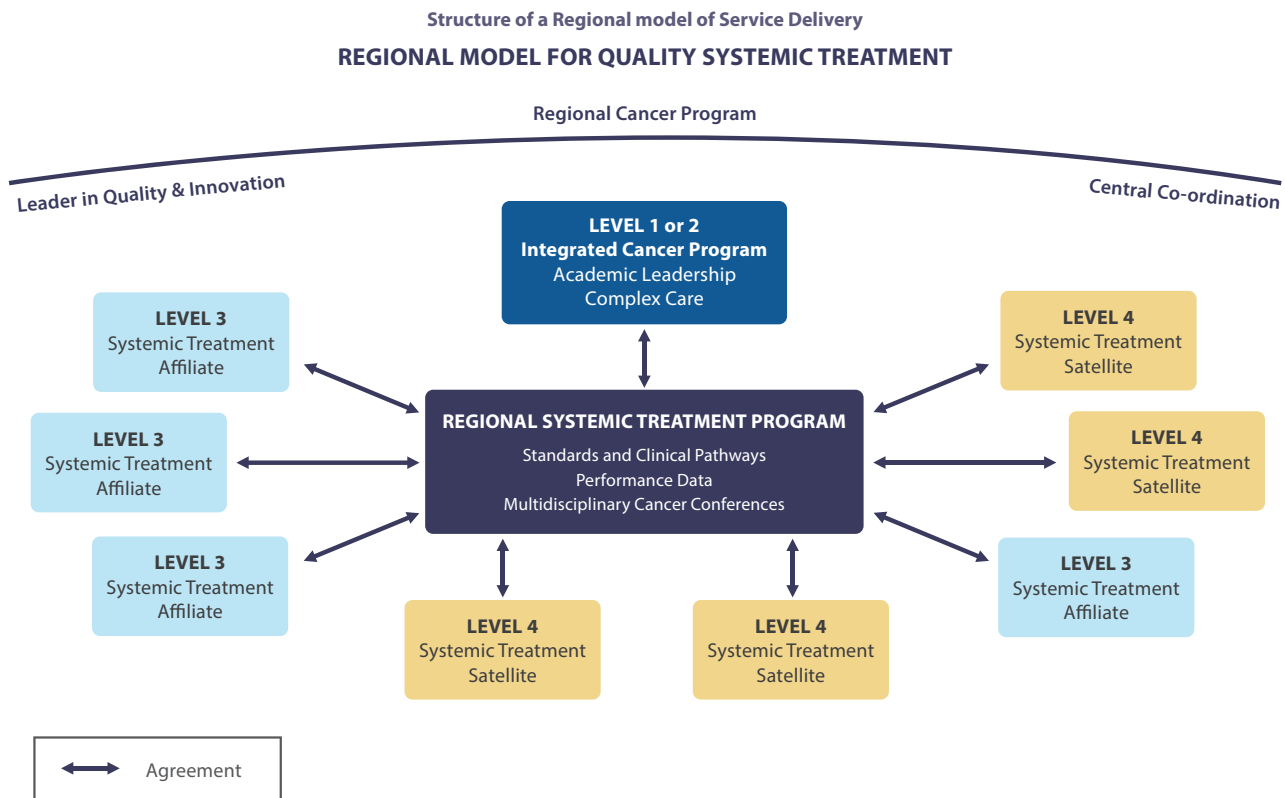
8

STRATEGIC PRIORITY 8.0

Strengthen regional capacity to optimize regionally-appropriate delivery of care

The delivery of safe, high-quality systemic treatment is supported in part through a regional framework and model which enables the effective delivery of care (Figure 12). As the demand for systemic treatment services grows, we must look at ways in which regional capacity can be strengthened and front line providers can be supported with tools and education that align with the provincial quality agenda. Looking forward, there is a need to continue to build upon existing frameworks to support regionally-optimized and appropriate delivery of systemic treatment.

