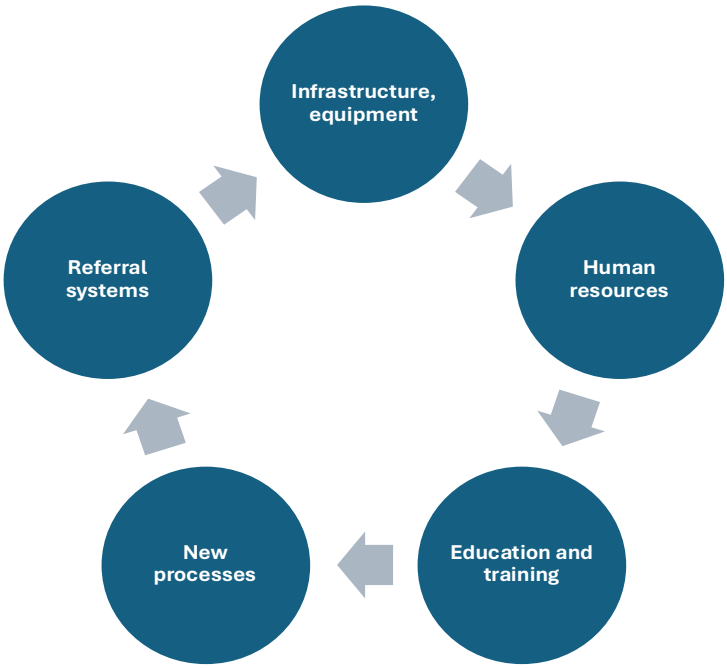
Enabling Optimal New Oncology Product Implementation in Ontario's Health Care System

An Implementation Readiness Playbook

for Health System Leaders



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Executive Summary

Introduction

The path to patient access for new cancer therapies is complicated and new treatments can only impact health outcomes if they reach patients in a timely manner. Many of the new products in the cancer pipeline are highly complex therapies in terms of the supports that are required to enable their use in patients.

Ensuring **health system implementation readiness** for complex therapies has emerged as an additional factor impacting timely and equitable patient access. Implementation readiness encompasses activities related to planning for, securing funding for, and putting into place everything needed to enable the actual use of a product in a patient in a health care facility (e.g., hospital, clinic, etc.).

The current approach to implementation planning tends to be reactionary rather than proactive, at all levels of the health care system. There is also significant variability in the approach of individual hospitals and health care providers to adoption processes, in terms of focus on individual centre adoption versus regional service delivery.

Health system leaders and other key stakeholders need to be more proactive in identifying and planning for implementation challenges associated with complex therapies. All sectors within the system need to work collectively to avoid introducing new sources of delay in access to important new treatments.

This document is **intended to support health system leaders** in their efforts to undertake proactive implementation planning for complex therapies, serving as a resource for leaders at various levels within the existing cancer system. A shift to more proactive planning will serve as a catalyst for quality improvement in the cancer system, with a focus on methods to improve the effectiveness of new oncology product adoption at the organizational and regional level.

Implementation planning and readiness can become part of the "learning health system" process, where experience, learnings, and best practices of the implementation process are considered and embedded into future implementation activities. This approach will require an ongoing commitment to knowledge-sharing at an organizational, regional, and provincial level. This sharing can catalyze new approaches to implementations and can serve as a stimulus for health system and regulatory change to better meet the needs of Ontarians.

Recommendation Summary

A series of recommendations have been developed to guide implementation readiness, as a means of supporting front-line health system leaders as they prepare their organizations for the cancer innovations of the future. The recommendations focus on 3 areas: creating an ecosystem that enables implementation readiness, roles for other stakeholders, and tools for implementation planning.

<u>i) Building a Management Ecosystem that Enables New Product Implementation</u>

Recommendation 1 – Leadership

- New complex cancer treatment implementation should be led in a regional setting by the lead regional cancer centre. Regional Cancer Programs play an important role in coordination of implementation across all regional hospitals. They can also serve to assist smaller hospitals achieve their goals of timelier implementation.

Recommendation 2 – Project Management

- Regional cancer centres / programs should use a standard project management methodology to implement new complex cancer treatments. This project management approach can vary from region to region depending on the regional structures and realities, but should address a standard set of implementation parameters.

Recommendation 3 – Implementation Funding Support

- Ontario Health – Cancer Care Ontario (OH-CCO) should explore ways to enable funding of implementation supports, through sources internal as well as external to government. For instance, there may be a role for the pharmaceutical industry to play in providing funding to support complex implementations across the province. This would ensure more equitable access to implementation resources. Funding should be tied to performance outcomes related to specific product implementation.

Recommendation 4 – New Product Triaging

- Regional cancer centres / programs should triage new products to determine the complexity of implementation parameters, which will then inform implementation planning.

Recommendation 5 – Patient Engagement

- Regional cancer centres / programs should ensure that patients are meaningfully engaged in the implementation planning process and that an experience-based design approach is used. Patient and care giver representation should include a deliberate and intentional approach to dealing with issues related to the social determinants of health.

Recommendation 6 – Disease Management Approach

- Regional cancer centres / programs should ensure that lead centre and regional disease site teams are engaged proactively in planning and that the planning ensures a holistic disease management-based approach to implementation rather than a singular product adoption focus.

Recommendation 7 – Role Clarity

- Regional cancer centres / programs, provincial health authorities, individual hospitals, patients and families, and the pharmaceutical industry should be well-versed in the roles that each party plays in implementation. They should ensure that the parties work collaboratively and engage in regular dialogue to plan, oversee, and advise on new product implementation on a provincial level.

ii) Recommendations for Other Stakeholders

Recommendation 8 – Industry Leadership

a) Information sharing

- Individual pharmaceutical companies should increase their efforts to engage with and support health system leaders in their planning efforts for complex therapies. Similarly, there needs to be openness on the part of health system leaders to meet with industry representatives and collaborate in both identifying and addressing implementation challenges.
- Manufacturers need to proactively identify and define implementation challenges related to their products and inform all levels of the health system of the issues that may arise. Engagement of the health system needs to occur as early as possible in the product development process.

b) Implementation support

- The cost of implementation for complex therapies cannot be borne by the health system alone. As part of the cost of doing business, companies should examine potential mechanisms to support funding of project management resources at one or more regional cancer centres to enable implementation of complex therapies. Such an investment is analogous to industry funding of infusion centres for IV biologic therapies and would benefit patients, cancer centres, and companies alike in terms of timely and equitable access.

c) Practical pharmaceutical product considerations

- Cancer medications and their administration can be quite complex. The available dosage forms, sizes of products, and dosing regimens all can lead to complexity of administration and, therefore. implementation. Pharmaceutical vendors should ensure that their products better meet the operational requirements of those prescribing and administering the medications. This can include:
    - Ensuring that dosing regimens are simple and avoid unnecessary patients visits to a cancer centre on off hours or days;
    - Providing drugs that can be administered subcutaneously;
    - Aligning medication vial sizes to real life dosing needs to reduce wastage and facilitate medication administration;
    - Using dose banding to standardize doses; and/or;
    - Providing medications in ready to use syringes per dose for subcutaneous administration.

Recommendation 9 – Enabling Roles for Ontario Health and Ministry of Health

a) Ministry of Health

- At a provincial level, the introduction of proactive, cross-ministry and/or cross-sectoral planning processes to support timely implementation activities for complex therapies would be a valuable addition to current processes. The health system needs to create mechanisms for systematically anticipating, prioritizing, evaluating, planning for, adopting, and evaluating the real-world effectiveness of innovations and new technologies. The success of initiatives such as the recent FAST program hinges on both timely funding but also timely implementation to prove its value.

b) Ontario Health

- There may also be opportunities for OH to facilitate coordination and information exchange amongst organizations regarding some aspects of implementation planning, to minimize duplication of effort by individual treatment centres when planning for adoption of new therapies and inform all levels of the health system of the issues that may arise. The most recent Systemic Treatment Program Implementation Plan highlights the role of OH-CCO in provincial implementation of bispecifics (i.e., T-cell engaging therapies), a pilot initiative which could be leveraged as a model for supporting implementation readiness for future complex therapies.

Recommendation 10 – Making Cross-Sectoral Collaboration the Norm

- In addition to the importance of role clarity noted above, it is also important that sectors across the cancer system work together to ensure successful health system readiness for complex therapies.
- No single entity can take on sole responsibility for enabling implementation readiness. The health sector components required to ensure timely and successful health system readiness are divided into those who own the product information, those responsible for system planning, those with funding powers, and those responsible for delivering care directly to patients. It is only when all of these components work together through cross-sectoral collaboration that we will successfully address the challenges associated with integrating complex therapies into the health system in a timely manner.

<u>iii) Health System Implementation Readiness Playbook</u>

Recommendation 11 – Implementation Check Lists

- Regional cancer centres / programs should develop and adopt an implementation check list to ensure that new product implementation project plans are comprehensive and well executed.

Call to Action

Delays in access to cancer care and/or treatments can directly impact patients and their health outcomes. Leaders at all levels of the health system need to adopt a proactive approach to implementation planning, including support in terms of securing the human and financial resources needed to execute such plans. Implementation readiness is a key success factor in support of timely patient access to innovative therapies and optimizing health outcomes.

The principles and recommendations proposed may also have applicability in the adoption of new medical devices used in cancer treatment. Tools that support health system leaders in their efforts to enable proactive planning and implementation readiness for all types of health innovations will benefit patients and the health system overall.

Acknowledgements

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Contributions

Dr Judith Glennie and Neil Johnson conceived and designed all aspects of the report, developed the methodology, and conducted the literature review.

Neil Johnson conducted the semi-structured interviews with key cancer system leaders and integrated relevant learnings into the report.

Neil Johnson and Dr Judith Glennie led the writing and review of the original draft and approved the content of the final version.

Dr Judith Glennie was responsible for funding acquisition.

Dr Judith Glennie is the guarantor of this work. The conclusions of the authors were not contingent on the sponsor's approval or censorship of the document. The conclusions are the authors' and do not reflect the views of their affiliated organizations. All authors have read the report and agreed to the published version.

Background

The path to patient access to new cancer therapies is a complex process. This section provides an overview of the oncology patient access ecosystem, with the intent of providing context on both the challenges and opportunities for optimizing these processes to enable timely treatment of cancer patients.

New cancer therapies can only impact health outcomes if they reach patients in a timely manner. Many of the new products in the cancer treatment pipeline (e.g., Chimeric antigen receptor T-cell [CAR-Ts], T-cell engaging therapies [e.g., bispecifics], gene therapies, mRNA technologies, radioligands) are highly **complex therapies** in terms of the supports required to enable their use in patients. As a result of this complexity, enabling health system implementation readiness has emerged as an additional factor impacting timely and equitable patient access to these therapies. Equity remains a key issue in impacting health care outcomes. At a provincial level, the access to sophisticated specialized treatments can vary from region to region. Additionally, patient factors play a key role in accessing new medications. These factors can include, poverty/income insecurity, lack of housing, age, education, food security, racial / sexual discrimination mental health illnesses as well as isolation due to a lack of family and/or social network supports.

Implementation readiness encompasses activities (see Figure 1) related to planning for, securing funding for, and putting into place all the things needed to enable the actual use of a product in a patient in a health care facility (e.g., hospital, clinic, etc.). The following outlines examples of activities that facilities may need to undertake to enable use of some complex therapies:

- Infrastructure (e.g., additional critical care beds to manage severe adverse events; specialized equipment and/or building requirements e.g., for radioligand therapies)
- Human resources (e.g., specialized nursing, medical, other health professional staff)
- Staff education and training
- New processes to support use of the product within the health facility (e.g., cell retrieval processes, transportation to cell processing facility, manufacturers legal agreements, etc.)
- Development of referral systems and processes to shepherd patients to centres of excellence for their care

Addressing the challenges associated with implementation readiness for complex therapies is an important step in optimizing the health outcomes associated with the use of these products. We know that delays in treatment access can have measurable impacts on cancer patients, for instance, in terms of their survival and quality of life, as well as on overall health care system efficiency.[1,2] We need to work collectively to avoid introducing new sources of delay in access to important new treatments.

