Enhancing the Delivery of Oncology Systemic Treatment in the Home and Community in Ontario

Recommendations Report

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ABBREVIATIONS AND DEFINITIONS

Abbreviations

BSA	Body Surface Area
CADD	Continuous Ambulatory Delivery Device
CMIRPS	Canadian Medication Incident Reporting and Prevention System
CTCAE	Common Terminology Criteria for Adverse Events
EMR	Electronic Medical Record
HCCSS	Home and Community Care Support Services
IV	Intravenous
NSIR	National System for Incident Reporting
NSP	Nursing Service Plan
ONP	Oncology Nursing Program
PPAC	Professional Practice Advisory Committee
PPE	Personal Protective Equipment
RCP	Regional Cancer Program
RN	Registered Nurse
SOP	Standard Operating Procedure
SPO	Service Provider Organization
STIHC	Systemic Treatment in the Home and Community
STP	Systemic Treatment Program

Definitions

Care coordinator: Health system navigators who link patients with the right information and resources to help them achieve their short and long-term health care goals.

Case conference: Regularly scheduled meetings of STIHC healthcare providers from various disciplines. Participants may discuss, identify, or clarify issues; coordinate roles and responsibilities; resolve conflicts or strategize solutions; and adjust current service plans.

Health care providers: Health care providers (including personal support workers, rehabilitation therapists and health care providers from Regional Cancer Programs (RCPs)) involved in one or more of prescribing, handling, preparing, administering, dispensing, patient education and/or monitoring of STIHC.

Hazardous drugs: Drugs are classified as hazardous when they exhibit one or more of the following six characteristics: carcinogenicity, developmental toxicity (including teratogenicity), reproductive toxicity, genotoxicity, organ toxicity at low doses, or structure and toxicity profile that mimics existing drugs determined hazardous by exhibiting any one of the previous five toxicity types. The term "hazardous" will be used throughout the recommendations to represent hazardous-cytotoxic and hazardous drugs unless otherwise stated.

Home and Community Care Support Services (HCCSS): Regional health authorities responsible for providing access to home and community care services for Ontario residents.

Independent double checks: A process by which a second practitioner conducts a verification. Such verification can be performed in the presence or absence of the first practitioner. In either case, the most critical aspect is to maximize the independence of the double check by ensuring that the first practitioner does not communicate what they expect the second practitioner to see, which would create bias and reduce the visibility of an error.

Medication incident: Any preventable event that may cause or lead to inappropriate medication use or patient harm while the medication is in the control of the health care professional, patient, or consumer. Such events may be related to professional practice, health care products, procedures, and systems, including prescribing, order communication, product labelling, packaging, nomenclature, compounding, dispensing, distribution, administration, education, monitoring, and use.

Near miss: An error that has the potential to cause an adverse event (patient harm) but fails to do so because of chance or because it is intercepted prior to reaching the patient.

Nursing service plan (NSP): A plan generated by a nursing service provider organization that guides the nursing care for a client in the home. NSPs contain all of the relevant information about a patient's diagnoses, the goals of treatment, specific nursing orders (including what observations are needed and what actions must be performed), and a plan for evaluation. The plan is updated with any changes and new information as it presents itself.

Service provider organizations (SPOs): Refers to nursing and pharmacy vendors contracted by the Home and Community Care Support Services to deliver home and community care services.

Systemic cancer treatment: Any oral or parenteral anticancer agent including but not limited to hormonal, biological, immunotherapeutic, or chemotherapeutic agents. These anticancer agents may be hazardous-cytotoxic, hazardous or of non-reproductive risk.

Systemic Treatment Facility: A center that offers systemic treatment.

Systemic Treatment in the Home and Community (STIHC): A service that provides a package of evidence-informed care to support patients receiving systemic cancer treatment at home or in the community.

STIHC provider: A subset of health care providers including nurses, pharmacists, pharmacy technicians and care coordinators involved in one or more of handling, preparing, administering, dispensing, patient education and/or monitoring of STIHC (excluding health care providers within Regional Cancer Programs).

SYNOPSIS

As the demand for oncology services - particularly systemic treatment delivery - continues to rise, so does the need for accessible, high-quality systemic treatment care delivery in the home and community.

Currently, delivery of systemic treatment in the home and community (STIHC) varies across Ontario. In 2014 and 2017, current state assessments, conducted by Ontario Health (Cancer Care Ontario), indicated significant regional variation, specifically regarding the services offered, treatment protocols, referral forms, administration devices and equipment (e.g., pumps), education and support, and community provider education. To date, there are no provincial best practice models outlining policy, program and clinical standards to guide coordination and standardization of community-based systemic treatment services. As such, the STIHC initiative was launched jointly by Cancer Care Ontario and Shared Services Ontario (now both part of Ontario Health) and the Local Health Integration Networks (now Home and Community Support Services (HCCSS)) to help standardize policies and program components of STIHC to achieve the same quality standards that are required for systemic treatment delivery in Systemic Treatment Facilities. In 2019 and 2020, Ontario Health (Cancer Care Ontario) convened the STIHC Steering Committee and Project Working Group, respectively to execute Phase 1 of this project - the development of STIHC recommendations. The Steering Committee was accountable for approving the strategy and approach for Phase 1 of the project, as well as final decision-making of this initiative. The mandate of the Project Working Group was to advise Ontario Health (Cancer Care Ontario) on how to enhance the current system for STIHC to optimize quality and safety. Based on evidence and expert opinion of the Steering Committee, Project Working Group, and HCCSS regional representatives, this report was developed to help standardize and enhance the delivery of STIHC in Ontario.

The objective of this report is to present consensus-based recommendations that optimize quality and safety and encourage consistency across the province. The goal is not to create new knowledge, but to make the best use of existing areas of evidence and lessons learned from other jurisdictions, as well as contribute to ongoing practice to address any gaps. The expectation is for this report and its associated recommendations to be implemented and evaluated by HCCSS; this is Phase 2 of the STIHC project.

A variety of approaches were used to inform the findings and achieve consensus:

- Environmental Scan
    - Literature Review
    - Jurisdictional scan of STIHC models in 12 jurisdictions in Canada and abroad via key informant interviews
    - Working group meetings with representatives from Ontario Health (Cancer Care Ontario), HCCSS, Service Provider Organizations (SPOs), and Systemic Treatment Facilities
- A three-step modified Delphi process with the Project Working Group and HCCSS regional representatives to develop quality and safety recommendations

- Consultation with subject matter experts and stakeholders

This document consists of consensus-based quality and safety recommendations for STIHC and a discussion on implementation enablers and barriers of the recommendations.

BACKGROUND

With over 19 million new cases of cancer worldwide in 2020 (1), the demand for oncology services, particularly systemic cancer treatment delivery, continues to rise. In Ontario, approximately 45% of people are expected to have a cancer diagnosis during their lifetime (2). While significant progress has been made in the areas of cancer treatment and prevention, it is projected that the number of people living with cancer in Ontario will continue to rise. Since at least 1981, the incidence and incidence rate of new cancer cases diagnosed have increased each year and it is estimated that in 2030, there will be 115,306 new cancer cases in the province (2). Among these new incident cases, the majority are cancers of the lung, colon and rectum (colorectal), breast and prostate (2). Population growth and population aging are the key drivers of the increase in new cases (Figure 1).