FIGURE 12 | Structure of a Regional Model of Service Delivery



“The focus on strengthening regional capacity provides the opportunity to bring together providers within and among the regions to work with enthusiasm toward our common goal of producing the best cancer system in the world with the best patient care.”

Maureen Trudeau, Head, Division of Medical Oncology & Hematology, Sunnybrook Health Sciences Centre

8.1 Regional Structures

By 2019, there will be standardized governance frameworks across regions that support optimized regionally-appropriate delivery of systemic treatment.

- CCO will ensure that all funding agreements and supplementary education with facilities include a statement about participating within the regional program.
- CCO will enable the standardization of nursing and pharmacy leadership functions by assessing current nursing/pharmacy lead roles across regions and recommending standardized role statements.
- CCO will advocate for funding for a Regional Quality Improvement (QI) Coordinator for each region to support QI work and regional initiatives under the purview of the Regional Quality lead.
- CCO, in partnership with the regions, will develop a framework for the elements that should be considered as part of a regional governance model (e.g. quality, safety, access, funding etc.) and recommend structures that should be considered to support the model (e.g. steering committees, quality committees, etc.).

8.2 Provider Education

By 2019, tools and processes that support front line staff in achieving the provincial quality agenda will be developed and implemented.

Examples of tools which will be developed and implemented include:

- Orientation programs for new leaders and healthcare providers within the system.
- Ongoing education and “briefs” around key knowledge areas (e.g. Provincial Drug Reimbursement Programs (PDRP), using iPort, de Souza Institute).
- Development of applications or tools that enable improved knowledge and information sharing.
- CCO will develop and implement a strategy to improve the quality of care through alignment of information systems that currently support clinical decisions at the point of care.
- CCO will develop and implement a strategy to support regions and facilities with data access and requests in order to support regional improvement efforts.

9

STRATEGIC PRIORITY 9.0

Develop and implement patient-based funding model

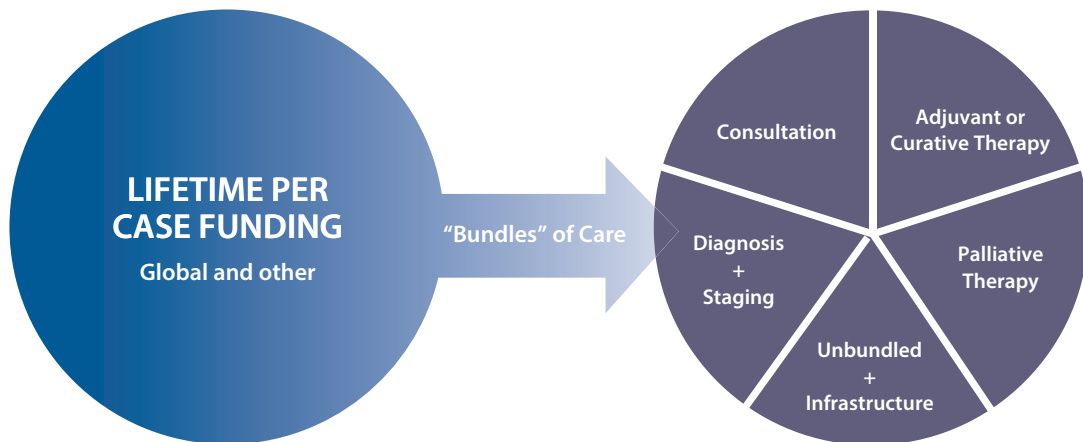
The need to develop and implement a new funding model was identified in the previous Regional Systemic Treatment Program Provincial Plan released in 2009. Effective April 1st, 2014, a patient based approach to funding for systemic treatment was implemented across the province. This was developed as a Quality Based Procedure in alignment with the Ministry of Health and Long-Term Care’s (MOHLTC) direction for Health System Funding Reform (HSFR).

The systemic treatment funding model (STFM) applies to all ambulatory activities supporting direct patient care at the 77 systemic treatment facilities across the province. The goals of this episode-based funding model are to ensure that funding better follows the patient, to reduce inequities in funding, and to tie funding to evidence-informed practice (Figure 13).