All to often, clinicians are put an awkward and compromised position in respect to prescribing new medications to their patients who are facing a cancer diagnosis. Once a drug is approved for funding, they understand that, many times, these medications may not be available for prescribing because the operational implementation details have not been fully addressed. This puts clinicians in a challenging position with their patients as they cannot provide treatments that they know will offer new hope and

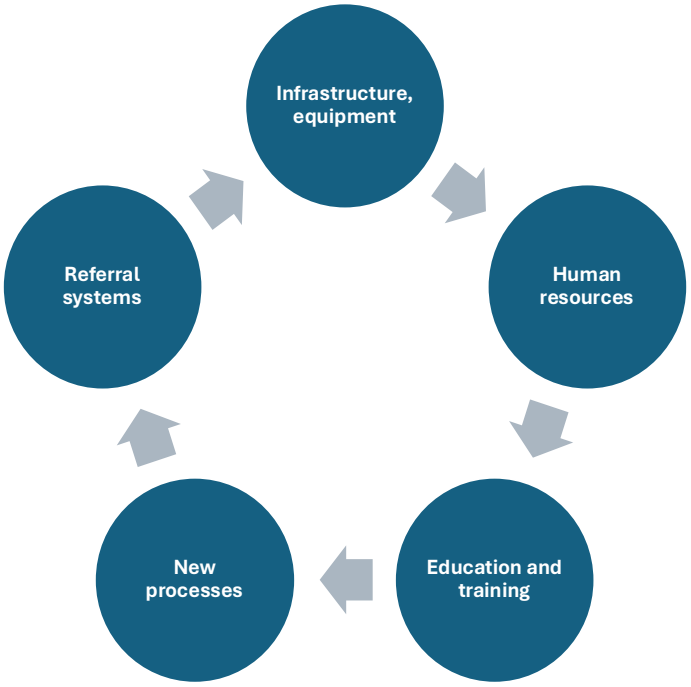
[1] Hanna TP, King WD, Thibodeau S, *et al*. Mortality due to cancer treatment delay: systematic review and meta analysis. *BMJ 2020;371:m4087* http://dx.doi.org/10.1136/bmj.m4087

[2] Gross-Langenhoff M, Flume M, Swami S, and Ruof J. Impact of Delayed Patient Access to Cancer Treatment. Value and Outcomes Spotlight May/June 2025 11(3). ISPOR - Impact of Delayed Patient Access to Cancer Treatment

benefit, for no other reason than the implementation process has not been completed. This clearly is an issue of importance to patients, their families, clinicians, health system leaders, and the pharmaceutical industry. Collectively, we can, and must, do better.

For a variety of reasons, the current approach to implementation planning can be challenging, time-consuming and can be burdensome on patients, health system leaders, organizations and clinicians alike. Frequently the outcome of seamless integration in a cohesive and coordinated system is not achieved. As a result, the ability of clinicians to offer valuable new therapies to their patients is impeded as the system determines how to integrate the treatment into the care path. Many believe that the system needs to shift to be more intentional and purposeful in its efforts to introduce new therapies. Such intentionality is demonstrated in the Regional Cancer Plan recently released by the Hamilton Niagara Haldimand Brant Regional Cancer Program, wherein timely adoption of new therapies is highlighted as a priority.[3]

Figure 1. Components of Health System Implementation Readiness



[3] Hamilton Niagara Haldiman Brant Regional Cancer Program. Hamilton Niagara Haldimand Brant Regional Cancer Plan 6 (August 2025). https://hnhbregionalcancerprogram.ca/wp-content/uploads/2025/08/HNHB-Regional-Cancer-Plan-6.pdf

While a shift is required, many individuals in the system have only a limited perspective or view as to the challenges and requirements to successfully implement these new treatments. Leaders in government, hospitals, industry and provincial agencies need to develop a more comprehensive view of the system and the roles that each stakeholder can play. Health system leaders as well as other key stakeholders need to be proactive in identifying and planning for implementation challenges associated with complex therapies, so that infrastructure, human resource, and/or other issues are addressed in parallel to funding decisions. For optimal implementation, readiness activities would occur in parallel to other parts of the oncology product approval process.

This document is intended to support health system leaders in their efforts to undertake proactive implementation planning for complex therapies, so that actual use in patients is not delayed after the provincial funding decision. Research and insights into gaps as well as recommendations to guide implementation readiness are provided as a tool to support front-line health system leaders prepare their organizations for the cancer innovations of the future.

Problem Statement

In Ontario, new oncology product adoption and implementation after federal approvals and provincial funding approvals, is complex and variable. Individual hospitals and health care providers approach adoption in a variable and inconsistent manner – sometimes focusing on individual centre adoption and at other times planning on a regional service delivery level. This can lead to delays in implementation and / or compromise quality of service delivery, ultimately impacting equitable patient access to new treatments and related health outcomes. Moreover, the roles that industry, government and provincial health agencies can play in this process is not always clear.

In assessing this issue, this document focuses on methods to improve the effectiveness of new oncology product adoption at the organizational and regional level. It presumes that the foundation of health system governance, policy, and the current financial systems and realities of health care do not change. Rather, the focus of the document is to serve as a catalyst for quality improvement in the cancer system and as a resource for health leaders at various levels of the cancer system in their work within the existing system.

Methodology

The contents of this document are the culmination of consultations with Ontario cancer system stakeholders in 2024-2025, as well as a review of publicly available documents touching on the topic of health system implementation readiness.

- A virtual multi-stakeholder meeting held in October 2024[4] pointed to the importance of health system implementation readiness as a factor in timely patient access, particularly with complex therapies.
- Insights from Ontario regional cancer system leaders (medical and operational) in 2025.
- Internet and literature review sources[5,6,7,8,9,10]

This guidance document will be reviewed by key Ontario health system leaders and other stakeholders, to ensure the relevance and practicality of its contents. As part of this external review process, health system leaders will be encouraged to identify what they see as opportunities resulting from the use of the recommendations and/or tools outlined in the document. They will be asked to share any experiences and/or success stories they have using elements that are similar to those outlined in the guidance document, as well as the components of the guidance that they see as valuable that they may not have considered in the past. Any insights, case studies, and/or best practices identified through the external review process will be integrated into the final draft of the document. The authors are solely responsible for the final content.

[4] *Life Sciences Ontario*. Collaborative Solutions to Timely Patient Access to Cancer Treatments. November 2024: https://lifesciencesontario.ca/advocacy/reports-and-publications-2/.

[5] Glennie JL, Duon L, O'Quinn S. Assessment of Listing Timeframes for Oncology Products in Canada. Provincial Reimbursement Advisor. 2022;25(1):12-25.

[6] Glennie J, Gesy K, Nguyen Y (2023). Canadian public payer best practices for providing timely patient access to cancer therapies. Canadian Health Policy, Nov 2023. https://doi.org/10.54194/VIEL2883 | canadianhealthpolicy.com.

[7] I2U. I2U System Readiness Tool. https://i2u.ca/tool/

[8] Husereau D, Lemieux C, Szwajcer D, Bosch M, Kassam S, Gesy K, Slovinec M. Canadian healthcare systems preparedness for the future of complex interventions Lessons from T-cell re-directing therapies. 2025. [N] p. ISBN 978-1-7389568-1-4 https://static1.squarespace.com/static/600f391a99309024c056ab8a/t/68c2fd2aa3883e04b0f236c2/1757609258395/Complex+Therapies+_FINAL+10_Sep.pdf

[9] Husereau D, Lemieux C, Szwajcer, D, et al. Assessing Canada's Health System Readiness for Complex Therapies - The Current and Future State of T-Cell Redirecting Therapies. Preprints 2025, 2025111469. https://doi.org/10.20944/preprints202511.1469.v1

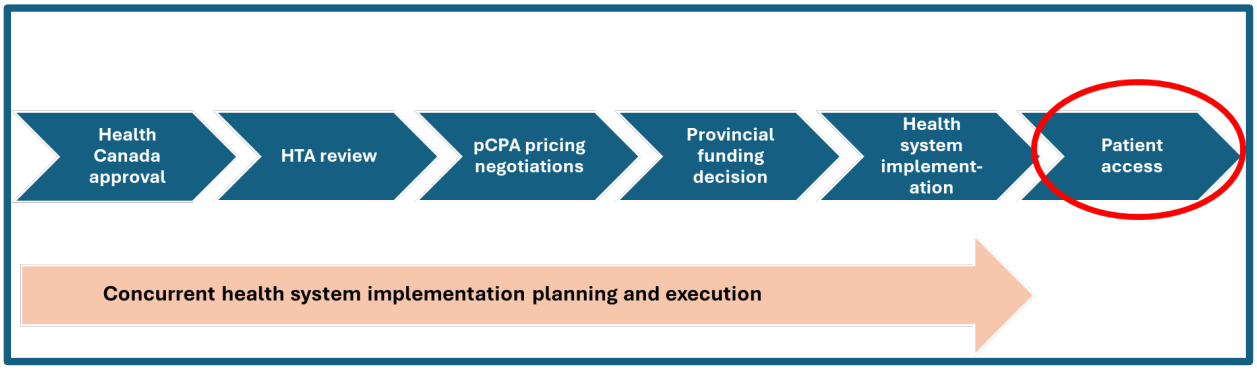
[10] Husereau D, Villalba E, Muthu V, et al. Progress toward Health System Readiness for Genome-Based Testing in Canada. Curr Oncol. 2023 Jun 1;30(6):5379-5394. doi: 10.3390/curroncol30060408. PMID: 37366891; PMCID: PMC10296918.

Current Oncology Product Approval Processes

The process of achieving patient access to new therapies in Canada is complex (see Figure 2 for an overview).[11,12] The federal regulator (Health Canada) determines whether a product can be sold on the Canadian market. To secure provincial funding after Health Canada approval, a new cancer therapy must first undergo a health technology assessment (HTA) by Canada's Drug Agency (CDA; or via INESSS in Quebec). If recommended for funding by the HTA body, the price for the product is then negotiated on behalf of the provinces by the pan-Canadian Pharmaceutical Alliance (pCPA). It is not until a pricing agreement is reached between the pCPA and the manufacturer that individual provinces make the final funding decision to enable patient access through their provincial health system (i.e., provincial drug plan, cancer system, etc.).

As outlined in Figure 2, approval of funding for new treatments is only one of many steps in achieving patient access. Finding ways to accelerate access to innovative new therapies has been a key focus of both government and private sectors for many years. Health Canada, CDA, and the pCPA continue to evolve and accelerate their processes. There is an opportunity to better align health system implementation planning in parallel to oncology approval processes to ensure timely patient access to new products.