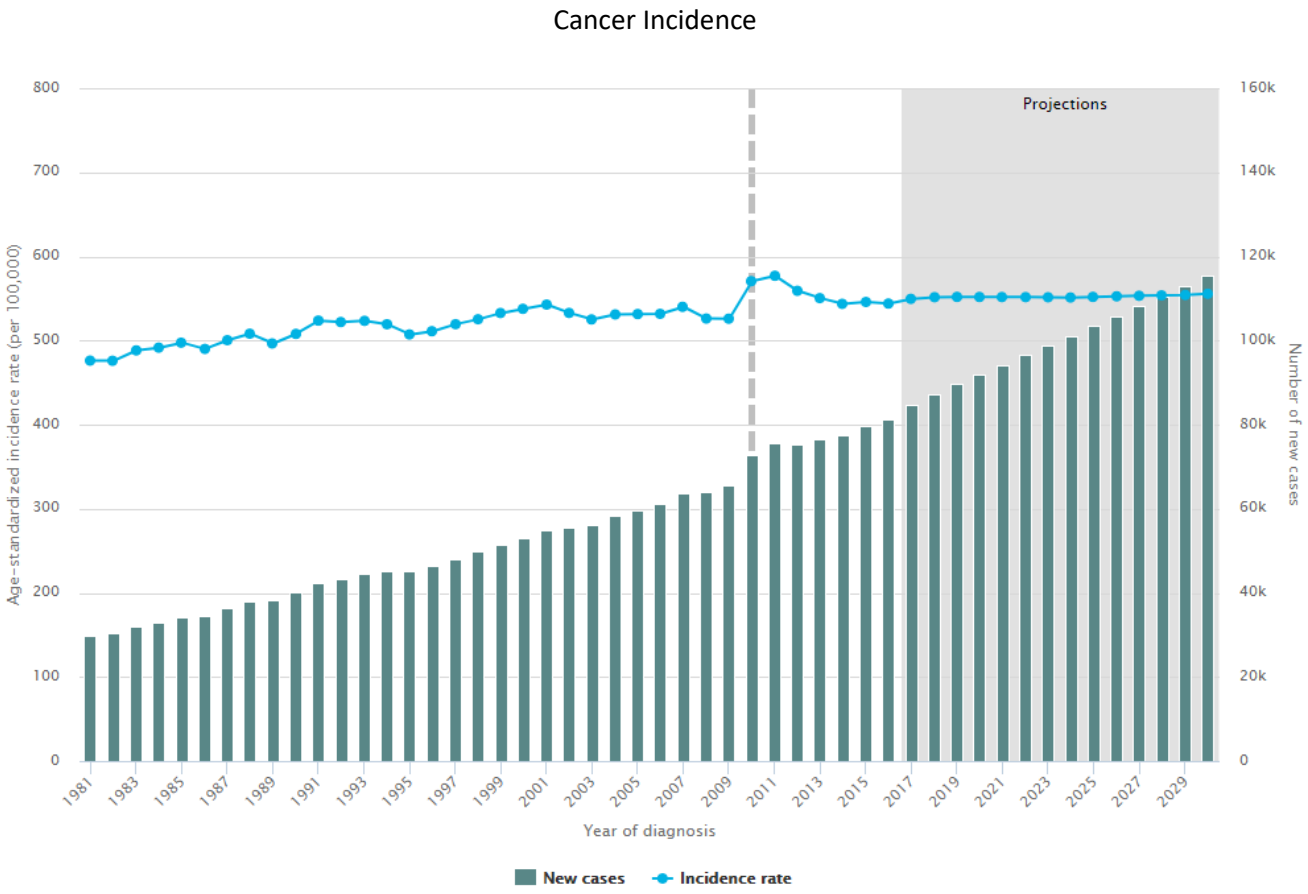


Figure 1. Growth in new cases of cancer in Ontario, 1981-2030

Once diagnosed, patients affected may undergo systemic treatment as part of their treatment plan. Advances in cancer treatment modalities and technological improvements have made it possible to offer systemic treatment in the home and community (STIHC), under specific conditions, through the Home and

Community Care Support Services (HCCSS). These factors combined with local variances in STIHC, patient needs and preferences of available alternatives, contribute to an increasing demand to shift focus outside the walls of the Systemic Treatment Facility to the community and ensure high-quality person-centred care across all settings and closer to home.

> The STIHC project was initiated to ensure patients with cancer receive consistent, high-quality evidence-based care that is in alignment with hospital safety procedures for existing systemic treatment services offered in the home and community.

In 2014 and 2017, Cancer Care Ontario, now part of Ontario Health, conducted current state assessments to understand practices in the delivery of systemic treatment in the home and community, which included an environmental scan, literature review, regional consultations, and process mapping. The results demonstrated significant regional variation, specifically in the areas of services offered, treatment protocols, referral forms, administration devices and equipment (e.g., pumps), education and support, and community provider education and training.

In 2019, Cancer Care Ontario and Shared Services Ontario (now both part of Ontario Health), and the Local Health Integration Networks (now HCCSS) acknowledged the challenge and opportunity of STIHC and committed to standardize the care for systemic treatment administration that is currently being delivered in the home and community. As Phase 1 of this initiative, Ontario Health (Cancer Care Ontario) established a Steering Committee and Project Working Group to support the development of evidence-informed recommendations. The recommendations outlined in this document are intended to support HCCSS to deliver community-based systemic treatment. The recommendations are to be implemented and evaluated by HCCSS as Phase 2 of the STIHC project.

The areas of focus included in the recommendations are:

- **Standards:** Identify standard processes to drive consistency
- **Safety:** Describe requirements to drive safe delivery of STIHC
- **Coordination:** Enhance communication and role clarity among all providers involved
- **Education:** Ensure healthcare providers, patients and families and/or caregivers receive appropriate education and training

SCOPE

This document reports on Phase 1 of the STIHC Initiative - the development of evidence-informed recommendations to support HCCSS in delivering community-based systemic treatment across four focus areas: standards, safety, coordination, and education.

The STIHC recommendations are to be implemented and evaluated by HCCSS as Phase 2 of this Initiative.

KEY GUIDING PRINCIPLE

The Ontario Cancer Plan 5 (2019 – 2023) provides a road map for how Ontario Health (Cancer Care Ontario), the Regional Cancer Programs (RCPs), and health system partners will work together to reduce Ontarians' risk of developing cancer and improve outcomes for those affected by cancer. It focuses on improving safety, equity, efficiency, effectiveness, timeliness and person-centered care.

As outlined in the Plan, **Safe** is the guiding principle for the development of the STIHC Recommendations. The **Safe** goal intends to improve the safety of patients, caregivers and healthcare professionals across care settings.

The STIHC Recommendations will support Ontario Health (Cancer Care Ontario)'s aim to strengthen the delivery of safe care by:

- Providing patients with the necessary tools and education to help them manage their treatment; and
- Standardizing best practices.

Additionally, the STIHC Recommendations will support Ontario Health (Cancer Care Ontario)'s aim to strengthen the existing culture of safety, leadership and accountability by:

- Working with partners to set standards, and measure and report on quality.

Finally, the STIHC Recommendations will support Ontario Health (Cancer Care Ontario)'s strategic objectives to:

- Develop and implement clinical standards and practices to improve treatment quality and safety; and
- Strengthen the culture and system-level oversight for safety.

METHODS

Episode of Care Pathway

In Ontario, the STIHC models of care are fragmented and lack standardization, both intra- and inter-regionally, leading to potential concerns about the safety, quality and accessibility of care.

Several system partners play a role in STIHC including Systemic Treatment Facilities, HCCSS, and SPOs. Together, these organizations must coordinate the movement of patients and their information seamlessly through the care continuum to ensure patients who require STIHC receive the high-quality care they need.

In an effort to map the roles of the numerous partners involved in STIHC across Ontario, an episode of care pathway was developed via expert consultation (Figure 2). In Ontario, a patient requiring STIHC is referred by a Systemic Treatment Facility to HCCSS. HCCSS then reviews the referral and coordinates care delivery in the patient's home or community clinic via a nursing and/or pharmacy SPO. Additionally, bidirectional communication occurs between the Systemic Treatment Facility and community partners to ensure that all parties are informed of the most up-to-date patient information.

This episode of care pathway formed the basis of the framework used to develop the STIHC recommendations.

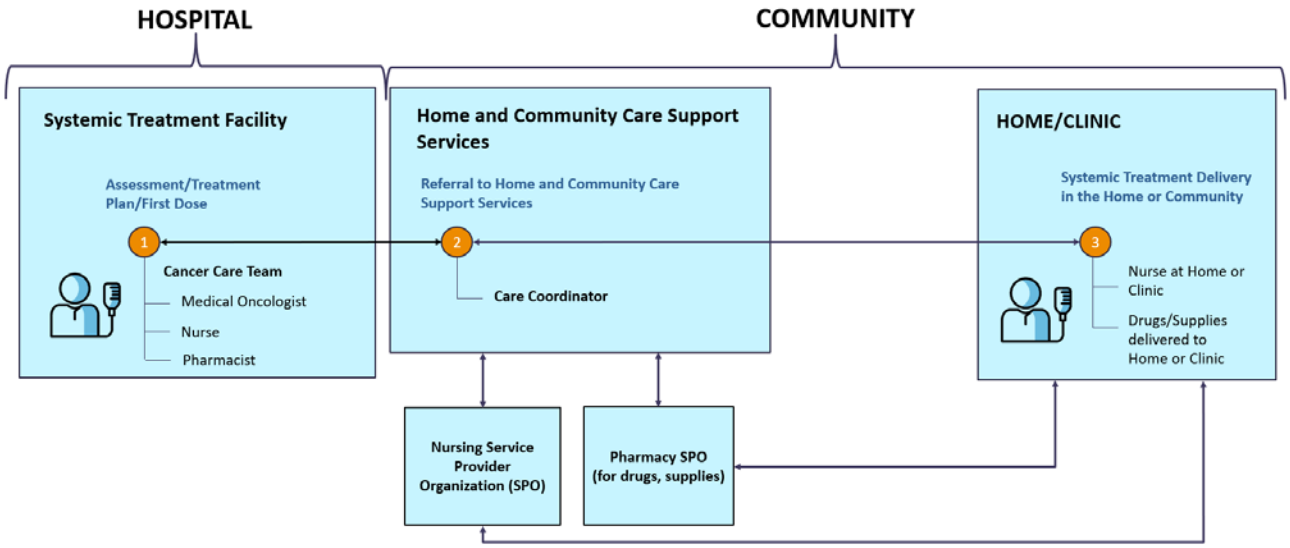


Figure 2. Episode of care pathway for the delivery of STIHC in Ontario.