The STFM continues to be refined using a collaborative multi-stakeholder approach. The governing Advisory Committee consists of clinical and administrative experts from all regions of the province. The Advisory Committee is supported by a number of subgroups, established to develop recommendations for specific complex issues.

Continuous monitoring and evaluation of the model will identify where refinements are required and guide future development and expansion. Opportunities may include inpatient systemic treatment chemotherapy or chemotherapy in the home setting.

FIGURE 13 | Systemic Therapy Funding Model: Transition to Episode-Based Funding



“The cancer system is a live organism, and must continue to change to keep up with the changing needs of the population of Ontario. Only by devising a system that will follow the changing population using evidenced based guidelines, will we be able to ensure that the system can grow to support these needs.”

Caroline Hamm, Regional Quality Lead, Windsor Regional Hospital

9.1 Funding Model

By 2019, high-quality patient care will be enabled through a funding model which supports best possible patient outcomes.

- CCO will continue to refine the definition of what constitutes evidence-informed clinical practice within the systemic treatment funding model in order to ensure that each patient gets the right regimen or treatment at the right time.
- CCO will also undertake initiatives to align funding to quality of care and to provide the best benefit to patients receiving systemic therapy for the funding provided. CCO will refine the funding approach in order to ensure appropriate funding and benefit to patients for each episode of systemic treatment care while also enabling access to necessary services such as psychosocial oncology.
- CCO will expand the scope of the systemic treatment funding model in order to achieve high-quality patient care. This could include integrating access to palliative care, home care, inpatient treatment, lab and diagnostic imaging, and other priorities where required. Note: exact scope expansions are to be determined, in alignment with provincial CCO and MOHLTC HSFR priorities.
- CCO will monitor the model and adjust as necessary to ensure that funding is patient based. This includes ensuring that funding supports the decision for a patient to receive care in the community, where appropriate.