Figure 2. Aligning Oncology Product Approval Processes and Health System Implementation Readiness

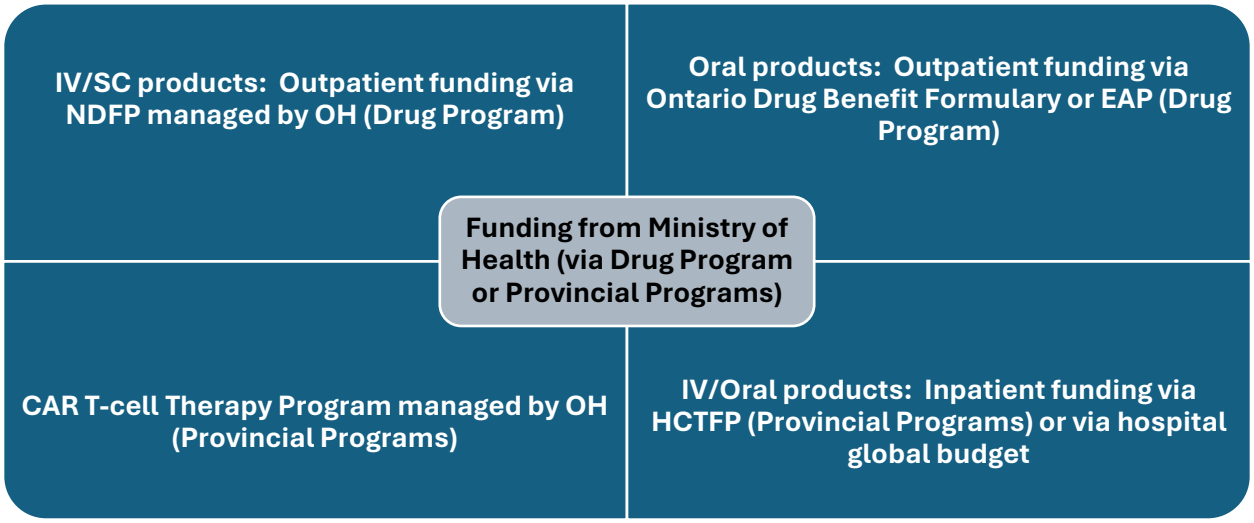


In the case of oncology products, funding sources and mechanisms for accessing these products varies in Ontario (see Figure 3) depending on where the product is administered (i.e., outpatient versus inpatient) and the formulation (i.e., injection [intravenous {IV} or subcutaneous {SC}] versus oral). The majority of cancer therapies are accessed on an outpatient basis via cancer clinics (IV and some SC medications) or pharmacies (oral). In both cases, funding is provided by the Ontario Drug Program via its New Drug Funding Program (NDFP) for injectable treatments or via the Ontario Drug Benefit Formulary or Exceptional Access Program (EAP) for primarily oral cancer treatments.

[11] Ontario Ministry of Health. Drug funding review and approval process. https://www.ontario.ca/page/drug-funding-review-and-approval-process (March 19, 2025).
[12] CDA-AMC. Drug Access in Canada: Understanding the System (December 2025). https://www.cda-amc.ca/sites/default/files/pdf/htis/2025/DS0101-Drug_System101_e.pdf

For those patients requiring inpatient cancer treatment, funding sources can vary considerably depending on the product. In general, funding is secured through a combination of hospital global budgets and/or specialized provincial programs (e.g., High-Cost Therapy Funding Program[13] [HCTFP] for specific high-cost cancer drugs). (Additional smaller programs may also provide funding but are beyond the scope of this document.)

Figure 3. Overview of Major Ontario Oncology Drug Funding Sources



[13] Ontario Health/Cancer Care Ontario. High-Cost Therapy Funding Program. https://www.cancercareontario.ca/en/cancer-treatments/chemotherapy/funding-reimbursement/high-cost-therapy-funding-program

The Ontario Context

The cancer control system in each Canadian province is structured differently. In some jurisdictions, a provincial cancer agency, as either a standalone organization or part of a larger health services organization, designs and operates the cancer system. In Ontario, the cancer system was overseen by a provincial cancer agency (Cancer Care Ontario) until 2019 and, since that time, the oversight of policy, funding and strategy has been led by a program of Ontario Health, the provincial health agency. Services are provided by individual health services corporations including primary care offices, hospitals, and diagnostic imaging companies. Ontario Health – Cancer Care Ontario (OH-CCO) plays a lead role in developing a patient and evidence informed provincial cancer plan, monitoring its progress, establishing new provincial programs and standards, directing funding and monitoring and overseeing system and organizational performance. Service delivery agencies are accountable to the provincial agency through a series of contracts, commitments, and legislation.

The entire health system in Ontario is a complex interwoven collection of provincial agencies, government and service delivery organizations such as hospitals. It is important that the reader have some familiarity with the roles and responsibilities of agencies that oversee and operate the health system so that the unique issues related to implementation can be more clearly understood. The authors have compiled a summary of the roles and responsibilities of various players within the health system for consideration and review. This is detailed in Table 6 in the *Further References section*.

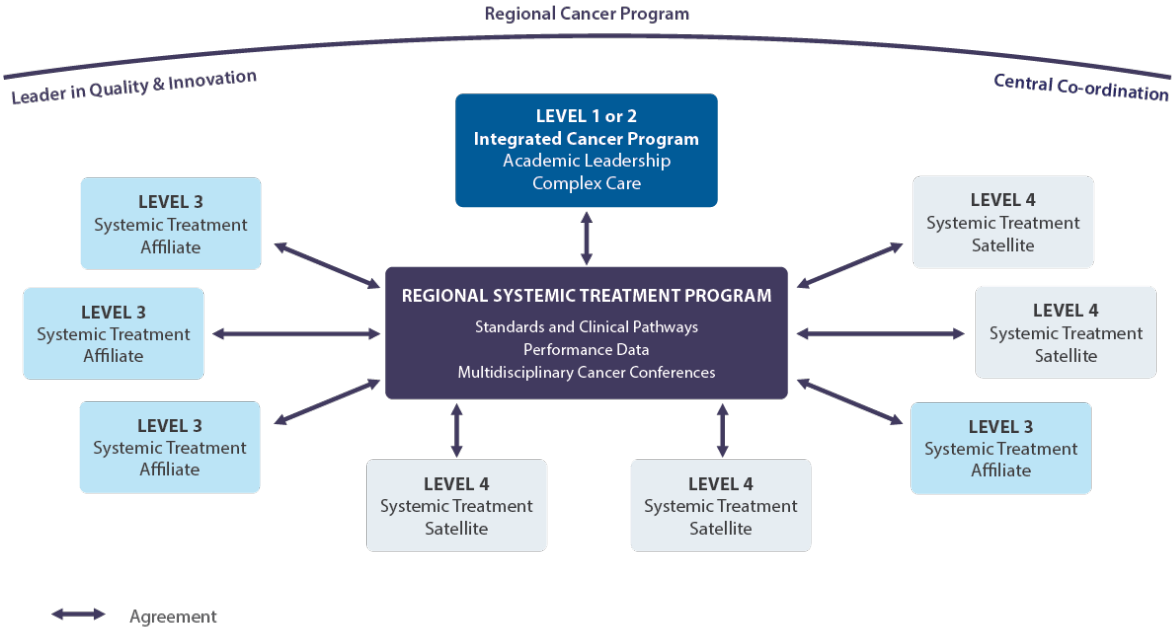
a) Regional Cancer System and Provincial Cancer System Overview

Ontario's cancer service delivery system is complex and includes a variety of agencies as stated above. A key component of the overall cancer system in Ontario is that of the regional cancer system structure. Cancer service delivery is anchored in 14 lead cancer centres across the province. These cancer centres have, for 20 years, served as the practice leaders across Ontario providing cancer control services as well as acting as leaders in their region to enact the Ontario Cancer Plan. They serve as key liaisons or agents of OH-CCO. This unique dual role (service delivery and system leadership) has enabled great improvements in the Ontario cancer system in the past two decades.

From a service delivery perspective, these cancer centres are not equal in size and service delivery. For instance, Ontario has centralized several highly specialized cancer care services in a smaller number of centres of experience or lead centres. These centres provide care for patients with hepato-biliary cancers, sarcomas, gynecologic cancers, lung cancers, head and neck cancers, and primary brain tumours. Additionally, the full array of complex malignant hematology services is provided by a subset of these cancer centres. Each centre provides a unique array of services which may include some or all of these specialized services.

This system as it relates to the administration of systemic treatments is depicted in Figure 4 below.

Figure 4. Regional Model for Quality Systemic Treatment [14]



These cancer centres also work with other hospitals that provide cancer surgery services, diagnostic / screening services, and systemic therapy delivery. Systemic therapy delivery is organized according to the following classifications.

b) Regional Centre Typology

Level One Centres – An academic regional cancer centre that provides some or all of the specialized lead centre services. These centres have medical, gynecology and hematology oncologists on staff and provide radiotherapy services.

Level Two Centres - A regional cancer centre that provides some the specialized lead centre services. These centres have medical oncologists on staff and provide radiotherapy services. They may also have gynecology, and hematology oncologists on staff.

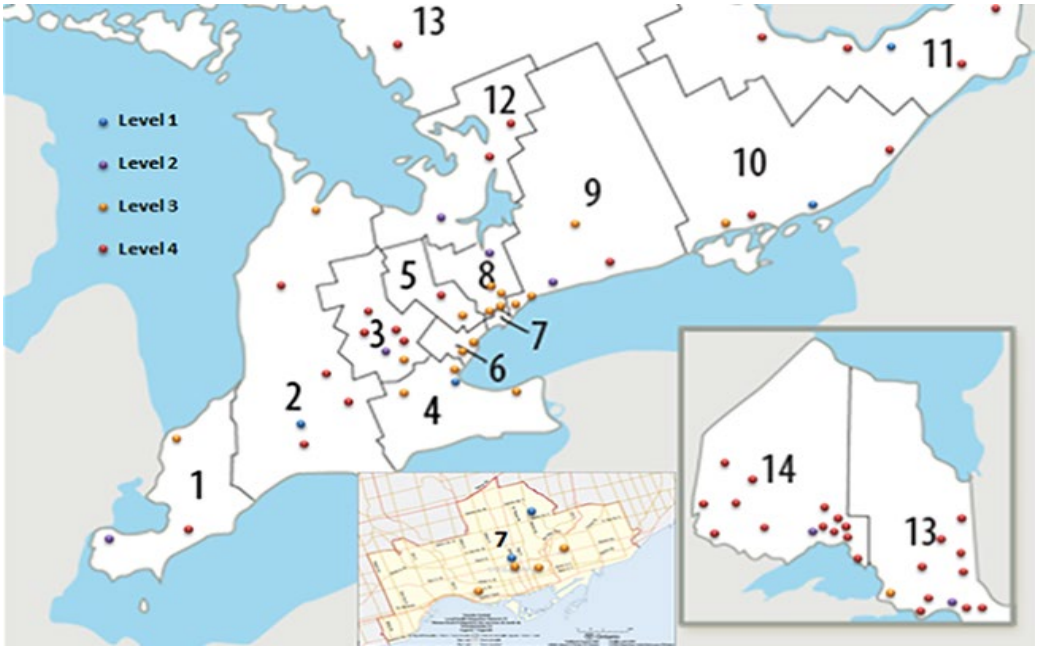
Level Three Centres – A hospital that provides systemic treatment services with its own medical oncologists on site. These centres do not provide radiotherapy services.

Level Four Centres – A hospital that provides system treatment services prescribed by medical, gynecology or hematology oncologists at a Level One or Two Centre. These hospitals do not have their own medical oncologists and do not provide radiotherapy services.

These facilities are spread across a significant geography as illustrated in Figure 5 below.

[14] *Systemic Treatment Program Implementation Plan 2019–2023, Ontario Health – Cancer Care Ontario* https://www.cancercareontario.ca/en/cancer-care-ontario/programs/clinical-services/systemic-treatment/implementation-plan-2019-2023

Figure 5. Ontario Systemic Treatment Facilities [6]



Cancer treatment services are funded according to what is called a "Quality Based Procedure" methodology. Leaving cancer surgery and radiotherapy aside, systemic treatment is funded in two ways. First parenteral cancer systemic treatment drugs are approved for funding based on specific evidence and standards. Medical, gynecology, and hematology oncologists must prescribe approved medications for specific approved indications. These drugs and indications are continually updated according to the most recent scientific evidence. Hospitals are reimbursed when information is provided to the funder that confirms the diagnosis and treatment plans of specific medications for a specific patient.[15]

The expenses associated with preparation, administration, and monitoring of patients receiving systemic treatment are reimbursed according to a complex funding formula that includes labour and supply costs for clinical staff; as well as costs associated with supportive care and administrative staff. (The details of the funding scheme are beyond the scope of this document.) These drug and labour funding schemes apply to level one, two and three centres with specific modifications for small level four centres. Funding is not provided to private/ 'for profit' infusion centres.[16] Funding for physician billings is provided through a Provincial Oncology Alternate Funding Plan.