STIHC Steering Committee & Project Working Group Member Selection & Participation

To catalyze the development of these recommendations, Ontario Health (Cancer Care Ontario) established a Steering Committee and Project Working Group to gain a comprehensive understanding of the way systemic treatment is currently delivered in the home and community. These tables were in session between fiscal years 2019/20 – 2021/22. The STIHC Steering Committee was accountable for approving the strategy and approach for Phase 1 of the project, as well as final decision-making for this initiative. The STIHC Project Working Group operated as a strategic advisory group to inform, validate and support the development of the recommendations. Appendix A outlines the Terms of Reference of the STIHC Steering Committee and Project Working Group. Members included representatives from Ontario Health (Cancer Care Ontario), HCCSS, SPOs, and RCPs from across Ontario.

Ontario Health (Cancer Care Ontario) identified regional representatives to participate on the STIHC Steering Committee via HCCSS' Professional Practice Advisory Committee (PPAC). The PPAC is a provincial committee that provides guidance on scope of practice for regulated health care professionals, highlights new best practices, and makes recommendations to support high quality learning and practice environments.

Ontario Health (Cancer Care Ontario) recruited representatives from HCCSS, SPOs, and RCPs to participate on the STIHC Project Working Group. Some members were identified through their participation on a 2018 working group which was tasked with examining the elements of safe systemic treatment in the home, while others were nominated by the PPAC and RCP leadership.

A Participation Agreement, including a Conflict-of-Interest Declaration, was required upon joining the STIHC Steering Committee and Project Working Group tables.

Environmental Scan

An environmental scan was conducted to uncover existing knowledge and practice of parenteral systemic therapy delivery in home and community settings. The environmental scan consisted of a literature review and jurisdictional scan, conducted in parallel between September 2019 and January 2020.

Literature Review

A literature review was conducted to systematically gather all relevant guidelines, recommendation reports, and standards to inform the delivery of STIHC to patients with cancer. Ontario Health (Cancer Care Ontario) conducted a search in Ovid MEDLINE, Ovid Embase, and Ebsco CINAHL. The search strategy used a combination of key words and free text terms related to cancer, chemotherapy/systemic treatment, community health/home care setting, and adult. Searches were limited to the English language and articles published within the past 10 years (2009-2020).

After manual removal of duplicates in EndNote version 8, the remaining citations were exported to an Excel database to screen titles and abstracts and to manage findings. A single reviewer screened the search results against the eligibility criteria. To ensure accuracy and transparency, abstracts were cross screened by a second reviewer.

Additional articles were included through reference chaining.

In addition, grey literature was located through a targeted internet search, as well as utilizing previously identified Canadian and international organizations and sources. The search strategy used a combination of key words and free text terms related to systemic therapy/chemotherapy/targeted treatment, and home care/primary care/community care/ambulatory care settings.

For a detailed search strategy, refer to Appendix B1.

Jurisdictional Scan

In conjunction with the literature review, Ontario Health (Cancer Care Ontario) conducted a jurisdictional scan of national and international programs that deliver STIHC.

The jurisdictional scan consisted of 12 semi-structured interviews with key informants from 12 unique STIHC programs. Seven Canadian jurisdictions were interviewed including Alberta, British Columbia, Manitoba, Newfoundland & Labrador, Prince Edward Island, Quebec and Saskatchewan; and three international jurisdictions were interviewed including Australia, United Kingdom and United States. Interviews were conducted between November and December 2019 by two interviewers. Upon completion of each interview, a summary was shared with key informants for validation. Information from the programs was synthesized and a thematic summary of interview findings was presented to the Project Working Group.

Additionally, key informants shared tools and resources regarding STIHC programs within their respective jurisdictions. Relevant documents received from key informants were screened, reviewed, and analyzed by subject matter experts to help inform Ontario's STIHC recommendation statements.

For further details, refer to Appendix B2.

Three-Step Modified Delphi

The modified Delphi method is a structured method to achieve consensus through a series of questionnaires and controlled feedback. The Delphi process does not create new knowledge; rather, it builds consensus for group decision-making. The technique is a widely used and accepted method for gathering data from respondents within their domain of expertise. (3,4)

From July to October 2021, a three-step modified Delphi method was used to solicit expert opinion and gauge agreement on the STIHC recommendations using a consensus threshold of 70% or above.

Participants of the modified Delphi Process included members of the Project Working Group and additional representatives from HCCSS regions. Additional HCCSS representatives were recruited through a call for participation via the PPAC.

Ontario Health (Cancer Care Ontario) took this approach to ensure that the most appropriate disciplines and organizations involved with STIHC were present at the table. Additionally, diverse representation and perspectives ensures a comprehensive approach, builds support among the intended audience, and increases the chances of identifying and addressing challenges related to implementation.

Questionnaire Development

Forty citations for articles, reports, standards, guidelines and/or recommendations on the provision of STIHC were identified through the environmental scan. Nine practice components emerged from a content analysis within the four focus areas: policies and procedures, systemic treatment practice standards, drug preparation/delivery, patient monitoring, incident reporting, roles and responsibilities, standardized transition/communication, training and education for providers, and education for patients and caregivers.

Members of the Ontario Health (Cancer Care Ontario) internal project team reviewed a summary of the information, streamlined the statements to ensure clarity, removed redundancies, discussed discrepancies, identified provincial priorities, and finalized a draft with 46 statements (42 recommendations and 4 opportunities for general feedback on each focus area) which was formatted as a questionnaire.

Round 1

The questionnaire was circulated by email to the participants of the modified-Delphi process. Each participant was asked whether they agreed or disagreed with the recommendation statement. Participants were also given the opportunity to provide comments and suggest additional items that may not have been included when developing the initial list of recommendations. In Round 1, the intention was also to clarify issues regarding redundancies as well as the comprehension or composition of each recommendation.

Results from Round 1 were analyzed to determine whether the proposed recommendations met the 70% consensus threshold for inclusion into the final list.

Round 2

All of the recommendations were re-circulated to participants in a second electronic survey. Members used the same voting method described for Round 1 to gauge agreement on the recommendations.

Results from Round 2 were analyzed to determine whether the proposed recommendations met the 70% consensus threshold for inclusion into the final list.

Round 3

The 20 recommendations that were modified based on the feedback provided in Round 2 were re-circulated to members in a third electronic survey. Members used the same voting method as was described for Rounds 1 and 2 to gauge agreement on the recommendation that would be accepted in the final list.

Following Round 3, final editing was completed by the internal working group on the recommendations for accuracy of content, development of ideas, organization, and clarity of expression.

Results of the Three-Step Modified Delphi

Table 1 describes the change in agreement from the statements proposed in Round 1 to the final list of recommendations reviewed and endorsed by the Steering Committee, PPAC and Home and Community Care Support Services VP Table.

Table 1. *Change in agreement from modified Delphi round one to final version.*

Response Criteria	Initial List of Recommendations (Modified Delphi Round One)	Final List of Recommendations Reviewed and Endorsed by the Steering Committee
Response Rate	92% (12/13)	100% (10/10)
# of statements	42	41
# of statements receiving >70% agreement without modification	7	41
# of statements receiving <70% agreements	1	0
# of newly suggested statements	2	0
Agreement % range	58-100%	100%

RECOMMENDATIONS

Standards

Policies and Procedures

Evidence Summary

- Cancer care is a complex, tightly coupled system, in which interdependencies are inherent. Updated policies and procedures bring consistency and standardization to all patient care operations and prevent failures that can have catastrophic effects such as permanent damage to the patient due to overdosage or compromising success in therapy with underdosage. (5,6)
- Appropriately written, executed, disseminated, and audited policies and procedures provide safe, consistent, and effective healthcare within an organization, and set the foundation for safe and high-quality patient care. An organization without a set of overarching principles would struggle to provide clarity when dealing with issues critical to patient safety, health administration, staff responsibilities, legal obligations and regulatory requirements.(7,8)
- Well-defined emergency protocols help providers and staff efficiently and appropriately assess and respond to treatment related oncologic emergencies that may result in devastating outcomes.(9)
- Improper storage or transportation of pharmaceutical products can make some drugs ineffective, and can be harmful or life-threatening to the patients who rely on these products.(10)
- Audits are effective ways for organizations to regularly and consistently examine and improve the quality of their services. Audits highlight discrepancies between a particular standard and actual practice, identifying changes needed for system improvement. (11)
- Protocols not developed in a standardized format are particularly prone to error because crucial information required for safe administration will be difficult to find. (12)