Evaluating our Progress

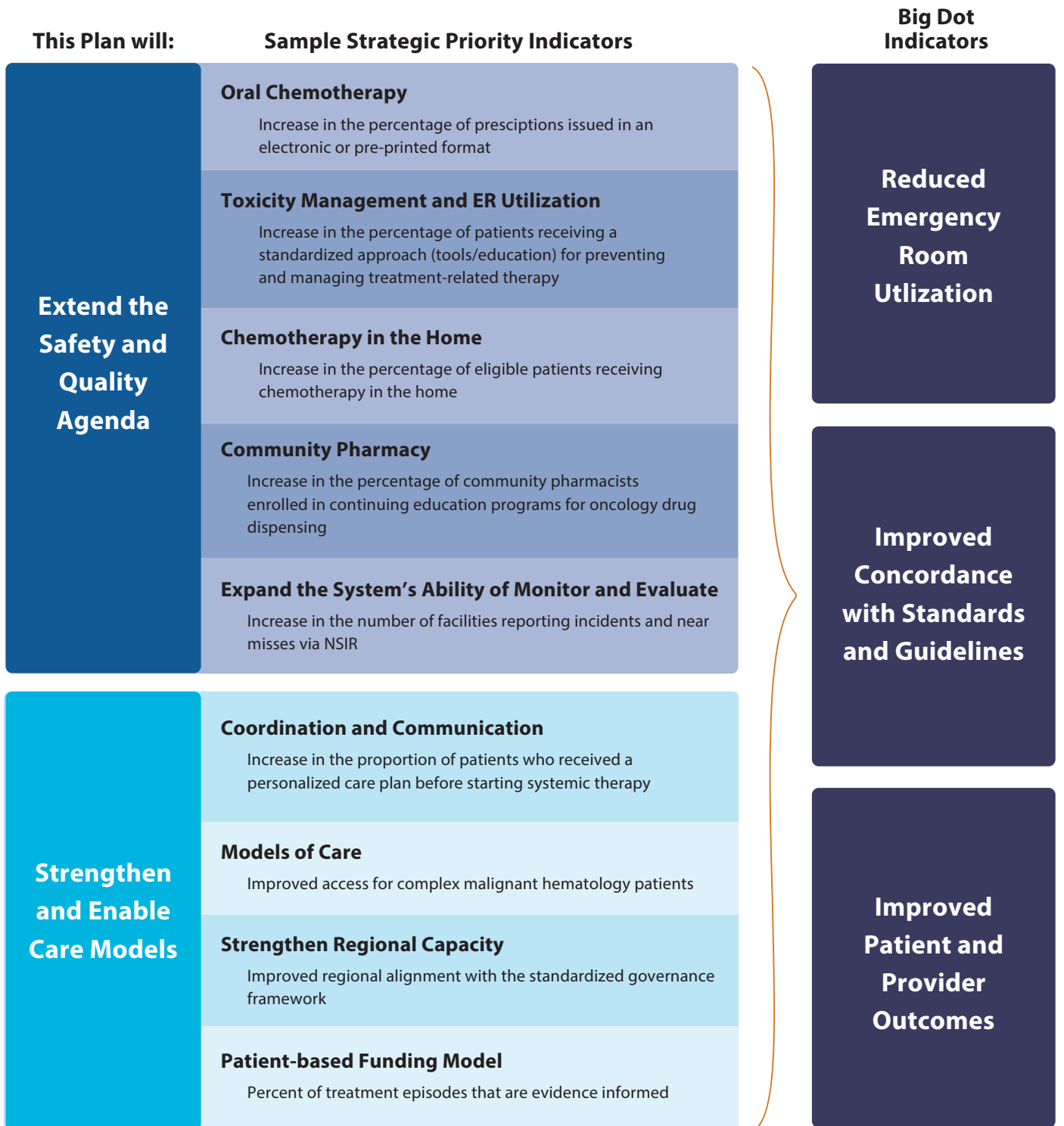
Quality Person-Centred Systemic Treatment in Ontario: Systemic Treatment Provincial Plan 2014 - 2019 aims to extend the quality and safety agenda, and strengthen and enable care models for all patients receiving chemotherapy in Ontario, in all settings. To support the recommendations laid out in this plan, select performance indicators will be used to track progress over the duration of the strategic plan.

The evaluation will include indicators specific to each of the identified strategic priorities, along with “Big Dots” which will reflect the success of the plan overall. The draft framework was developed with input from health care providers, administrators, as well as patients and family members from across the province. Although the evaluative framework has not been finalized, process and outcome indicators have been identified, with patient reported outcomes being integral to the measurement strategy.

The following diagram illustrates the overall goals of the plan, as well as examples of proposed indicators associated with each of the strategic priorities. The diagram also highlights the draft Big Dot Indicators of the plan that are less specific to the individual strategic priorities, but rather serve as measures of the success of the plan overall.



Evaluation Framework





Looking Forward

Quality Person-Centred Systemic Treatment in Ontario: Systemic Treatment Provincial Plan 2014-2019 sets out an ambitious agenda for progress. It builds on existing strengths, partnerships, and work that has been completed through the first Provincial Plan to improve the safety, quality and accessibility of systemic treatment in Ontario. This plan is framed by the overarching goals of extending the quality and safety agenda and strengthening and enabling care models with an emphasis on person-centred care. It is aligned with the goals of the next Ontario Cancer Plan (2015 – 2019), as well as broad CCO organizational strategy.



Implementation of this plan will require a collective effort on the part of all partners – regional and provincial stakeholders, health care providers, patients, caregivers and their families. Together we will address gaps that remain in quality of care, access and safety, and we will ensure that clinical evidence drives our efforts.

An annual operating plan will be developed that will outline specific activities to address each objective and deliver on the priorities. It will include the indicators to measure performance and progress each year, in order to ensure accountability.

Together we will build on our success to drive quality, safety and accessibility of systemic treatment across Ontario.