Oral systemic treatment agents are provided by a patchwork of private and public insurance reimbursement systems. From time to time, when a new oral or parenteral agent is brought to market but not yet funded by the public system, pharmaceutical companies may make these new treatments available free of charge though compassionate use programs. In these cases, parenteral medications are sometimes administered in private infusion centres.

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[15] *Ontario Health. Provincial Drug Reimbursement Programs.* https://www.cancercareontario.ca/en/cancer-care-ontario/programs/provincial-drug-reimbursement

[16] *Ontario Health. Systemic Treatment Program.* https://www.cancercareontario.ca/en/cancer-care-ontario/programs/clinical-services/systemic-treatment

Challenges Faced by Cancer System Leaders

Leaders of Ontario's Regional Cancer Centres face unique challenges in their roles. Regional Vice Presidents (RVPs) serve two unique roles. The first is to ensure the operational excellence of cancer services provided by their hospital / cancer centre. This role also relies on their centre serving as leaders in the quality of services that they provide. The second role is one of leading and catalysing positive change amongst the various providers of cancer services in their region. This role serves to advance the Ontario Cancer Plan[17] in a region across all corporations which provide cancer services.

As agents of Ontario Health – Cancer Care Ontario they serve as influencers and facilitators of improvement across the cancer control system in their region – from screening to diagnosis, treatment and survivorship. The Regional Vice President is tasked with influencing the behaviour of other organizations and providers. The RVP employs various clinical experts to facilitate quality improvement in the region. Frequently the team is supported by a small group of staff. Individual organizations do not report for accountability purposes to the RVP, rather the RVP and team work with organizations in collaboration and partnership with a view to influence positive change. This complicates new product implementation in a region, as the regional team must factor a variety of hospital and health agency agendas into the planning process.

With respect to new product implementation, it is important to recognize that the RVP and Regional Cancer Program do not oversee the operations of other hospitals. Therefore, it is the responsibility of the partner hospitals in a region to implement new cancer treatment products in a safe and effective manner and in alignment with the standards and requirements of accreditors and the Ontario Cancer Plan. While the Regional Cancer Program plays an influencing and coordination role, they rely on the good will and expertise of other hospitals to do their part in implementation.

As the lead executive of the cancer centre in their region, the RVP serves in a similar capacity to all other health system executives. They are charged with ensuring that care is provided in a safe, effective, affordable and timely manner. The RVPs in this hospital leadership role also serve as leaders of other portfolios within their organization. The cancer leadership role is only one of several programs or sites that the executive might oversee in their own hospital. The RVP is supported in this work by a variety of administrative and medical leaders. In the overall system, it is critical that the RVPs team and centre be top performers and well respected in order to serve their lead influencing role amongst their regional partner organizations and clinicians.

In regard to new product implementation, the RVP at their own hospital level faces a number of challenges. As noted previously they must ensure that the new products meet the financial requirements, capacity needs, and strategy for the organization. Frequently new cancer agents also require the adoption of advanced companion diagnostics. Many times, lab diagnostics is managed by another portfolio, or in some cases, a regional service provider. This adds more complexity to the RVP who must negotiate the adoption of new lab tests with other portfolios frequently, with out the requisite laboratory or financial capacity being present. These issues are multiplied several times as the RVP and team work with other hospitals in the region who will also play a role in adopting new technologies.

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[17] *Ontario Health. Ontario Cancer Plan 6 (2024-2028).*
https://www.cancercareontario.ca/sites/ccocancercare/files/assets/cancerplan6.pdf

Suffice it to say, once a new product is funded by the government, the regional leadership team faces many challenges in implementing advanced technologies into their hospital or into the regional cancer control system. They frequently, lack the authority, finances and mandate to implement new therapies at the organizational or regional level and spend much time and effort collaborating and influencing others to enable change.

Several issues or constraints challenge the timely adoption of new cancer products. Hospitals of all types – be it a regional cancer centre or a smaller hospital facility - face numerous constraints. The cancer portfolio in a hospital is but one of the areas of overall concerns for hospital executives. Health executives interviewed consistently noted the following concerns.

a) Hospital Inpatient Capacity

Ontario hospitals continue to routinely operate above actual funded bed capacity. This is particularly true of large academic and community hospitals. Limited home care, long term care, and supportive housing resources means that Ontarians who no longer require acute services must stay in hospital due to insufficient non-hospital resources. The impact on individual citizens can vary greatly depending on the diagnosis of the patient, social determinants of health and hospital location.

Jurisdictions across Canada are seeking to improve these issues. In Ontario, home care services are being restructured, and significant investments are being made to expand team based primary care. New long term care homes are being commissioned, and hospitals and municipalities are seeking ways to ameliorate housing shortages. Despite these investments, emergency department wait times are protracted and planned surgical cases are delayed past industry standards. Achieving reductions in wait times for both emergency departments and surgery services are key goals of many governments. These can only be solved with additional post acute care capacity.

The lack of acute care hospital bedded capacity leads to a key challenge for hospital cancer leaders. With many services each seeking to use acute care beds, the introduction of new treatments that either rely on administration in an inpatient bed or that rely on the availability of emergency and critical care units to manage urgent side effects is very challenging. Hospital executives are resistant to further burdening inpatient bedded services, even if funding is available.

Additionally, the impact of new cancer treatment product introduction, is experienced in a differential manner at different hospitals. Lead centres that offer specialized services many times serve as a resource or backstop to smaller hospitals without the experience and knowledge of these new agents. The impact of these new agents is felt disproportionately on these specialized hospitals. Furthermore, the impact on these hospitals is felt in areas such as emergency services and critical care, which are amongst the most capacity constrained areas in a hospital especially during respiratory illness seasons.

To illustrate the gap, the Financial Accountability Office Ontario noted the following in their October 2025 report.

> *Hospital Beds: There were 35,540 funded hospital beds in Ontario in 2024-25. Based on the 2025 budget health sector spending plan, the FAO projects that there would be sufficient funding for 33,083 beds by 2027-28, resulting in a decrease from 220 funded hospital beds per 100,000 Ontarians in 2024-25 to 203 funded hospital beds per 100,000 Ontarians in 2027-28.*[18]

b) Cancer Centre Capacity

The capacity of cancer centres across Ontario is limited. While central planning for radiotherapy services, including machine, medical human resources and facilities, has a long-standing history in Ontario, until recently this type of organized planning for systemic treatment has not existed.

Treatment paradigms in cancer have changed over the past decade. Previously the cancer journey was viewed as follows:

Figure 6 The Cancer Journey

[19]

The treatment phase was viewed as time limited with patients, in the case of systemic treatment, being offered two or perhaps three different chemotherapy options as their disease progressed.

With the advent of advanced therapeutic agents, such as the range of immunotherapies, the treatment phase in many cases is now viewed as life long, with treatments continuing as opposed to being offered in a time bound manner. This conversion of patient treatment from episodic to continual has led to significant growth in the utilization of cancer centres to administer systemic treatments. This growth exceeds the growth of the incidence of cancer. Combined with a growing number of therapeutic options for clinicians to use means that systemic treatment suites are at or beyond capacity and can no longer absorb unlimited growth.

This growth has prompted OH-CCO to conduct its first Systemic Treatment Capacity Plan[20]. The capacity plan looked at non-oral systemic treatments that were provided at 73 Ontario hospitals (levels 1-4). The capacity plan addressed only 'chair time and availability' and did not address

[18] *Ontario Health Sector: 2025 Spending Plan Review, Financial Accountability Office of Ontario, October 23, 2025 ISSN 2562-4008*
[19] *Ontario Health. The Cancer Journey.* https://www.researchgate.net/figure/The-Cancer-Journey-courtesy-of-Cancer-Care-Ontario_fig4_282412525 *- accessed 2026-02-03*
[20] *Developing Ontario's First Systemic Treatment Capacity Plan, Cancer Data Strategy KTE Webinar Series, March 21, 2025*

health human resources, revenue / cost per chair, clinic and pharmacy space requirements or space design considerations. The results of the first plan showed that five of these hospitals already exceeded chair capacity and that, by 2034, fifteen centres will be over capacity. Of those centres, the top five over capacity centres would be in the range of 43-63% over capacity. These five centres alone had a capacity of 237 chairs and would require a further 130 chairs by 2034.

Given that most hospitals and cancer centres lack the ability to build new facilities, this problem will only grow in significance. Hospital expansion projects in Ontario are very limited, and a major new build can take up to 15 years from time of application to commissioning. While the capacity mismatch varies by organization, each organization is addressing their own issues largely through process improvement, service hour expansion and regional collaboration. These individual improvement measures will vary in impact and will likely not solve the capacity constraint. For instance, moving patients to different centres within or across regions to load level capacity can be challenging given the specialized nature of services offered within specific centres. As well, many areas in Ontario face long travel times (i.e. the largest regions of the Northeast, Northwest, Southwest).

c) Health Human Resources Capacity

Aside from the aforementioned physical capacity constraints, expansion of services requires investments in qualified professional and support staff and oncologists.[21] Ontario has a robust medical alternate funding plan for oncologists that bases allocations on workload. Increases in service delivery are matched with increases in medical positions. Staffing theoretically should follow a similar principle; however, each hospital adopts different methods to develop staffing budgets and assignments. Given the current financial distress of many hospital corporations, incremental funding for treatments is frequently used to offset current financial gaps within an organization. Frequently, funds received do not match the funds required based on expenses, collective agreements and standards. Additionally, ancillary positions such as laboratory staff are not included within the direct funding envelopes of many funding formulas.

While funding mechanisms are not static and do, in theory, offer hospitals the opportunity to grow their medical and employee base to meet service demands, this is not possible given the gaps in health human resources. Many professions such as nursing, pharmacy, and laboratory medicine require additional specialist training in order to meet the service needs of oncology patients. Indeed, current provincial professional standards require additional training such as the Provincial Standardized Chemotherapy and Biotherapy course for nurses offered by the de Souza Institute[22]. Recruiting, training and retaining skilled oncology professions remains a challenge for all centres.

d) Hospital Financial Capacity

Lastly, growing hospital services within Ontario is a challenge based on the fiscal climate of Ontario. The sector is responding to the significant financial realities of the provincial government and the impact of post pandemic inflationary pressures. This pressure on the financial viability of many organizations means that expansion of services will, in the foreseeable future be a challenge extending both to capital investment and operational growth.

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[21] Abdel-Rahman O, McFarlane E, Ohm H, et al. Advances in cancer therapy require urgent changes to the oncology workforce. CMAJ Jun 2025, 197 (21) E590-E596; DOI: 10.1503/cmaj.241425

[22] Ontario Health. Oncology Nursing Program. https://www.cancercareontario.ca/en/cancer-care-ontario/programs/clinical-services/oncology-nursing-program

To illustrate the financial realities, the Financial Accountability Office Ontario noted the following in their October 2025 report.