RECOMMENDATION 1:

HCCSS and SPOs shall have clearly written policies in alignment with their involvement in STIHC including:

- **a)** Systemic cancer treatment administration in the home, including:
  - Administration of systemic cancer treatment drugs inclusive of all relevant routes of administration;
  - Documentation requirements;
  - Communication between Pharmacy, Systemic Treatment Facilities and other Service Providers;
  - Independent double checks at point of care; and
  - First doses
- **b)** Safe handling and disposal of systemic cancer treatment agents/waste, including:
  - Transport and storage of systemic cancer treatment drugs;
  - Risk management;
  - Provider and patient health and safety;
  - Education/training of all staff and patients/caregivers;
  - Equipment required in the home to support administration of systemic cancer treatment agents/waste, including personal protective equipment;
  - Management of extravasation;
  - Management of spills; and
  - Management/transport of waste including contaminated body waste and laundry
- **c)** Central/peripheral vascular access devices
- **d)** Actions to take in the event of adverse events/medication incidents including:
  - Prevention;
  - Early detection;
  - Management;
  - Monitoring;
  - Reporting;
  - Systematic process for tracking/reporting incidents electronically;
  - Identifying areas for system improvement and safeguards; and
  - Reviewing all critical medication events using a multidisciplinary approach
- **e)** Standardized transitions of care, including information sharing/review of:
  - Pre-treatment assessment by providers;
  - Patient assessment prior to systemic cancer treatment administration;
  - Treatment plan information;
  - Current patient status;
  - Assessment for and maintenance of access devices required for administration;
  - Ongoing training and education program for all providers; and
  - Incident learnings

RECOMMENDATION 2:

HCCSS and SPOs shall have a clearly written policy to ensure the following information is available for all STIHC providers, prior to administration of STIHC:

- Informed consent has been obtained and/or documented for STIHC as per organizational standard operating procedures (SOP) (e.g., treatment consent, consent to share information/privacy);
- Treatment intent (adjuvant, neoadjuvant, palliative, curative);
- Patient diagnosis and status information;
- Prescribed treatment(s);
- Medical history/co-morbidities;
- Physical care/psychosocial needs;
- Requirements for lab work;
- Self-care capability; and
- Ability to follow directions and learn technical skills

RECOMMENDATION 3:

HCCSS and SPOs shall have a SOP for identifying and documenting:

- Which pharmacy is responsible for the clinical verification of the cancer treatment plan and medication orders (e.g., the oncology pharmacist within the Systemic Treatment Facility or Pharmacy SPO preparing the medication);
- When lab parameters and/or treatment conditions need to be checked, including timing (e.g., prior to each treatment administration, every 3 months), and how recent the results must be;
- How lab results will be shared and communicated to all STIHC providers as required; and
- Who is responsible for checking that lab parameters and/or treatment conditions are appropriate for the patient to receive STIHC

RECOMMENDATION 4:

HCCSS and SPOs shall have well defined emergency response procedures including:

- Immediately accessible emergency kits containing treatment information, dressings, antiseptics, supportive medications, contact information of healthcare providers etc.;
- Ability to access an oncology trained healthcare provider anytime as needed;
- When and who should be called in specific circumstances (oncologist or other provider); and
- Documentation and bi-directional communication processes

RECOMMENDATION 5:

Pharmacy SPOs shall have a clearly written policy to ensure that STIHC medications are transported safely, securely and under the appropriate storage conditions for each drug. HCCSS shall have a clearly written policy to support Pharmacy SPOs in their safe transport of STIHC medications and validate Pharmacy SPOs have such a policy in place.

- Measures must be in place to ensure all medications are maintained within the required temperature range as stated by the manufacturer during transport.
    - Any drug that requires refrigeration, or cold chain protection, shall be kept at the appropriate temperature during transportation and promptly placed in a refrigerator upon receipt by the patient.
- Signature by the patient or agent upon receipt is required unless there is a valid reason for not signing.

RECOMMENDATION 6:

HCCSS and SPOs shall have audit and evaluation processes for the following:

- Training and education requirements for STIHC providers including documentation of all training in a learning portfolio; and
- Patient experience

RECOMMENDATION 7:

Organizations should be subject to an accreditation process.

- Findings of deficiencies pertaining to STIHC (e.g., communication of information relevant to patient care, incident reporting, appropriate training, and re-certification of STIHC providers etc.) shall be addressed with plan of action in a transparent manner.

Safety

Systemic Treatment Practice Standards

Evidence Summary

- Chemotherapeutic agents have a narrow therapeutic window and high toxicity. Medication errors with these agents, coupled with the health status of the patient, can lead to significant harm or, in some cases, death. To mitigate risks, organizations should look for any patient risk factors, assess the risks within the medical environment, and inform the patient of these risks before deciding whether to administer STIHC. (12,13)
- Errors associated with infusion pumps are consistently one of the top 10 hazards on the Emergency Care Research Institute's annual list. Limiting the variety of systemic cancer therapy infusion pumps and clearly labelling easy-to-follow instructions on all infusion pumps support patient safety and minimize medical-device-associated adverse events that could result in significant injury or death. (11,14,15)
- A lack of appropriate oversight and inadequate processes and procedures for the development, review and publication of chemotherapy protocols can lead to significant patient harm. (16)
- Independent double checks have a pivotal role in error detection strategies and can be part of a valuable defense to prevent potentially harmful errors from reaching patients. (17–19)
- Verbal orders offer more room for error than orders that are written or sent electronically. Additionally, once a verbal order is received, it must be transcribed as a written order; this adds further complexity and risk to the ordering process. (20–24)

RECOMMENDATION 8:

HCCSS and SPOs shall consider the following prior to administration of STIHC:

- Patient/caregiver readiness (e.g., patient has a desire and is motivated to receive STIHC);
- Required patient/caregiver education/teaching;
- Diagnosis (e.g., patient's diagnosis is appropriate for STIHC);
- Patient characteristics (both physical and psychological) and co-morbidities;
- Treatment regimen and the risk of complications with the proposed treatment (e.g., patient's systemic cancer treatment is appropriate for STIHC);
- Hospital proximity (e.g., patient has access to 24-hour emergency department); and
- Home environment (e.g., patient has living accommodations which are conducive to self-care, such as access to clean water and electricity, ability to call for help or communicate with health care providers)

RECOMMENDATION 9:

HCCSS and SPOs ideally in collaboration with Systemic Treatment Facilities, shall maintain a list of:

- Drugs eligible for delivery in the home/community; and
- Drugs at high risk for infusion reactions including hypersensitivity reactions and local site reactions (e.g., extravasation, irritation, flare)

When generating the approved lists, the following criteria shall be considered for each drug:

- Safety factors:
  - Drug/treatment regimen toxicity (vesicant or irritant);
  - Complexity of drug/treatment regimen; and
  - Staff education requirements
- Practical factors:
  - Drug/treatment regimen transportation factors;
  - Drug/treatment regimen stability and storage factors;
  - Drug/treatment regimen preparation factors; and
  - Time required by staff to provide service
- Administration protocols shall be obtained or prepared by HCCSS and SPOs (ideally in collaboration with Systemic Treatment Facilities) for each regimen administered in the home/community and reviewed/shared with STIHC providers on an ongoing basis.

RECOMMENDATION 10:

New treatment protocols for STIHC should be established, ideally in collaboration with Systemic Treatment Facilities, following a standard review as per organizational SOPs and development of the standard regimen. Provincial guidelines and recommendations (e.g., Ontario Health (Cancer Care Ontario) best practice guidelines and recommendations) should be continuously referenced in the development of standard regimens promoting quality and consistent care. Refer to Appendix D.

- Deviations from standard protocol recommendations should be clearly documented in order to facilitate safe care delivery involving STIHC providers.

RECOMMENDATION 11:

Administration of drugs that have a high risk of infusion reactions shall only be administered and monitored in a Systemic Treatment Facility.

RECOMMENDATION 12:

All STIHC medications shall undergo an independent double check for treatment and equipment programming.

- Independent double checking shall be completed by the clinician administering STIHC and another health care provider with appropriate knowledge, skills and training to perform this function. Discrepancies shall be addressed prior to administration and completion of the independent double check shall be documented.

RECOMMENDATION 13:

Spill kits shall be provided to a patient/caregiver by the clinician/team initiating the administration of STIHC.

- STIHC providers shall confirm:
  - A spill kit is readily available in the patient's home prior to administration of STIHC; and
  - Patient/caregiver has been provided with training and verbal/written instructions for spill kit use
- If a spill kit is unavailable, patients must have the following items on hand until a spill kit becomes available:
  - Two pairs of nitrile or latex gloves;
  - One surgical mask;
  - Detergent or soap solution;
  - Paper towels; and
- Two garbage bags (double-bag) to dispose of the above

RECOMMENDATION 14:

Ideally, a limited number of suppliers should be sourced for the procurement of supplies and equipment for home/community care (e.g., regional standardization of infusion pump type and brand).