Acknowledgements

We wish to acknowledge the many individuals who contributed to the development of this plan. In particular, we would like to thank the patient and family advisors, clinicians, regional partners, and administrators who were part of the working groups and whose input helped shape the recommendations within this plan.

We would also like to thank all of the groups who provided strategic direction and advice throughout the development of the plan, including the Systemic Treatment Program Committee, Systemic Treatment Provincial Leadership Team, Patient and Family Advisory Council, Clinical Council, Provincial Leadership Council and Executive Sponsors.

It is through the expertise of individuals from across the province that *Quality Person-Centered Systemic Treatment in Ontario* has become a reality, and has helped us to set an ambitious agenda for the next five years.



Appendices

Appendix A:

Main Recommendations from 2009 RSTP Provincial Plan

1. Each region will implement its plan, and CCO will support coordinated implementation to address the priority standards.
2. CCO, in collaboration with the regions, will identify areas of improvement that optimize the efficiency of system and service delivery.
3. CCO will establish mechanisms to ensure standardization of quality and safety.
4. CCO will expand measurement and reporting of systemic treatment delivery across the province.
5. The MOHLTC should provide funding for additional medical oncology positions.
5b. CCO will research and propose interdisciplinary team-based configurations of health human resources to support high-quality systemic treatment, making the best use of health human resources to deliver appropriate levels of service.
6. The MOHLTC should provide funding to CCO to support the growth of systemic treatment in non-cancer centre hospitals and to monitor volumes, wait times and quality.
7. CCO will develop and implement a coordinated approach to funding systemic treatment that includes funding hospitals based on resource intensity.

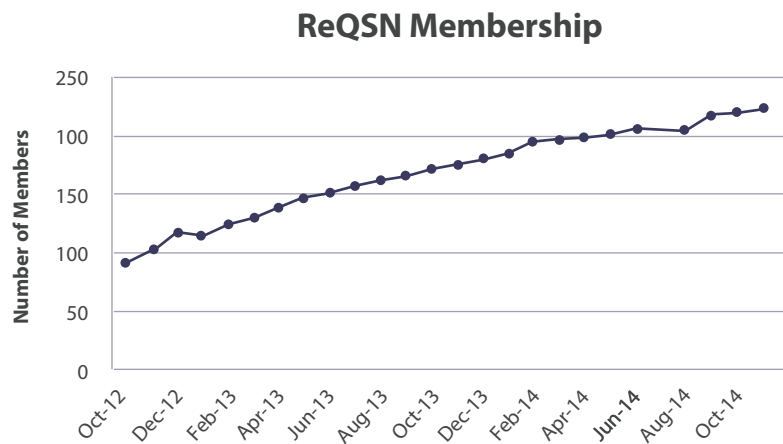
Appendix B:

Highlights of Our Progress

Making Strides in Chemotherapy Safety and Quality Standards

- Following a successful Breakthrough Series Collaborative (2011) based on the Institute for Healthcare Improvement's methodologies, the Regional Quality and Safety Network (ReQSN) was launched. Along with monthly teleconferences, ReQSN has established a very active virtual community who share quality improvement strategies and safety information through shared email and website communication. Currently there are over 205 physicians, nurses, pharmacists, administrators and other members enrolled in the network, which has continued to grow since inception in 2012 (Figure 14).