> *The 2025 budget spending plan is below the FAO's cost driver projection by $3.4 billion in 2025-26, $6.4 billion in 2026-27 and $9.6 billion in 2027-28. This means that the Province will need to implement health sector efficiencies (i.e., provide the same level of services with less resources) and/or commit additional funding to the health sector to maintain 2024-25 service levels.*[9]

In a media statement in October 2025, the Ontario Hospital Association captured the situation faced by hospitals well in describing the following:

> *Ontario's hospitals welcome the investments announced in the 2025-2026 Ontario Budget. At the same time, the full revenue needs of the hospital sector – and many individual hospital organizations – will not be fully met this year. Unfortunately, many Ontario hospitals are facing significant financial and operational pressures due to an increased demand for health care services and growing numbers of patients with more complex care needs.... Given the complex and changing environment, the OHA believes that a long-term health services capacity building strategy is necessary for hospitals and all health services in Ontario. Technological and clinical innovation will continue to reshape health care and improve productivity and efficiency, and Ontario's hospitals will continue to lead the way in transforming the way care is provided for patients.*[23]

Hospital executives are faced with a unique mixture of issues that make adoption of progressive new treatment options a challenge. Fiscal limitations, health sector capacity and health human resources limitations all impede the ability and add complexity to the implementation of new therapeutic agents.

[23] Media Statement: Ontario Hospitals Will Continue Adapting in the Face of New Financial Challenges, Ontario Hospital Association, Toronto, Ontario, October 2025

Operational Steps to Implement New Cancer Treatments

a) Hospital Implementation

Implementing complex new cancer treatments in a hospital setting requires a systematic and defined approach. Implementing a new treatment in the cancer milieu is far more complex than introducing so called 'me-too' community-based medications. Table 1 itemizes many but not all of the considerations that need to be in place before adoption can proceed in an effective manner. While this is a long list, it is by no means exhaustive and the individual check list items include a wide variety of details.

Table 1. Implementation Considerations

Implementation Plan Components	**Hospital**	**Region**
Cancer Centre Operations		
Systemic Treatment Suite Operations		
Hospital Operations		
Laboratory and Diagnostic Services Operations		
Pharmacy Operations		
Integration with Radiotherapy Services		
Health Human Resources Capacity Readiness		
Professional Practice Assessment		
Clinical Staff Training		
Oncologist Readiness		
Hospital Physician Readiness		
Disease Site Team Preparation		
Multidisciplinary Case Conference Preparation		
Patient Engagement and Education		
Finance		
Data Capture and Reporting		
Billing		
Information Technology and Electronic Health Records		
Occupational Health Assessment		
Hazardous Drug Precautions		
Research and Innovation		
Legal Agreements		
Regional Oversight / Governance		
Quality Management and Improvement		
Referral Patterns		
Communication		
Implementation Effectiveness Evaluation		
Clinical Trials		
Home care		
Primary Care		
Infusion Centres		

b) Provincial Implementation

Implementation of new oncology products also requires a significant effort at the provincial Ontario Health – Cancer Care Ontario level. When a new drug is funded in Ontario, the OH-CCO drug formulary team must develop provider and patient facing information to support regimen dosing, dose reductions for toxicities, specifics around monitoring and common side effects. This information is gathered from drug monographs and pivotal clinical trials. In the case of drugs that are added to current regimens, this may require developing or editing numerous existing regimens. This work is in addition to the regular maintenance and updating done on the existing 1000+ documents on the website.

The drug formulary team are also responsible for reviewing new regimens with the disease site teams and ensuring they are evidence-based. The drug formulary team coordinates with other OH teams to determine the appropriate ST-QBP funding amount and must provide the inputs for the formula e.g. number of clinic visit, nursing/pharmacy workload. The regimens are then added to the ST-QBP formulary with appropriate communications sent to regions across the province. One major rate limiting step is the build of a new regimen at the hospital pharmacy and they rely on this information published by the OH Drug formulary team. In the case of a new class of drug (e.g. bispecifics), our pharmacists are responsible for participating in working groups, performing evidence base summaries and writing clinical guidance documents that support centres to implement.

Improving Implementation Planning for New Cancer Treatments

Conceptually and practically, health system leaders should view new product adoption and implementation as a continuous process that is integrated into the management operating systems of a regional cancer centre or program. For academic centres, this would include ensuring that clinical trials are included in the planning as a key component of horizon scanning and as a key method where clinicians and staff can gain experience with new cancer treatment molecules.

Interviewees provided some information on the approaches that are currently in place or are evolving in their own region or centre. Several examples are noted below.

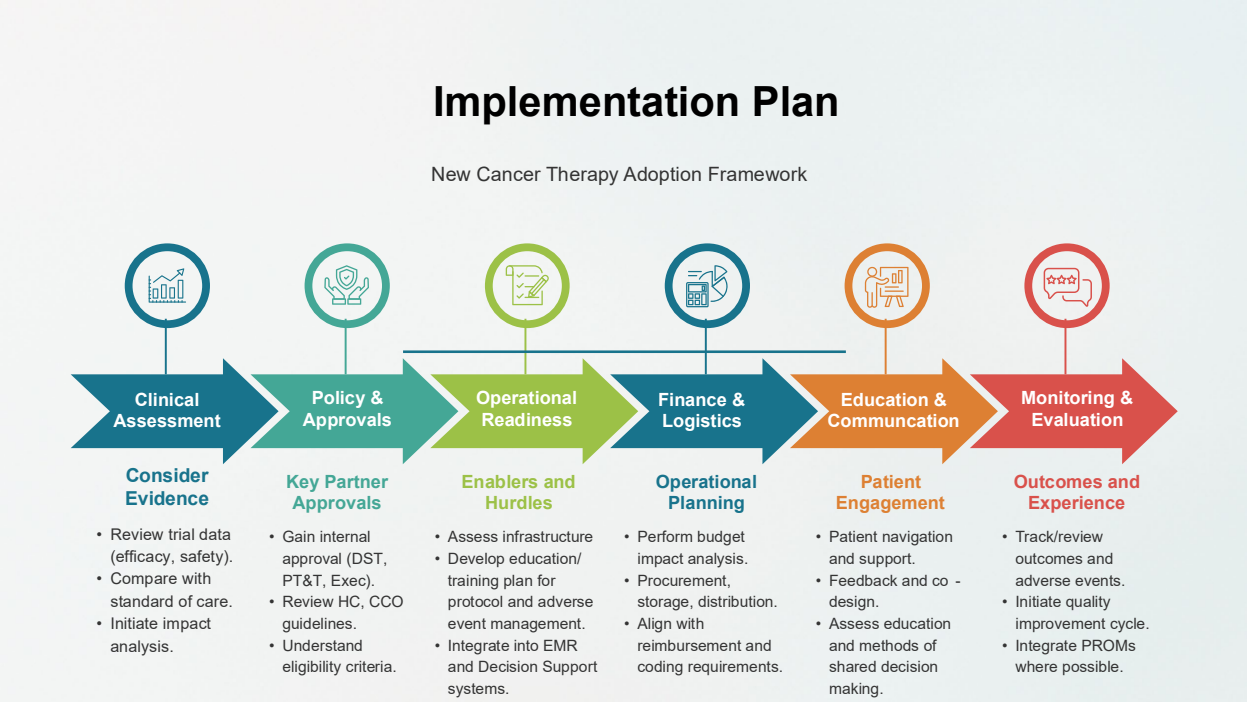
One centre reported that they have established a new regional table specifically dedicated to implementation of new systemic treatment agents. This committee also provides oversight over other matters of the quality of systemic treatment in their region. They reported that their region took a step wise approach to the implementation of new T-cell engaging antibody medications, enabling one centre to take the lead role in implementation. This centre implemented the products first in their region due to their readiness and the lessons learned are now available to apply to other centres. Another regional centre reports establishing a hematology-specific regional table. This committee spans multiple regions owing to the organizations of hematology oncology services in the province. The centre hopes that this table can provide enhanced implementation planning across multiple centres.

Other centres reported on more institution specific examples of engaging other non-cancer centre stakeholders in the process. In one centre, engaging laboratory leadership is a key step in the process and while some improvement in the process is required, the cancer leadership views this as a key part of their own hospital's planning process. Another hospital noted that the engagement of diverse stakeholders was required to adopt radioligand treatments. These stakeholders included nuclear medicine, radiation safety officers and facilities management. These molecules require investment in facilities and a strong and effective interface with other clinical programs such as nuclear medicine.

Another region has begun to engage the pharmaceutical industry in regular horizon scanning. This process is evolving but the goal is to provide both the centre and the pharmaceutical manufacturers with the opportunity to plan more effectively for new product adoption. The ongoing dialogue also allows both parties to identify concerns and roadblocks that each party can collaborate on to resolve. Lastly, this dialogue is also facilitating the development of that centre's clinical trial enterprise which the centre feels is a key strategic program of their centre. The growth of clinical trials enables the centre's academic research mandate, its ability to onboard new products more effectively and as a key treatment option for patients for whom other therapeutic alternatives do not exist.

This same centre is using its limited product management resources and regional staff to develop implementation plans associated with complex systemic treatment product planning implementation such as CAR-T. This new product implementation cascade can be viewed as continuum as represented in Figure 4. This management system is predicated on a broader and more comprehensive approach to implementation. Check lists for implementation are a key component of this process, however, what is required is a new approach to management oversight.

Figure 7. New Oncology Product Implementation Framework[24]



[24] Hamilton Health Sciences New Cancer Therapy Adoption Framework – Implementation Plan (September 2025)

Building a Management Ecosystem That Enables New Product Implementation

It is clear that hospitals, clinicians, provincial health authorities and industry are each working to improve and facilitate a more effective implementation planning process for new cancer treatments. Everyone is working hard to make a difference. That said, the current state is unsustainable if the broad group of stakeholders want to ensure that new drugs are provided safely and effectively in a more-timely manner to patients.

Recommendation 1 - Leadership

New complex cancer treatment implementation should be led in a regional setting by the lead regional cancer centre. Regional Cancer Programs play an important role in coordination of implementation across all regional hospitals. They can also serve to assist smaller hospitals achieve their goals of timelier implementation.

The following outlines recommendations for the creation of local and regional management systems to enable systematic and timely implementation planning to support the introduction of new cancer treatments within the health system. Leadership and standardized processes are foundational pillars to building such an ecosystem, along with proactive planning and broad stakeholder engagement."

Given the complexity of implementation at a local and regional level, implementation of new oncology products should be led in an organized manner by a regional cancer centre / program with a defined project management approach. Health system leaders interviewed validated the need for a defined approach within a region and some are already changing their oversight structures to ensure that tables are created to plan new product adoption in a regional context. Depending on the region this may require the repurposing of existing regional committees such as systemic treatment committees or the development of purpose-built tables where providers, leaders, and patients can oversee the implementation process.

Recommendation 2 – Project Management

Regional cancer centres / programs should use a standard project management methodology to implement new complex cancer treatments. This project management approach can vary from region to region depending on the regional structures and realities, but should address a standard set of implementation parameters.

Recommendation 3 – Implementation Funding Support

Ontario Health – Cancer Care Ontario should explore ways to enable funding of implementation supports, through sources internal as well as external to government. For instance, there may be a role for the pharmaceutical industry to play in providing funding to support complex implementations across the province. This would ensure more equitable access to implementation resources. Funding should be tied to performance outcomes related to specific product implementation.

The eventual system of care that is delivered with the new therapies may vary in different regions, based on the variety of types of health service providers in the region, the expertise of oncology teams, the size of the organizations in the region, geographic considerations within the region, and any number of local considerations. That said, by standardizing the approach to implementation planning and execution, the region will deliver treatment in a more effective, timely and safe manner. There may be opportunities to adjust STQBP funding levels to support implementation planning activities.

Recommendation 4 – New Product Triaging

Regional cancer centres / programs should triage new products to determine the complexity of implementation parameters, which will then inform implementation planning.