- If this is not possible, STIHC providers shall be comprehensively trained, educated and proficient on all available supplies and equipment for home/community care (e.g., infusion pump types and brands used within their organization).

RECOMMENDATION 15:

Verbal orders shall not be accepted for STIHC except to hold, delay or discontinue the treatment in which case, the instructions should be noted on the order followed by a counter signature/electronic signature by the prescriber. "No refills" or "No part fills" shall be specified on all orders. New orders or changes to orders shall be made in writing and reviewed by an oncology pharmacist in a timely manner, to avoid delivery of medication being delayed.

Drug Preparation/Delivery

Evidence Summary

- Medication safety practices have greater significance when hazardous drugs are provided and may need to be more stringent. STIHC requires the same strict checking of procedures used for hazardous drugs administered in the hospital. (25–27)
- To ensure the integrity of the product and safety of the patient and staff, hazardous drugs should be prepared, stored and transported using appropriate equipment and by individuals appropriately trained on safe handling practices. (10,25)

RECOMMENDATION 16:

HCCSS shall ensure that contracted Pharmacy SPOs providing STIHC have the following:

- Training on cancer and systemic cancer treatment medications for community pharmacy staff;
- Access to Systemic Treatment Facilities' protocols for systemic cancer treatments and patient treatment plans;
- Clearly documented communication pathways with the Systemic Treatment Facility;
- A link to the pharmacists at the Systemic Treatment Facility to provide support to the community pharmacy team; and
- A referral system that safely delivers bi-directional key patient information in a confidential way back to the Systemic Treatment Facility

RECOMMENDATION 17:

Pharmacy SPOs shall follow regulatory standards for compounding of sterile and non-sterile preparations (e.g., National Association of Pharmacy Regulatory Authorities).

RECOMMENDATION 18:

IV systemic therapy agents shall not be stored for long periods in community settings, either during transport or in a patient's home.

- Systemic therapy shall not be held in transport for more than 4 hours and will be dependent on the stability of each individual medication.
- IV systemic therapy shall:
    - Not be stored in a patient's home for more than 2 days;
    - Appropriately labelled with storage information; and
    - Be accompanied with proper storage instructions to be provided to the patient

RECOMMENDATION 19:

Orders for same day administration should be discouraged. STIHC providers require a minimum of 24 hours to process STIHC referrals/orders.

- Systemic therapy medications that are required for same day administration and cannot be delivered and administered within the required time frame shall be prepared/administered in the Systemic Treatment Facility.

RECOMMENDATION 20:

HCCSS and Pharmacy SPOs shall ensure that hazardous drugs are labelled appropriately and transported by individuals who have received appropriate training (e.g., certification for the transportation of dangerous goods, use of spill kits) and who have spill kits immediately accessible.

Patient Monitoring

Evidence Summary

- Protocols and procedures that enhance patient safety and reduce variation in service delivery prevent delays and undertreatment of adverse events that can result in poorer adherence to treatment, impaired health related quality of life, increased health service use, and mortality. (11,28–31)
- Proactive symptom assessments and clearly defined reporting channels may help clinicians manage toxicities between visits and address toxicities before they become severe and require Emergency Department visits or hospitalization. (28–30)

RECOMMENDATION 21:

Evidence-based protocols shall be readily accessible and utilized for the management of symptoms, side effects, and oncological emergencies.

- Protocols should provide details on appropriate assessment intervals and grading of adverse effects using a recognized toxicity grading system (e.g., Common Terminology Criteria for Adverse Events (CTCAE)).

RECOMMENDATION 22:

HCCSS and SPOs shall report back to the Cancer Care team promptly if there are:

- Adverse drug reactions;
    - Adverse events should be graded using a recognized toxicity grading system (e.g., CTCAE); and
    - Medication infusions should be stopped immediately if any adverse reaction occurs
- Systemic cancer therapy related incidents;
- Device-related complications;
- Problems with adherence to STIHC drugs;
- Spills;
- Potentially severe near misses; and
- Change in patient- and condition-related factors (e.g., cognitive decline)

Information should be documented and shared with all STIHC providers though established communication channels.

Incident Reporting

Evidence Summary

- Incident reports highlight errors that occur throughout the medication use process and are used to identify opportunities for improving patient safety. (5,27,32,33)
- Incident reports should be reviewed and analysed by a dedicated team of patient safety specialists to identify the most important risks to patient safety and coordinate incident learnings for successful accident reduction. (34)
- Under reporting of incidents results in inconsistent investigational approaches and action planning, hindering effective risk reduction and shared learnings to improve safety. (33–35)

RECOMMENDATION 23:

HCCSS and SPOs shall track near misses and/or medication incidents with a review and system improvement process.

- Aggregate information from near misses and/or medication incidents should be readily accessible and shared with all health care providers for incident learning across the STIHC care delivery system.

RECOMMENDATION 24:

Near misses and/or medication incidents (including spills) shall be reported to incident-based reporting systems (e.g., local reporting systems, Canadian Medication Incident Reporting and Prevention System (CMIRPS) Program, safemedicationuse.ca) as per organizational SOPs.

Coordination

Roles and Responsibilities

Evidence Summary

- Role clarity is a crucial issue for effective interprofessional collaboration. Poorly defined roles can become a source of conflict in clinical teams, reduce the effectiveness and quality of care and services delivered and result in poor patient experiences as well as gaps in care.(23,27,36)

RECOMMENDATION 25:

Organization and team roles and responsibilities shall be formalized as indicated:

Systemic Treatment Facility*

- Develop and communicate an individualized systemic cancer treatment plan to HCCSS' care coordinators.
- Ensure labs are ordered, lab parameters are appropriate for the patient to receive STIHC and results are sent to the HCCSS care coordinators for sharing with the SPOs.
- Provide the following patient education (verbal and written) related to STIHC using a multi-disciplinary approach which may include nurses, physicians and pharmacists:
    - Diagnosis;
    - Intent of treatment;
    - Short and long-term effects (including any patient specific side effects experienced with treatment in the Systemic Treatment Facility);
    - Management of side effects;
    - How to manage IV/oral treatments in the home including recognizing pump malfunction;
    - Appropriate medication storage conditions;
    - Use of spill kits; and
    - Disposal/safe handling
- Ensure consultative oncology clinicians (e.g., oncologist, specialist cancer nurses, and clinical pharmacists) are available for advice, consultation and remote support.
- Complete a standard intake form (Resource Matching and Referral) and associated orders and submit to the HCCSS' care coordinator.
- Obtain and document consent for STIHC.
- Assess/manage treatment related toxicities.
- Maintain internal system of incident reporting while fulfilling the requirement of reporting critical incidents related to medication/IV fluids to National System for Incident Reporting (NSIR).
- Report severe adverse events related to medications/devices to Health Canada as part of the Protecting Canadians from Unsafe Drugs Act (Vanessa's Law).

HCCSS and SPOs

- Oversee ongoing development and maintenance of standardized protocols and procedures that support STIHC.
    - Standardized protocols should be developed in collaboration with the Systemic Treatment Facilities to ensure consistency and quality throughout the STIHC care continuum.
- Ensure there are processes in place to enable auditing/monitoring of clinical and service outcomes.

HCCSS' Care Coordinators

- Determine ability to accept patient for STIHC (e.g., eligibility for nursing, supplies, and equipment).
- Develop a personalized service/care plan which details the patient's STIHC care needs and full complement of home and community services to meet those needs.
- Conduct assessment to identify any actual/potential risk factors that may compromise patient or nurse safety (e.g., environmental hazards, issues related to drug transportation or disposal of waste etc.).
- Coordinate the referral process and organize all aspects of patient care. Ensure:
    - Complete referral form received from Systemic Treatment Facility;
    - Consent is complete and documented;
    - A new complete systemic cancer treatment order is received for each STIHC administration;
    - Elements of the systemic cancer treatment plan required for safe administration of STIHC are documented including:
        - Patient diagnosis and status information;
        - Medical history/co-morbidities;
        - Medication history;
        - Presence or absence of allergies and history of other hypersensitivity reactions; and
        - Prescribed treatment(s) (e.g., systemic cancer treatment protocol)
    - Provision of supplies, medications and equipment;
    - Patient/caregiver received education regarding treatment plan, adverse effects and complications of therapy and appropriate management;
    - Patient/caregiver received education on drug delivery system, appropriate medication storage conditions, venous access device, systemic cancer treatment drug precautions and home spills (including who to notify for replacement if a spill kit is used);
    - Patient/caregiver's understanding of education provided;
    - Link patients to appropriate STIHC providers to address identified gaps in education and answer outstanding questions;
    - SPO nurse requested pump pick-up at the end of each STIHC administration;
    - Documentation is completed; and
    - Patient/caregiver is informed of who and when to call for on-going help
- Communicate regularly through established shared documentation channels with health care providers to provide/receive updated information and/or clarifications.
- Consider/share all assessments and information from healthcare providers in accordance with legislation and expressed patient consent.
- Coordinate emergency situations in accordance with policies, emergency response procedures and emergency preparedness.
- Ensure there is the ability to contact consultative oncology providers (e.g., oncologist, specialist cancer nurses, and clinical pharmacists) for advice, consultation, remote support and referral.