FIGURE 14 | ReQSN Membership 2012-2014

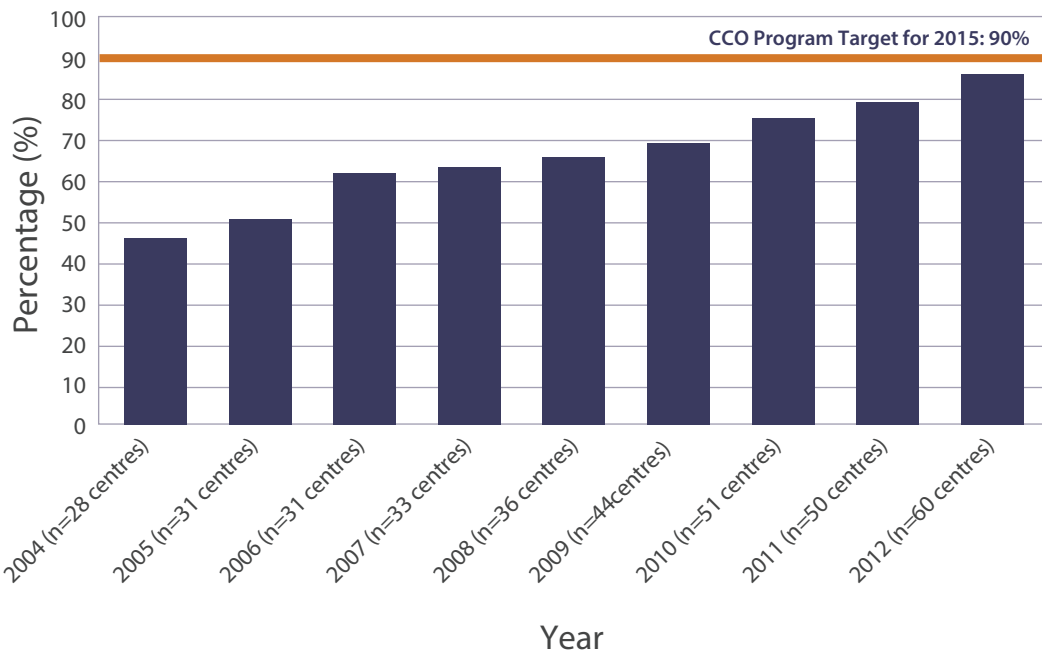


- The Systemic Treatment Safety Symposium is an annual event held since 2012 where representatives from each region come together for a day of knowledge transfer activities focused on an area of systemic treatment quality and safety.
- Safe Labeling Guidelines for chemotherapy have been published and regional quality improvement efforts have led to an increase in the percentage of criteria met by hospitals, from a baseline concordance of 59 percent to 80 percent at the most recent evaluation.
- Safe Handling Guidelines for chemotherapy have been developed and recently updated. By October 2011, 98 percent of hospitals providing chemotherapy had up-to-date safe handling policies in place, in concordance with the guideline.
- Safe Administration Guidelines for chemotherapy have been published to provide guidance on processes, technologies, and devices for the prevention and control of adverse effects that can occur during or following the administration of systemic treatment to adult cancer patients.
- Antiemetic Recommendations have been developed and submitted to the Ministry of Health and Long Term Care and presented to the Oncology Steering Committee for Cancer Drugs.
- ST CPOE Best Practice Guidelines have been developed to provide guidance on the key features, functionalities and components of a ST CPOE system which are required to ensure safe, high-quality systemic treatment. In 2012, 86.9 percent of systemic therapy orders in Ontario used a ST CPOE system (figure 15) and this is predicted to rise to 93 percent by the end of 2014/15.

FIGURE 15 | Use of Best-Practice Drug Ordering Technology

Use of Best-Practice Drug Ordering Technology

Figure 1: Percentage of systemic treatment visits supported by Computerized Prescriber Order Entry, by Local Health Integration Network *(LHIN) 2004-2012



Report Date: January 2014
 Source: NACRS - CIHI, Self-Reported CPOE Use
 Prepared by: Informatic Centre of Excellence, Cancer Care Ontario