All new oncology products are not created equal. Some are easily implemented due to a variety of factors including but not limited to complexity of administration, side effect profiles, and the ability to use existing treatment facilities to administer the product. While project management is required for many complex treatments, some products do not require the same degree of oversight and planning. Regional programs, in partnership with Ontario Health Cancer Care Ontario and the pharmaceutical industry should evaluate each new product / category to determine the amount and type if implementation support that will be required. Such evaluation should start as early as possible in the product evaluation timeline (see Figure 2), in collaboration with local clinicians and pharmaceutical manufacturers. A sample New Product Implementation Complexity Assessment is provided in Table 7 in the Further References section of this report. Focussing planning and project management efforts on complex therapies that meet the needs of the centre can help ensure appropriate use of resources.

Table 2. Sample Product Adoption Stage and Gating Process

Stage 1. Initial Clinical and Operational Assessment
Do patients with this disease have any viable therapeutic options?
How does this treatment fit into the programs overall management of the disease(s) in question?
Is this a novel agent that has no comparable therapeutic option?
Does the program have an equivalent therapeutic option?
Does this new product afford any cost, operational or adverse effect benefit?
Does the program have suitable capacity to implement this product and continue its use?
Gate 1. Decision - Strategic Intent **Decision Maker - Regional Executive Leadership**
Stage 2. Detailed Clinical and Operational Assessment
Conduct a more thorough clinical and operational impact assessment with additional considerations below
Do regional providers have sufficient knowledge and capacity to offer this therapy within the region's provider network?
Does the plan integrate with the overall provincial health system approach
Gate 2. Decision - Operational Intent **Decision Maker - Regional Executive Leadership and Health Provider Agency**
Stage 3. Implementation and Evaluation Plan
See Table 1 New Oncology Product Implementation Plan
Gate 3. Decision - Begin Implementation **Decision Maker - Regional Executive and Health Provider Agency Approvals**
Stage 4. Evaluation and Course Correction
Implement Evaluation Plan
Initiate course correction as required
Determine implmentation plan close out
Gate 4. Decision - Implementation Close Out **Decision Maker - Regional Executive Leadership**

A key part of the project management approach will the development of a stage and gating mechanism to guide regional network for new product implementation. This staging and gating approach will ensure that regions take a disciplined and step-by-step approach to assessing the implementation requirements and readiness of a region and its individual health care organizations in adopting new treatments. It will also allow regions to avoid new product implementation log jams that can be experienced without a coordinated approach. It can also allow or enable regions to expedite implementation of products that are deemed to be of significant importance in the treatment of citizens with particular cancer diagnoses. Table 2 provides a draft framework for an adoption and implementation staging and gating process.

The management ecosystem of improved implementation planning is dependent on the availability of valid and contemporary information on the types and timing of launch and approval of new oncology products. This can only be accomplished through effective partnership with industry and with the provincial cancer agency. The timing of new product development and approvals is fluid and must be an ongoing process. Additionally, academic centres with large clinical trials enterprises should integrate the clinical trials research function into this horizon scanning. Integration will enable academic centres to more effectively compete and contribute on the national and international stage for new research. Conducting clinical trials also provides clinicians with valuable real-world experience with new products that can speed up adoption and implementation planning activities when products receive regulatory approval. Experience with clinical trials and/or compassionate use programs create platforms for supporting health system implementation readiness, providing an opportunity for knowledge transfer within institutions as well as with other regional centres.

Recommendation 5 – Patient Engagement

Regional cancer centres / programs should ensure that patients are meaningfully engaged in the implementation planning process and that an experience-based design approach is used. Patient and care giver representation should include a deliberate and intentional approach to dealing with issues related to the social determinants of health.

The quality of implementation of new products - or any major initiative or change in the health system - is more optimally achieved when patients and caregivers are integrated in the process. Many centres do this well, while in other cases the inclusion of patients is less impactful as they are not integrated as partners in the process. Patients are not bound by the limitations of health professionals' minds. They see things with a clarity that many times eludes health care professionals. While 'participation' of patients is important, the quality of engagement is the key success factor. Experience-based design principles, which embed the actual lived experiences of patients in the design of service delivery, should be adopted in the planning frameworks that a region and its hospitals use.[25]

Patient characteristics based on the social determinants of health should also be an integral component of implementation planning as they play key roles in accessing new medications. These factors can include, poverty/income insecurity, lack of housing, age, education, food security, racial / sexual discrimination mental health illnesses as well as isolation due to a lack of family and/or social network supports.

Importantly, regional programs and centres should actively engage First Nations peoples and Indigenous health providers in the planning. The complex array of issues, supports, stereotypes and racism impact health outcomes of First Nations peoples in a manner that is fundamentally different from other citizen groups. Additionally, the complexity of federal and provincial health insurance adds a unique layer of complexity. Meaningful engagement, active listening and story telling can lead to more effective partnerships between First Nations and health care provider organizations. While not solely related to new product implementation, a planning approach that is inclusive and participative will lead to better outcomes for all.

Another key success factor is the meaningful inclusion of regional cancer centre / program Disease Site Teams (DST) and their leadership. These teams represent front line clinicians and staff who deal with the specifics of a cancer disease site. Their advice in the implementation process can be invaluable. They should also play a key role in horizon scanning with industry. In engaging DSTs, regional leadership should encourage a holistic approach to implementation based on the needs of the disease site.

For example, if capacity is a limitation and a region / centre is faced with an opportunity to implement multiple complex treatments, the DSTs can provide

Recommendation 6 – Disease Management Approach

Regional cancer centres / programs should ensure that lead centre and regional disease site teams are engaged proactively in planning and that the planning ensures a holistic disease management-based approach to implementation rather than a singular product adoption focus.

[25] Morley C, Jose K, Hall SE, et al. Evidence-informed, experience-based co-design: a novel framework integrating research evidence and lived experience in priority-setting and co-design of health services. BMJ Open 2024;14 :e084620. doi: 10.1136/bmjopen-2024-084620

valuable advice and insights to leadership on the relative merits of each new molecule. This could lead to a more balanced approach to implementation and a better-informed decision if all molecules cannot be adopted. As regional cancer centres / programs adopt a more comprehensive and standardized project management approach to new oncology product implementation, it will be important to adopt a conceptual framework that details the roles of specific players in the health system.

Additionally, planning for new product adoption is variable across the province. Many times, the issue of equitable access across the province escapes the viewpoint of local and regional planning. For instance, the system does not clearly measure the access of new molecules across the province. Examples of this would be T-cell engaging antibodies and radioligands. While a progressive and gradual roll out is necessary, local providers can sometimes focus only on their local needs as opposed to building a broader, more cohesive system of care. Clearly mapping out the eventual system of care that is envisaged with a clear plan - as is done in the complex malignant hematology program - would help regional programs, industry, clinicians, and others implement towards a coordinated standards-based goal.

The provincial health agency, individual hospitals, regional cancer programs, patients and families, and the pharmaceutical industry each play a unique role in the health system as it pertains to new product implementation. Ensuring that all parties have clarity on the role that each play is important. As well, ensuring that each party is aware of the requirements, expertise and authority that each party has is critical to effect change. Currently, each player sees the system from their own vantage point, and, in many cases, they do not see the entire system and the interdependencies of each segment of the system. Better understanding along with active and ongoing dialogue across the system will promote more effective ways to implement new treatments.

Understanding the roles and responsibilities of different providers will create a more effective implementation plan. Given that regional cancer centres must use influence and collaboration as a means to enact change with regional providers, ensuring that each party understands their role and responsibility will add clarity to exercise.

Recommendation 7 – Role Clarity

Regional cancer centres / programs, provincial health authorities, individual hospitals, patients and families, and the pharmaceutical industry should be well-versed in the roles that each party plays in implementation. They should ensure that the parties work collaboratively and engage in regular dialogue to plan, oversee, and advise on new product implementation on a provincial level.

For instance, the RVP of a regional cancer centre has responsibility for the organization's service delivery. The leaders can enact change in their own organization and be responsible for change management and service delivery. However, the RVP does not have accountability or responsibility for the operations of another organization. The regional cancer program leadership team can serve as an expert resource, thought partner, and demonstrate a clear command of the standards in the cancer system. They can also serve as an advocate within other organizations to advance change in cancer operations and can act as an advocate for issues of smaller regional hospitals with the provincial cancer agency. Any regional leadership team efforts to manage operations in another hospital would not be acceptable or successful.

Application of a RACI framework (Responsible, Accountable, Consult, Inform) in assessing the overall roles of implementation could be an effective start to understand each agency's role. Clarity of communications and expectations in these matters with regional partners will lead to more effective implementation. Table 3 provides a sample responsibility framework to illustrate the subtle but important differences in accountabilities of the various parties.

Table 3. Implementation Responsibility Matrix

Level	Regional Cancer Centre	Individual Hospital	Regional Cancer Program	Industry	Provincial Cancer Agency
Institutional					
Cancer Operations					
Disease Site Teams					
Finance					
Health Human Resources					
Hospital Operations					
Information Technology and Electronic Health Records					
Multidisciplinary Case Conferences					
Future Focused Planning and Environment Scanning					
Professional Practice					
Quality Management and Improvement					
Research and Improvement					
Support Systems					
Laboratory and Diagnostic Services					
Legal Agreements					
Regional Cancer System					
Disease Site Teams					
Information Technology and Electronic Health Records					
Multidisciplinary Case Conferences					
Future Focused Planning and Environment Scanning					
Quality Management and Improvement					
Referral Patterns					
Regional Oversight / Governance					
Laboratory and Diagnostic Services					
Regional Health System					
Home care					
Primary Care					
Infusion Centres					
Provincial					
Specialized Disease Specific Multidisciplinary Case Conferences					
Specialized Disease Oversight					
Best practice adoption					
Future Focused Planning and Environment Scanning					

Recommendations for Other Stakeholders

While the focus of this document is front-line health system leaders, there are other stakeholders in the system who can contribute to success implementation planning to ensure timely patient access to new therapies. Recommendations targeted to these stakeholders are outlined below and are linked to broader strategies (e.g., Ontario Cancer Plan 6, OH-CCO Systemic Treatment Program Implementation Plan 2024-2028)[26] that emphasize the need to improve health system coordination to support patient care.

Recommendation 8 – Industry Leadership

a) Information sharing

Individual pharmaceutical companies should increase their efforts to engage with and support health system leaders in their planning efforts for complex therapies. Similarly, there needs to be openness on the part of health system leaders to meet with industry representatives and collaborate in both identifying and addressing implementation challenges.

Manufacturers need to proactively identify and define implementation challenges related to their products and inform all levels of the health system of the issues that may arise. Engagement of the health system needs to occur as early as possible in the product development process.

b) Implementation support

The cost of implementation for complex therapies cannot be borne by the health system alone. As part of the cost of doing business, companies should examine potential mechanisms to support funding of project management resources at one or more regional cancer centres to enable implementation of complex therapies. Such an investment is analogous to industry funding of infusion centres for IV biologic therapies and would benefit patients, cancer centres, and companies alike in terms of timely and equitable access.

c) Practical pharmaceutical product considerations

Cancer medications and their administration can be quite complex. The available dosage forms, sizes of products, and dosing regimens all can lead to complexity of administration and, therefore. implementation. Pharmaceutical vendors should ensure that their products better meet the operational requirements of those prescribing and administering the medications. This can include:

- Ensuring that dosing regimens are simple and avoid unnecessary patients visits to a cancer centre on off hours or days;
- Providing drugs that can be administered subcutaneously;
- Aligning medication vial sizes to real life dosing needs to reduce wastage and ease administration;
- Using dose banding to standardize doses; and/or,
- Providing medications in ready to use syringes per dose for subcutaneous administration.