- Ensure SPOs are aware of communication channels between organizations and consultative oncology providers.
- Regularly reassess patient's STIHC needs, review requirements and revise the client's Home and Community service/care plan as necessary.

SPO Nurse

- Complete oncology specific training and demonstrate ongoing competency in oncology care.
    - Level of training should be dependent on role in STIHC (e.g., initiation, administration and monitoring versus monitoring and discontinuing only).
- Review, assess and accept STIHC referrals from HCCSS.
- Develop a nursing service plan.
- Communicate with STIHC providers to provide/receive updated information and/or clarifications.
- Prior to administration of STIHC:
    - Conduct environmental health and safety assessment to confirm personal and patient safety;
    - Confirm patient consent is completed and documented;
    - Confirm clear prescription documented;
    - Confirm medication has been stored within the required temperature range as stated by the manufacturer in the patient's home (e.g., medication that requires refrigeration was promptly placed in a refrigerator upon receipt by the patient);
    - Confirm a spill kit or appropriate substitute items are readily available;
    - Conduct patient assessment (confirm using at least 2 patient identifiers), consider:
        - Patient status;
        - Co-morbidities;
        - Patient medication history;
        - Patient allergies; and
        - Any pre-existing symptoms
    - If initiating STIHC, confirm lab parameters is within acceptable range for dosing and perform independent double-check of treatment and equipment (if applicable);
    - Confirm and reinforce education provided by the Systemic Treatment Facility and Pharmacist and address outstanding patient questions; and
    - Provide patient with details regarding:
        - Contact information of home care nurse;
        - Expected care and service; and
        - Who and when to call for on-going assistance
- Monitor and communicate risks as per protocols, adverse drug effects, allergic/infusion reactions and patient status to HCCSS' care coordinators and Systemic Treatment Facilities as appropriate.
- Discard all systemic cancer treatment waste per appropriate disposal protocols.
- Communicate significant changes in patient status and adverse effects to the HCCSS' care coordinators as appropriate in accordance with legislation and any expressed patient consent.
- Complete documentation in patient's health record including:
    - Systemic cancer treatment administered, dose, rate, date and time;
    - Teaching completed;
    - Instructions provided to patient/caregiver;
    - Medical device used;
    - Site inspection;
    - Patient tolerance/response;

    - Follow up plan; and
    - Communication with physician
- Document, report and share patient assessment data and changes to medications in a timely manner with STIHC providers.

* The roles, responsibilities and expectations of the Systemic Treatment Facilities included in this document are not comprehensive. This document only includes recommendations that specifically support systemic treatment in the home and community. Systemic Treatment Facilities are to follow all appropriate guidelines, recommendations and standards defined by Ontario Health (Cancer Care Ontario).

Standardized Transition/Communication

Evidence Summary

- Poor communication and communication failures can lead to medication errors that have the potential to cause severe injury or unexpected patient death. Standardized communication tools and structured communication techniques ensure accuracy of complex information, increase consistency, minimize duplication, decrease risk of medication errors, promote patient safety and overall, lead to improved patient experience and quality of care. (11,23,27,37)
- Effective teamwork can immediately and positively affect patient safety and outcome. It minimizes medical errors, near misses and other adverse events caused by miscommunication. (11,23,27,38)
- Treatment or service care plans improve clarity and prevent duplication. They promote patient safety and ensure consistent communication between all members of the patient's care team, and serve as a roadmap to help patients navigate their treatment journey, improving quality of care and patient experience. (11,23,27,39)

RECOMMENDATION 26:

HCCSS and SPOs shall have a formal communication plan for sharing information such as:

- Care plans;
- Dose changes;
- Adverse reactions;
- Incidents;
- Preparation;
- Administration guidelines;
- Confirmation of receipt of orders; and
- Education provided to patient from home care nurses, care coordinators and the care team at the Systemic Treatment Facility respectively

Communications should ideally be coordinated via a single point of contact in each organization.

RECOMMENDATION 27:

STIHC providers shall have and be trained on standardized communication tools. Ideally there shall be a single point of contact within each organization to manage communications (e.g., HCCSS care coordinator, designated SPO nurse or manager etc.).

RECOMMENDATION 28:

Multi-disciplinary STIHC providers from SPOs, HCCSS and Systemic Treatment Facilities should jointly establish and participate in case conferences to facilitate integrated care for all eligible STIHC patients as required (e.g., complex cases).

RECOMMENDATION 29:

A copy of the original systemic cancer treatment order shall be readily accessible and accompany any documentation from the HCCSS and SPOs. Any changes in treatment shall be clearly documented in the patient's file and accompanied by a new order communicated through current portals from the Systemic Treatment Facility to the community partners.

RECOMMENDATION 30:

HCCSS and SPOs shall have an established standardized referral process (e.g., referral form) at all transition of care points to support continuity of care and information transfer. The form should contain at minimum:

- Patient demographic information;
- Diagnosis/stage of cancer;
- Co-existing medical conditions;
- Treatment/protocol;
- Lab parameters;
- Allergies;
- Current medications; and
- Contact of referring provider

RECOMMENDATION 31:

STIHC providers shall have access to the patient's treatment plan, including:

- Copies of the most current treatment order, including drug, dose, frequency, diluents, amount of diluent, method and sequencing of administration, length/rate of administration, scheduling and interval of therapy and duration of therapy;
- Lab parameters and frequency the physician has ordered;
- Infusion pump programming sheet (if applicable);
- Lab requisition (if applicable); and
- Medication information sheet

RECOMMENDATION 32:

HCCSS' care coordinators and SPO nurses shall have access to and be trained on the use of ConnectingOntario ClinicalViewer portals to support a comprehensive picture of care.

Education

Training and Education for Providers

Evidence Summary

- New cancer treatments and service models are continually evolving. Healthcare organizations have a responsibility to ensure all staff maintain their skills and competency relevant to their role and current scope of practice in cancer therapy and that the introduction of new services and treatments are supported by education, where needed, to ensure continued delivery of high quality cancer care. (16,17,19,27,40,41)
- The type of continuing professional development must reflect the role and responsibilities of the staff member and be relevant to their current scope of practice. Insufficient training and education in new service models or protocols can compromise safe delivery of treatment. (12,13,15,23,36,37)
- Treatment delivered in the community is given without the direct presence of specialist medical support. For this reason, nurses expected to administer this care must be given specific, relevant training and be deemed competent and experienced enough to manage all possible outcomes safely. (42)
- Care of patients with cancer is complex and encompasses a wide range of skills. Inadequate education regarding cancer and cancer treatments can be detrimental to the provision of safe, high quality comprehensive care to patients and their families. It is vital for staff involved in providing safe cancer care to be able to recognize treatment side-effects, symptoms or changes in a patient's overall health status. (40,42,43)

RECOMMENDATION 33:

STIHC providers shall be trained on organization policies and practices.

RECOMMENDATION 34:

Health care providers (including personal support workers and rehabilitation therapists) involved in one or more of prescribing, handling, preparing, administering, dispensing, patient education and/or monitoring of STIHC shall have oncology specific training and demonstrate ongoing competence in oncology care.

- Oncology specific training should be tailored to the health care provider's role in STIHC (e.g., appropriate disposal of systemic cancer treatment waste).
- Organizations shall determine the required level of training for health care providers in alignment with competency standards outlined by their regulating bodies.

RECOMMENDATION 35:

HCCSS and SPOs shall ensure that providers are appropriately trained and maintain the knowledge and skills required for their job function, including but not limited to:

- Ensuring safety in compounding, preparing and dispensing STIHC medications;
- Patient counselling and education;
- Contents contained within and use of a spill kit;
- Preventing, managing and reporting of side effects/adverse events and medication incidents using standardized tools, where available; and
- Training related to care of, and identification of complications including extravasation, phlebitis, infiltration, flare reaction, hypersensitivity/infusion and allergic reactions which are monitored in collaboration with the patient

RECOMMENDATION 36:

HCCSS and SPOs shall ensure that care coordinators and nurses have access to updated educational and training materials when new or unfamiliar agents, protocols or equipment are utilized or when procedures change.

RECOMMENDATION 37:

HCCSS and SPOs shall have a standard mechanism for providing opportunity for, and monitoring of, continued competence. Annual competence assessment or verification is recommended.