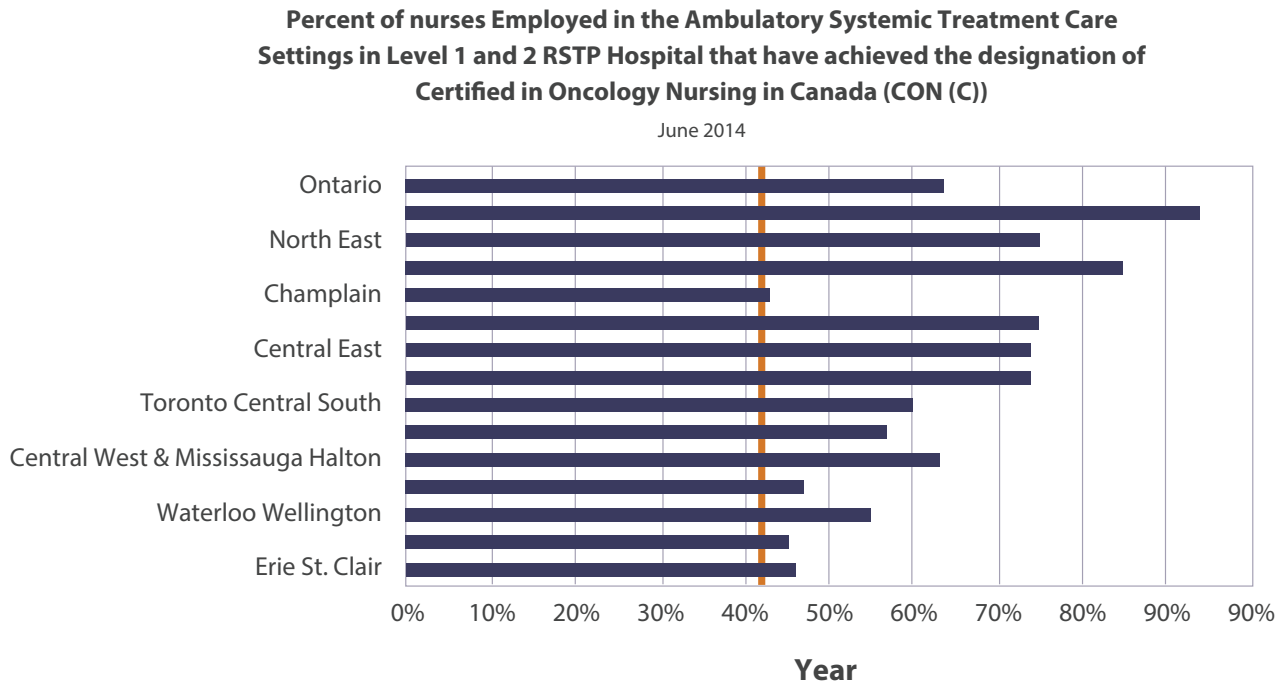
- CCO worked with the Canadian Institute for Health Information (CIHI) to enhance the cancer-specific data elements in the National System for Incident Reporting (NSIR). These enhancements became available nation-wide in the fall of 2012.
- Ongoing work has enhanced the CCO Drug Formulary, including the launch of a mobile app in late 2011 to better support providers at the point of care.



Progress in Service and Health Human Resource Planning

- In 2010, 2012 and 2013, a Health Human Resources (HHR) census was conducted to identify the total number of physicians providing systemic therapy in Ontario. This information supported the allocation methodology for new medical oncologist alternate funding plan (AFP) positions across the province.
- The 2009 Provincial Plan led to the expansion of the collection of wait times data for systemic therapy services to non-Regional Cancer Centre treatment facilities.
- Training requirements have been developed for all nurses in ambulatory systemic treatment care settings in Ontario, specifying the need for completion of a chemotherapy and biotherapy training course such as that offered via the de Souza Institute. At the most recent review, 98 percent of registered nurses administering chemotherapy in the province had completed the designated standardized program. Provincial recommendations also highlighted the importance of oncology nurses working towards achieving Canadian Oncology Nursing Certification CON(C) and currently, more than 50 percent of oncology nurses have achieved that goal (Figure 16).

FIGURE 16 | Percent of Nurses Employed in the Ambulatory Systemic Treatment Care Settings in Level 1 and 2 RSTP Hospitals that have achieved the designation of Certified Oncology Nursing in Canada (CON(C)) – June 2014



Funding for the Future

- Planning and forecasting has supported the requests for funding the care of a rising number of cases at all RSTP facilities across the province since 2009.
- The new Systemic Treatment Funding Model, as part of the larger ongoing Ontario Health System Funding Reform was launched on April 1, 2014.