[26] Ontario Health. Systemic Treatment Program Implementation Plan 2024-2028. https://www.cancercareontario.ca/sites/ccocancercare/files/assets/Systemic-Treatment-Implementation-Plan-2024-2028-EN.pdf

Recommendation 9 – Enabling Roles for Ontario Health and Ministry of Health

a) Ministry of Health

At a provincial level, the introduction of proactive, cross-ministry and/or cross-sectoral planning processes to support timely implementation activities for complex therapies would be a valuable addition to current processes. The health system needs to create mechanisms for systematically anticipating, prioritizing, evaluating, planning for, adopting, and evaluating the real-world effectiveness of innovations and new technologies. The success of initiatives such as the recent FAST program hinges on both timely funding but also timely implementation to prove its value.

b) Ontario Health

There may also be opportunities for OH to facilitate coordination and information exchange amongst organizations regarding some aspects of implementation planning, to minimize duplication of effort by individual treatment centres when planning for adoption of new therapies and inform all levels of the health system of the issues that may arise. The most recent Systemic Treatment Program Implementation Plan highlights the role of OH-CCO in provincial implementation of bispecifics (i.e., T-cell engaging therapies), a pilot initiative which could be leveraged as a model for supporting implementation readiness for future complex therapies.

Recommendation 10 – Making Cross-Sectoral Collaboration the Norm

In addition to the importance of role clarity noted above, it is also important that sectors across the cancer system work together to ensure successful health system readiness for complex therapies.

No single entity can take on sole responsibility for enabling implementation readiness. The health sector components required to ensure timely and successful health system readiness are divided into those who own the product information, those responsible for system planning, those with funding powers, and those responsible for delivering care directly to patients. It is only when all of these components work together through cross-sectoral collaboration that we will successfully address the challenges associated with integrating complex therapies into the health system in a timely manner.

Health System Implementation Readiness Playbook

A key component of the implementation planning process will be to develop an implementation plan. The implementation readiness checklist is intended as a pragmatic tool to help cancer treatment centres assess their readiness to move forward with implementation of complex therapies. Readiness planning as well as strong project management can accelerate and, thus, enable timely patient access. The checklist pulls its inspiration from public examples of tools used by various organizations to identify challenges and/or opportunities to be addressed as part of implementation planning for complex cancer therapies.

> ***Recommendation 11 – Implementation Check Lists***
>
> *Regional cancer centres / programs should develop and adopt an implementation check list to ensure that new product implementation project plans are comprehensive and well executed.*

How to Use the Checklist

The checklist below (Table 4) outlines factors (strategies) and activities (tactics) that should be considered at various stages. The checklist is intended to provide general guidance, so the factors and activities identified may not be relevant to all products and/or all centres.

Table 4. New Oncology Product Implementation Plan Checklist

Look to the Future	
Strategies	**Tactics**
Horizon Scanning	• Proactively seek early insights from clinicians on emerging therapies with complex implementation needs (e.g., via surveys, etc.)
	• Request/engage in pipeline meetings with pharmaceutical companies to get an early understanding of the implementation needs for complex therapies (i.e., early impact analysis) and learn about any early access opportunities via compassionate access programs or clinical trials
	• Use insights from above to prioritize and then complete the New Product Implementation Complexity Assessment (see Appendix)
	• Seek early feedback from clinicians on the role of a new product compared to current treatments (i.e., early prioritization, to support future planning)
	• Collaborate with OH/CCO to track complex therapies through regulatory and HTA processes (information sharing)
Consider Evidence	
Strategies	**Tactics**
Assessing Programmatic Clinical Relevance of New Technology	• How does this product fit within the centre's / region's clinical needs?
	• Review trial data (efficacy, safety) to understand relevance of product as a component of the centre / region's overall approach to a specific disease management • Leverage health technology reviews from Canada's Drug Agency and local or regional clinical trials experience
	• Compare with standard of care • Seek insights from clinicians on the role of a new product compared to current treatments (i.e., prioritization, for concrete implementation planning) and consider if existing treatments used will be removed from practice.
	• Complete initial operational impact analysis
	• Make organizational / regional decisions to adopt or defer new technology.
Key Partner Approvals	
Strategies	**Tactics**
	• Gain internal approval (DST, PT&T, Executive)

Policy and Approvals Within Each Centre in the Region	• Review Health Canada and OH-CCO guidelines
	• Understand eligibility criteria
Enablers and Hurdles	
Strategies	**Tactics**
Operational Readiness Planning	Assess enablers relevant to the product being assessed • Existing infrastructure (i.e., manufacturing, cold chain, imaging, nuclear medicine, diagnostics, physical space, equipment, IT systems) • Existing bed/ICU capacity • Existing human resources capacity • Existing policies and protocols (i.e., scope of practice, eligibility and referral protocols, education and training, geographic models of care)
	Assess gaps and identify needs/plans to address them • Infrastructure (i.e., manufacturing, cold chain, imaging, nuclear medicine, diagnostics, physical space, equipment, IT systems) • Human resources capacity • Bed/ICU capacity • Policies and protocols (i.e., scope of practice, eligibility and referral protocols, education and training, geographic models of care) • Scheduling requirements
	Develop staff and physician education / training plan for drug administration and monitoring as well as adverse event management
	Leverage information from pharmaceutical manufacturers
	Integrate into EMR and Decision Support systems
	Identification of regulatory requirements related to product administration, storage,
	Ensure that primary care, emergency medicine, paramedicine and home care are included in planning and knowledge sharing. Establish partnerships with EMS, home care and primary care leadership as well as hospital emergency departments.
Operational Planning	
Strategies	**Tactics**
Finance and Logistics	Perform budget impact analysis
	Procurement, storage, distribution
	Legal agreements
	Transportation requirements
	Align with reimbursement and coding requirements
	Ensure capital equipment and facilities needs are included
Patient Engagement	
Strategies	**Tactics**
Education / Communication	Patient navigation and support
	Feedback and co-design
	Assess education and methods of shared decision making
	Ensure active and meaningful participation of First Nations peoples in planning and evaluation
Outcomes and Experience	
Strategies	**Tactics**
Monitoring and Evaluation	Track / review outcomes and adverse events
	Initiate quality improvement cycle
	Integrate PROMs where possible

The process of assessing implementation needs for a product is not a static process. As new evidence and/or other information comes forward and new roles for a product are identified (e.g., movement from third line to first line), it may be necessary to reassess implementation readiness needs.

The checklist, while not exhaustive, can serve as a prompt for leaders in the development of the project plan associated with implementation. Other items should be considered in the planning process, as outlined in the box below (see Appendix II for further details). While these items are important in the overall planning processes, some of them will require significant policy, regulation, and resource changes.

Other Items For Consideration

Electronic Health Records
Hospital leaders should work with vendors and partner hospitals to enable better sharing of protocols and resources to enable the quicker development of EHR protocols for new medications.

Medication Administration Locations
Hospital leaders should develop implementation plans for new medications that include a more comprehensive assessment of the setting of medication administration.

The Potential Role of Private Infusion Centres
OH-CCO, the Ministry of Health, and Regional Cancer Programs should consider working together to examine the potential role of alternate infusion centres in the regulatory and care milieu in Ontario. Currently, these centres are used without regulatory oversight for non-funded medications. This can cause operational challenges and potential safety issues. These centres could be part of the solution to current systemic treatment capacity challenges in Ontario.

Privacy and Legal Agreements
Hospital leaders should work in concert to develop Ontario wide standards for privacy and legal agreements required for specific products such as CARTs. These will become the provincial standard that industry partners will follow and will streamline and reduce work of hospitals.

Implementation Experience
Ontario Health – CCO, hospitals, Regional Cancer Programs, patients and families and pharmaceutical industry partners should share implementation plans and learnings at an organizational, regional and system wide level to promote an ongoing PDSA improvement cycle for new product implementation. These players are encouraged to also share their expertise and experience with other Canadian jurisdictions.

Each centre in a region should be considered and evaluated for the potential to implement a new product or regimen. As noted by the health executives interviewed, within a region the adoption plan for a new molecule may take a staged approach based on individual organization readiness and the experience of staff and clinicians. A staged approach within a region can also serve as an effective tactic to enable a “Plan-Do-Study-Act” approach to implementation.

The knowledge and learnings gained by centres that adopt a new product first within a region can be applied and utilized for other centres. Thus, implementation planning and readiness can become part of the "learning health system" process, where experience, learnings, and best practices of the implementation process are considered and embedded into future implementation

activities. A recent publication demonstrated the value of sharing experiences and lessons learned with a T-Cell engager at a national level, to inform local implementation strategy development.[27]

Taking a learning health system approach in Ontario will require an ongoing commitment to knowledge-sharing at an organizational, regional, and provincial level. This sharing can catalyze new approaches to implementations and can serve as a stimulus for health system and regulatory change to better meet the needs of Ontarians.

Call to Action

Delays in access to cancer care and/or treatments can directly impact patients and their health outcomes. Leaders at all levels of the health system need to adopt a proactive approach to implementation planning, including support in terms of securing the human and financial resources needed to execute such plans. Implementation readiness is a key success factor in support of timely patient access to innovative therapies and optimizing health outcomes.

The principles and recommendations proposed may also have applicability in the adoption of new medical devices used in cancer treatment. Tools that support health system leaders in their efforts to enable proactive planning and implementation readiness for all types of health innovations will benefit patients and the health system overall.

[27] Cheema PK, Perdrizet KA, Sangha RS, et al. Early Experience with Tarlatamab (T-Cell Engagers) for Extensive-Stage Small Cell Lung Cancer (ES-SCLC) in Canada: Lessons Learned and Implementation Strategies. Current Oncology. 2026; 33(2):84. https://doi.org/10.3390/curroncol33020084

Appendix I – Tables

Table 5. Systemic Treatment Administration Location Framework

Facility	Location	Characteristics				Considerations							
		Accredited	Regulated	EMR	Prescriber	Treatment Complexity	Monitoring	Patient Complexity	Coordination With Radiation	Pharmacy	Insured	Clinical Trials	Products Characteristic
Level 1 Centre	Critical Care Unit	X	X	X	Oncologist	High	High	High	N	Oncology	Y	Y	Hazadous
Level 1 Centre	Stem Cell Unit	X	X	X	Oncologist	High	High	High	Y	Oncology	Y	Y	Hazadous
Level 1 Centre	Inpatient Ward	X	X	X	Oncologist	Moderate	Moderate	Moderate	Y	Oncology	Y	Y	Hazadous
Level 1 Centre	Ambulatory Systemic Treatment Unit	X	X	X	Oncologist	Moderate	Moderate	Moderate	Y	Other/Oncology	Y	Y	Non-Hazadous
Level 1 Centre	Other ambulatory units	X	X	X	Oncologist	Low	Low	Low	N	Oncology	Y	Y	Hazadous
Level 1 Centre	Nuclear Medicine	X	X	X	Oncologist / Nuc Med	Moderate	Moderate	Moderate	N	Radiopharmacy	Y	Y	Radio Ligands
Level 1 Centre	Operating Room	X	X	X	Surgeon	Moderate	Moderate	Moderate	Y	Oncology	Y	Y	HIPEC
Level 2 Centre	Inpatient Ward	X	X	X	Oncologist	Moderate	Moderate	Moderate	Y	Oncology	Y	Y	Hazadous
Level 2 Centre	Ambulatory Systemic Treatment Unit	X	X	X	Oncologist	Moderate	Moderate	Moderate	Y	Oncology	Y	Y	Hazadous
Level 3 Hospital	Ambulatory Systemic Treatment Unit	X	X	X	Oncologist	Low	Low	Low	N	Oncology	Y	N	Hazadous
Level 4 Hospital	Ambulatory Systemic Treatment Unit	X	X	X	Decentral Oncologist	Low	Low	Low	N	Oncology	Y	N	Hazadous
Private Sector Infusion Centre	Ambulatory Unit	X			Decentral Oncologist	Low	Low	Low	N	Other/Oncology	Y	N	Hazadous
Home	Home Care	X	X		Decentral Oncologist	Low	Low	Low	N	Other/Oncology	N	N	Non-Hazadous
Home	Self / Care giver administer				Decentral Oncologist	Low	Low	Low	N	Other/Oncology	Y	N	Non-Hazadous