RECOMMENDATION 38:

HCCSS should have established mentorship pathways with Systemic Treatment Facilities to support SPOs and community staff in initial oncology specific training and continued competence.

Training and Education for Patients and Caregivers

Evidence Summary

- Educating patients with cancer about their oncology medications is an important component of therapy. Education has been shown to benefit and positively impact patients by equipping them with the skills for self-management and improve adverse effect monitoring and treatment adherence. (44–46)
- Education resources should provide timely, consistent, and personalized information, using an array of teaching strategies tailored to individual patient needs to foster compliance, decrease anxiety and stress, and build trust. (47,48)

RECOMMENDATION 39:

Systemic Treatment Facilities, HCCSS' and SPOs shall provide patients/caregivers with educational resources aligned with their learning needs, abilities, preferences, and readiness to learn.

RECOMMENDATION 40:

SPOs shall review/reinforce the following information (verbal and written) with patients/caregivers:

- Diagnosis;
- Intent of treatment;
- Treatment plan;
- Side effects;
- How to manage systemic cancer treatment medications/supplies and equipment in the home including recognizing pump malfunction, storage, disposal, and safe handling; and
- Regimen- or drug-specific risks or symptoms that require notification and emergency contact information, including:
    - How to contact the practice or organization;
    - Who should be called in specific circumstances (oncologist or other provider); and
    - Symptoms that should trigger a call
- Safe handling of cancer drugs and bodily fluids, (e.g., Ontario Health (Cancer Care Ontario)'s: How to Safely Handle Cancer Medications and Body Fluids at Home);
- What to expect during treatment; and
- Expected outcomes

If identified knowledge gaps cannot be addressed, SPOs shall notify HCCSS care coordinators to liaise patient with appropriate health care provider(s) for additional counselling.

RECOMMENDATION 41:

HCCSS shall provide/reinforce patient education related to:

- Individualized service/care plan;
- When/what systemic cancer treatment supplies will be delivered to the home (e.g., spill kits, gowns, catheters etc.); and
- Who and when to call for on-going help

EXTERNAL CONSULTATION

The aim for the external consultation (Refer to Appendix E for a list of respondents) was to gather insight regarding the communication of the STIHC recommendations, their feasibility, enablers, and challenges/barriers to implementation. Feedback received indicated a strong support for the scope of the recommendations to optimize quality and safety and encourage consistent STIHC across the province. Comments received raised no substantive concerns regarding the clarity of the recommendations. Respondents agreed that the recommendations were comprehensive in addressing the practice components for safe administration of STIHC and that the focus areas for the recommendations were valid and important in the treatment of the patient. It was noted however, a lack of funding, resources, personnel and progression of Ontario Health Teams would be obstacles for implementation as establishing safe systemic treatment practices at home is resource intensive and requires a well integrated, collaborative team of health care professionals. Other perceived barriers highlighted by responders include rural geographical areas that would be difficult to serve, issues with consultant support for home services, a lack of standardization in provider and patient education, the limited number of eligible systemic treatment drugs that can be delivered in the home and last-minute scheduling. Respondents also indicated that the full implementation of these recommendations may be challenging because of their complexity, the novelty with respect to established practice, and the infrastructure needed to support their implementation. Respondents identified key enablers to facilitate implementation and change (discussed in Key Enablers for Implementation) acknowledging that further work would be required to assess the readiness and capacity for change, costs and implementation timeframes.

KEY ENABLERS FOR IMPLEMENTATION

Modified Delphi members and external reviewers identified key enablers for the delivery of high-quality evidence-based care that is in alignment with hospital safety procedures for existing systemic treatment services offered in the home and community. STIHC in Ontario would be facilitated by:

- Close relationship between the Systemic Treatment Facility and community partners to:
    - Enhance care coordination,
    - Improve bidirectional communication, including data sharing,
    - Support system improvement processes,
    - Formalize team functions and responsibilities,
    - Access resources (e.g., providing supplies, access to an oncology trained health care provider), and
    - Ensure quality, safety, and consistency of care (e.g., maintaining list of eligible drugs for safe delivery of STIHC)
- Integrated IT infrastructure for better data sharing and timely communication, such as access to digital health records (e.g., ConnectingOntario), and shared reporting systems between hospital and community partners.
- Funding for and training on the use of web-based portals that provide access to digital health records.
- Sustainable health human resourcing and funding to ensure providers are appropriately trained and maintain the knowledge and skills required for their job function.
- Standardized education for providers.
- Access to oncology expertise through communication links.
- Health human resources to:
    - Support continuing education such as the assignment of a community champion or liaison;
    - Support education and transfer of skills from nurses and pharmacists to patients and informal caregivers;
    - Appoint a single point of contact to support bidirectional communication; and
    - Establish and maintain a mentorship pathway
- Strengthening partnerships in rural settings to encourage consistent access to medication and supplies.

NEXT STEPS

The following are next steps for advancing system change:

- Ontario Health (Cancer Care Ontario) to start to engage affected stakeholders, share the contents of the report and discuss the recommendations for STIHC.
- Community partners currently delivering STIHC or planning to do so, implement and evaluate the STIHC recommendations when health human resources, funding and capacity for change permits, ideally within the next 5 years.
- Ontario Health (Cancer Care Ontario) to support community partners in education for safe delivery of STIHC.

REFERENCES

1. Sung H, Ferlay J, Siegel RL, Laversanne M, Soerjomataram I, Jemal A, et al. Global Cancer Statistics 2020: GLOBOCAN Estimates of Incidence and Mortality Worldwide for 36 Cancers in 185 Countries. CA Cancer J Clin. 2021;71(3):209–49.

2. Ontario Health (Cancer Care Ontario). Ontario Cancer Statistics 2020 [Internet]. Available from: https://www.cancercareontario.ca/en/statistical-reports/ontario-cancer-statistics-2020

3. Yousuf MI. Using experts' opinions through Delphi technique. Pract Assessment, Res Eval. 2007;12(4).

4. Hsu CC, Sandford BA. The Delphi technique: Making sense of consensus. Pract Assessment, Res Eval. 2007;12(10):1–8.

5. Weingart SN, Zhang L, Sweeney M, Hassett M. Chemotherapy medication errors. Lancet Oncol [Internet]. 2018;19(4):e191–9. Available from: http://dx.doi.org/10.1016/S1470-2045(18)30094-9

6. Kloth D.D. Guide to the prevention of chemotherapy medication errors. 2010.

7. Schyve PM. Leadership in Healthcare Organizations : A Guide to Joint Commission Leadership Standards. 2017; Available from: https://www.sahealth.sa.gov.au/wps/wcm/connect/7f1e5a804ab3e560bf56ff0d8bd99c13/Attach+1+Final+Report_Cytarabine.pdf?MOD=AJPERES

8. O'Donnell J, Randy Vogenberg F. Policies and procedures: Enhancing pharmacy practice and limiting risk. P T. 2012;37(6):341–4.

9. Higdon ML, Atkinson CJ, Lawrence K V. Oncologic Emergenices. 2018.

10. Sykes C. Time- and temperature-controlled transport: Supply chain challenges and solutions. P T. 2018;43(3):154–8.

11. Accreditation Canada. Standards Cancer Care. 2017.

12. Weiss BD, Scott M, Demmel K, Kotagal U, Perentesis JP, Walsh KE. Significant and sustained reduction in chemotherapy errors through improvement science. J Oncol Pract. 2017;13(4):e329–36.

13. French National Agency for Accreditation and Evaluation in, (ANAES) H. Patient selection criteria for at-home cancer chemotherapy-formal consensus [Internet]. 2003. Available from: www.anaes.fr

14. Gao, X., Wen, Q., Duan, X., Jin, W., Tang, X., Zhong, L., Xia, S., Feng, H., & Zhong, D. (2019). A Hazard Analysis of Class I Recalls of Infusion Pumps. JMIR human factors, 6(2) e10366. https://doi. org/10. 2196/1036. A Hazard Analysis of Class I Recalls of Infusion Pumps. JMIR Hum factors [Internet]. 2019;6(2)(e10366). Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6524450/?report=classic

15. Emergency Care Research Institute (ECRI). PSO Monthly Brief 2017 Health Technology Hazards

Topped by Infusion Errors. 2017.

16. Independent Review Panel for SA Health. Independent review into the incorrect dosing of cytarabine to ten patients with acute myeloid leukaemia at Royal Adelaide Hospital and Flinders Medical Centre. 2015;(November). Available from: https://www.sahealth.sa.gov.au/wps/wcm/connect/7f1e5a804ab3e560bf56ff0d8bd99c13/Attach+1+Final+Report_Cytarabine.pdf?MOD=AJPERES

17. Carrington C, Stone L KB. COSA guidelines for the safe prescribing, dispensing and administration of cancer chemotherapy. Asia Pac J Clin Oncol. 2010;6(3):220–37.