Table 6. Roles and Responsibilities of the Ontario Health System

Function / Area	Ontario Ministry of Health	Ontario Health	Ontario Health Teams	Hospitals
Primary Role	Sets health policy, legislation, provincial strategy	Oversees and coordinates the health system	Integrates local health providers to deliver coordinated care	Provides direct clinical care
Governance Level	Provincial government ministry	Provincial agency	Local collaborative network (not a legal entity)	Independent corporations with local boards
Key Responsibilities	Policy	Performance oversight	Coordinate care across providers	Hospital operations such as ED, surgery, inpatient, outpatient clinics
	Legislation	Funding distribution	Improve patient transitions	Manage staff and physicians
	System-wide planning	Quality standards	Implement local care pathways	Local clinical programs
	Resource allocation including operational and capital	Provincial programs (cancer, digital health, home care)	Population health planning	Clinical research and teaching
Funding Role	Funds Ontario Health (and some programs directly)	Funds hospitals, primary care, home care, community agencies, mental health agencies	Do not directly receive operational funding; work through partner organizations	Use funding to deliver clinical services Works in partnership with hospital foundations to gain philanthopic support
Accountability	To the public and provincial government	To the Ministry of Health	To Ontario Health for performance expectations	To Ontario Health and their boards
Policy vs. Operations	Policy, legislation, strategic direction	Provincial system operations, integration	Local coordination, care redesign, teamwork across sectors	Day-to-day clinical operations and patient care
Examples of Activities	Revise Public Hospitals Act	Manage wait-time systems	Create shared care model for COPD patients	Run hospital units (ICU, NICU, surgery)
	Set physician compensation models	Oversee home & community care	Connect hospitals, primary care & home care	Provide diagnostic services
	Pandemic policy	Cancer Care Ontario programs	Reduce duplication in care	Deliver emergency care
		Organ donation (TGLN)	Build “one patient, one plan” locally	
Scope of Work	Province-wide, high-level	Province-wide, operational	Local/regional, cross-organization partnerships	Local hospital or multi-site hospital network
Who They Work With	Works with Ontario Health and Cabinet	Works with hospitals, OHTs, primary care, home care, mental health	Works with hospitals, primary care, home care, long-term care, community agencies	Works with OHTs, Ontario Health, community agencies, not for profits, primary care providers, industry, hospitals

Table 7. New Product Implementation Complexity Assessment

Factor	Description
Novel agent	Molecule is fundamentally different than other therapeutic opportunities
Complexity of administration	Degree of complexity of administration and monitoring
Companion / novel diagnostics	Requires companion / novel diagnostics to guide treatment
Adverse event profile	Degree of severity and likelihood that the medication will require emergency, acute care or intensive care service
Complexity of patient treatment processes	Degree of complexity of assessment, and treatment including but not limited to centralized oversight, dependency on other hospital services, referral pathways etc.
Capital investment	Degree of investment in equipment, hospital infrastructure and buildings
Number of hospitals in a region that will be administering the treatment	A broader range of hospitals will require a broader and more comprehensive implementation plan
Clinician familiarity	Degree to which clinicians have experience with the molecule during clinical trials or pre-funding use
Clinician and staff training requirement	Degree of training and skill development required
Electronic health record preparation	Degree of electronic health record development and preparation required.
Patient population factors	Impact of factors such as social determinants of health. These can include poverty, mental health, lack of housing, social isolation, food insecurity and others. Review specific impacts and considerations that impact First Nations peoples.
Human resources requirements	Assess if the new treatment requires additional professional, support or administrative staff. Ensure this includes areas such as personal support workers, decision support staff, pharmacy, administrative clerical staff and IT professionals as well as front line clinical staff such as nurses physicians social workers and the like.
Professional practice changes	Frequently new treatments can change professional practice models. This may mean that staff mix needs to change to utilize advanced practice professionals or require a new set of clinical skills. Assess this impact.

Appendix II – Other Items for Consideration

A. Electronic Health Records

Electronic health records have a demonstrated ability to enhance patient care and medication safety and to enable enhanced and improved care of patients. Fortunately, most hospitals within Ontario utilize a contemporary Electronic Heath Record (EHR). While EHRs are well deployed the landscape shows a patchwork of individual systems from a small number of vendors. Connectivity and interoperability are challenges, and this state is unlikely to change in the foreseeable future.

The cancer EHR landscape has changed in the past decade. Previously when Cancer Care Ontario operated cancer centres it developed, deployed, and maintained a stand-alone electronic prescribing computer system called OPIS. With the advancement of integrated and comprehensive EHR's in the clinical information space, and with CCO's transition from a health care provider organization to a health leadership organization, OPIS was sunsetted and hospitals procured new EHR's as part of their own corporate EHR system. While hospitals have benefited from the advanced EHR's the core work done by CCO to maintain protocols and keep the system current, with new advances in treatments this has fallen to each hospital. This workload is far more complicated and extensive with modern EHRs and, as a result, hospitals find it difficult to operationalize new protocols quickly. Frequently, the rate limiting resources include expert pharmacist, pharmacy technician, and information technology professionals.

EHRs are a key component of a safe oncology medication system and their use as part of an overall health system is considered best practice. Administration of oncology medications is complex and requires much time and effort on the part of EHR system administrators to develop and implement protocols within an organization's EHR. Health leaders have uniformly signalled this as a key impediment to implementation. Additionally, leaders report that EHRs in separate institutions from the same vendor have been implemented in different ways. While this diversity can be expected among different hospitals owing to local processes and procedures, this reality has challenged hospitals in the adoption of new cancer treatments. Individual organizations cannot share learnings and protocols for oncology medications. Each organization is developing their own protocols - be it for EPIC, Oracle, or Meditech EHRs. While this issue is beyond the scope of this paper, health leaders understand that they must work with vendors and partner hospitals to enable better sharing of protocols and resources to enable the quicker development of EHR protocols for new medications.

This important and new work must be resourced to ensure safety and efficacy. Unfortunately, current funding models to do not recognize this work.

B. Medication Administration Locations and Private Infusion Centres

For many years, the administration of chemotherapy and other forms of oncolytic therapy has focused on a systemic treatment suite. These units vary according to hospital size and complexity, but all are focused on a day medicine approach to administration of medications in an ambulatory setting. That said, cancer medication administration can and does occur in a variety of settings, including inpatient acute care wards, intensive care wards, operating rooms, patients' homes, and out of hospital infusion clinics. New agents which are being brought to market carry with them many unique attributes, including administration requirements, side effect profiles, and the need for monitoring and support during and following administration. Given the capacity of systemic treatment units as noted previously, implementation plans developed for new medications should include a more comprehensive assessment of the setting of medication administration.

A conceptual framework for the location of systemic therapy administration is provided for consideration in Table 5 (in Appendix I). A similar framework can be deployed when assessing new (and existing treatments). Within an organization and across a region, this framework can be a useful tool in assessing where and how a medication should be administered based on patient, medication, and organization factors. A key objective of this framework is to preserve systemic treatment suite capacity for those patients and medications that must be delivered in such a specialized setting.

Although beyond the scope of this paper, this framework can also serve as a launch point for consideration of the use of alternate delivery channels outside the hospital outpatient clinic – for example, at-home delivery, via community-based clinics, or through a potential role for private infusion facilities delivering insured cancer medications. (Of note, a regulatory framework for the latter does not exist currently; but, in the future, it could serve as a useful tool for leaders who are seeking to build capacity within the oncology system.)

Clinicians and leaders note that the issue of Patient Support Programs (PSP) should also be considered. Before the public system provides funding approval, manufacturers may make products available to clinicians for 'compassionate' use. The gap between availability of evidence recommendations and funding can be prolonged, reaching six to nine months in many cases. Manufacturers may provide support programs in a variety of formats, including reliance on private infusion centres to administer the medications. These centres may be accredited but lack a provincial regulatory oversight mechanism to ensure quality and safety. Oncologists prescribe the medication and the patient visits these centres to receive the medication. Documentation sharing between the cancer centre and infusion facility is variable and many times leaves oncologists with out adequate care information.

When funding is received, the medications continue to be prescribed but are then administered in a hospital. Frequently, hospitals are caught 'flat footed' with implementation as they have not adequately prepared for implementation. This points to both a regulatory gap in the system as well as a siloing or stove-piping of thought and operations.

Hospital leaders and clinicians understand that the current system is unsustainable and articulate the desire to have a system that builds capacity in a safe and effective manner and recognizes the role that alternative infusion providers can play.

C. Other Pan Regional Collaboration Initiatives

The strength of the Ontario cancer system lies in large part to the interconnected nature of its regional cancer centres. As noted, these centres serve dual roles of service excellence for the services that they provide as well as serving as system leaders catalyzing effective and positive change in the cancer ecosystem in their own region. In the context of new product adoption, much of the work lies within the individual centres or regions. That said, enhanced cross organization and region collaboration may offer centres and the system with enhanced opportunities. Two examples of ideas are provided.

The first pertains to legal and privacy considerations for complex products. While these considerations do not apply to all products, one can easily envisage a growing complexity of legal and / or privacy issues as the sophistication of the scientific advances grows. Hospitals can mitigate some of the extra work in developing these agreements by sharing their expertise and knowledge amongst corporations. This could reduce duplication of effort and would provide a more standard interface with industry in implementing standards.

The second stems from the experience of each region in new product adoption. By sharing implementation plans and learnings, regional programs could potentially accelerate the speed and ease of adoption. (As shown by MacDonald *et al*, sharing of experiences nationally[28] is also important but beyond the scope of this report.) While each centre and region differs in many ways (e.g. geography, health ecosystem organization, technology and expertise) this approach to transparency of new product adoption could facilitate the development of a PDSA culture and a 'learning health system'. [29] Collaboration breaks down silos and reduces work effort by highlighting and sharing best practices.

[28] MacDonald D, Puckrin R, Skrabek P, et al. Practical Guidance for the Expanded Implementation and Provision of Bispecific Antibodies for Diffuse Large B-Cell Lymphoma (DLBCL) Across Canada. Current Oncology. 2025; 32(8):460. https://doi.org/10.3390/curroncol32080460

[29] Fung-Kee-Fung M, Maziak DE, Pantarotto JR, et al. Regional process redesign of lung cancer care: a learning health system pilot project. Curr Oncol. 2018 Feb;25(1):59-66. doi: 10.3747/co.25.3719. Epub 2018 Feb 28. PMID: 29507485; PMCID: PMC5832278.

D. Pharmaceutical Product Considerations

Cancer medications and their administration can be quite complex. The available dosage forms, sizes of products and dosing regimens can all lead to complexity of administration and, therefore, implementation.

Many times, the lack of alignment of dosage forms, vial sizes, administration routes and dosing schedules leads to suboptimal implementation. For instance, when a medication vial is provided in a strength that will lead to wastage when used in real life, centres will opt to not use that drug to reduce significant costly drug wastage. The result of this decision is that patients must travel to a larger centre to receive the medication, creating capacity challenges for those centres and inconveniencing patients. This can be assisted greatly by providing drugs in dosage sizes that align with the actual doses used in real life.

Seemingly simple practice issues such as these can be improved by the pharmaceutical industry working with hospital pharmacists, nurses, physicians, and health system leaders to enable changes that can include:

- Ensuring that dosing regimens are simple and avoid unnecessary patients visits to a cancer centre on off hours or days;
- Providing drugs that can be administered subcutaneously;
- Aligning medication vial sizes to real life dosing needs to reduce wastage and facilitate medication administration;
- Using dose banding to standardize doses; and/or,
- Providing medications in ready to use syringes per dose for subcutaneous administration.