18. ISMP. Published review of independent double checks shouldn't dissuade providers from using them judiciously. 2019;17(10):2–5. Available from: www.ismp.org/ext/309

19. (BOPA) BOPA. Chemotherapy Service Specification. Medicines Optimisation, Safety and Clinical Pharmacy workforce plan. 2015.

20. Cho I, Park H, Choi YJ, Hwang MH, Bates DW. Understanding the nature of medication errors in an ICU with a computerized physician order entry system. PLoS One. 2014;9(12):1–15.

21. ISMP. Strategies for Safer Telephone and Other Verbal Orders in De ned Circumstances. 2020;1–5.

22. Cohen MR, Anderson RW, Attilio RM, Green L, Muller RJ, Pruemer JM. Preventing medication errors in cancer chemotherapy. Vol. 53, American Journal of Health-System Pharmacy. 1996. p. 737–45.

23. CCNS. Oral Systemic Therapy for Cancer – Standards of Practice. 2016.

24. Karavasiliadou S, Athanasakis E. An inside look into the factors contributing to medication errors in the clinical nursing practice. Heal Sci J. 2014;8(1):32–44.

25. Canadian Association of Pharmacy in Oncology. Standards of Practice for Oncology Pharmacy in Canada. 2009;2(November):1–62. Available from: http://www.capho.org/sites/default/files/page-files/StandardsofPracticeFORWEBV2Dprintable.pdf

26. (BOPA) BOPA. Guidance to Support BOPA Standards for Clinical Pharmacy Verification of Prescriptions for Cancer Medicines. 2012;(February).

27. CAPCA and CCO. Recommendations for the Safe Use and Handling of Oral Anti-Cancer Drugs (OACDs) in Community Pharmacy: A Pan-Canadian Consensus Guideline. 2017.

28. Kendall M, Mason B, Momen N, Barclay S, Munday D, Lovick R, et al. Proactive cancer care in primary care: A mixed-methods study. Fam Pract. 2013;30(3):302–12.

29. Maguire R, McCann L, Kotronoulas G, Kearney N, Ream E, Armes J, et al. Real time remote symptom monitoring during chemotherapy for cancer: European multicentre randomised controlled trial (eSMART). BMJ. 2021;374:1–14.

30. Oakley C, Chambers P, Board R, Gallagher C, Young E, Purcell S, et al. National Chemotherapy Board GOOD PRACTICE GUIDELINE : Promoting Early Identification of Systemic Anti-Cancer Therapies Side

Effects : – Two Approaches . The National Chemotherapy Board (NCB) has a remit to provide guidance , oversight and support for th. 2016;(September).

31. Harrison JM, Stella PJ, LaVasseur B, Adams PT, Swafford L, Lewis JA, et al. Toxicity-related factors associated with use of services among community oncology patients. J Oncol Pract. 2016;12(8):e818–27.

32. Neuss MN, Gilmore TR, Belderson KM, Billett AL, Conti-Kalchik T, Harvey BE, et al. 2016 Updated American Society of Clinical Oncology/Oncology Nursing Society Chemotherapy Administration Safety Standards, including standards for pediatric oncology. Oncol Nurs Forum. 2017;44(1):31–43.

33. Cooke DL, Dunscombe PB, Lee RC. Using a survey of incident reporting and learning practices to improve organisational learning at a cancer care centre. Qual Saf Heal Care. 2007;16(5):342–8.

34. World Health Organization. Patient Safety Incident Reporting and Learning Systems. 2020. 51 p.

35. Stanhope, N., Crowley-Murphy, M., Vincent, C., O'Connor, A. M. & Taylor-Adams SE. An evaluation of adverse incident reporting. J Eval Clin Pr. 1999;(5):5–12.

36. Brault I, Kilpatrick K, D'Amour D, Contandriopoulos D, Chouinard V, Dubois C-A, et al. Role Clarification Processes for Better Integration of Nurse Practitioners into Primary Healthcare Teams: A Multiple-Case Study. Nurs Res Pract. 2014;2014:1–9.

37. O'Daniel M, Rosenstein AHR. Chapter 33. Professional Communication and Team Collaboration. In: The Keys to Effective Schools: Educational Reform as Continuous Improvement, Second Edition. 2008. p. 51–66.

38. Babiker A, El Husseini M, Al Nemri A, Al Frayh A, Al Juryyan N, Faki MO, et al. Health care professional development: Working as a team to improve patient care. Sudan J Paediatr [Internet]. 2014;14(2):9–16. Available from: http://www.ncbi.nlm.nih.gov/pubmed/27493399%0Ahttp://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=PMC4949805

39. Balogh EP, Ganz PA, Murphy SB, Nass SJ, Ferrell BRF, Stovall E. Patient-Centered Cancer Treatment Planning: Improving the Quality of Oncology Care. Summary of an Institute of Medicine Workshop. 2012;0031(0):1051–62.

40. Gill F, Duffy A. Caring for cancer patients on non-specialist wards. Oncology. 2010;19(12):761–7.

41. CCO and PEBC. Regional Models of Care for Systemic Treatment. 2007.

42. NHS Pan Birmingham Cancer Network. Guideline for the delivery of chemotherapy in the community, closer to the patient's home. 2012.

43. NHS Scotland. Education and Training Framework for the Safe Use of Systemic Anti-Cancer Therapy (SACT). 2014.

44. Overland L, Uidelines CLPRG, Framework A a CI, History AA, Admission UH, Education PT, et al. Understanding the process to develop a Model of Care An ACI Framework. Perspect Swallowing

Swallowing Disord. 2009;20(3):60–4.

45. Lively A, Minard L V., Scott S, Deal H, Lambourne T, Giffin J. Exploring the perspectives of healthcare professionals in delivering optimal oncology medication education. PLoS One. 2020;15(2):1–14.

46. McCorkle R, Ercolano E, Lazenby M, Schulman-Green D, Schilling LS, Lorig K, et al. Self-management: Enabling and empowering patients living with cancer as a chronic illness. CA Cancer J Clin. 2011;61(1):50–62.

47. Wood L, Moldawer NP, Lewis C. Immune Checkpoint Inhibitor Therapy. Clin J Oncol Nurs. 2019;23(3):271–80.

48. Kaupp K, Scott S, Minard L V., Lambourne T. Optimizing patient education of oncology medications: A quantitative analysis of the patient perspective. J Oncol Pharm Pract. 2019;25(6):1445–55.

49. Forbes L, Durocher-Allen L., Vu K, Gallo-Hershberg D, Pardhan A, Kennedy K, et al. Regional Models of Care for Systemic Treatment: Standards for the Organization and Delivery of Systemic Treatment. Toronto, ON; 2019.

50. Leung M, Bland R, Baldassarre F, Green E, Kaizer L, Hertz S, et al. Safe Administration of Systemic Cancer Therapy Part 2 : Administration of systemic treatment and management of preventable adverse events. Toronto, ON; 2018.

51. Vu K, Emberley P, Brown E, Abbott R, Bates J, Bourrier V, et al. Developing recommendations for the safe handling of oral anti-cancer drugs in community pharmacies: A pan-Canadian consensus approach. J Oncol Pharm Pract [Internet]. 2019;25(3):674–88. Available from: https://doi.org/10.1177/1078155218796182

52. Royal College of Nursing. Standards for infusion therapy. Vol. 4, Standards for infusion therapy. London, UK; 2016.

53. Saskatchewan Cancer Agency. Community Oncology Program Drug/Treatment Regimen Assessment Approval Process. Saskatchewan, CA; 2019.

54. Cooper C, Depledge J. Cytotoxic chemotherapy: what do community nurses need to know? Br J Community Nurs. 2004;9(1).

55. Hagan M. Disconnecting Chemotherapy in the Patient's Home. Michigan, US.

56. NHS England. 2013/14 NHS Standard Contract for Cancer: Chemotherapy (Adult) [Internet]. Vol. 1. 2013. p. 1–31. Available from: https://www.england.nhs.uk/wp-content/uploads/2013/06/b15-cancr-chemoth.pdf

57. Leung M, Bland R, Baldassarre F, Green E, Kaizer L, Hertz S, et al. Safe Administration of Systemic Cancer Therapy Part 1: Safety During Chemotherapy Ordering, Transcribing, Dispensing, and Patient Identification. Toronto, ON; 2012.

58. Bloomfield JG, Tanay MAL. Chemotherapy in the community: The importance of patient assessment. Br J Community Nurs. 2012;17(6):278–83.

59. World Health Organization. WHO guidelines for the pharmacological and radiotherapeutic management of cancer pain in adults and adolescents [Internet]. World Health Organization. 2018. Available from: https://apps.who.int/iris/bitstream/handle/10665/279700/9789241550390-eng.pdf?ua=1

60. The Scottish Government. Guidance for the safe delivery of systemic anti-cancer therapy [Internet]. 2012. Available from: https://www.sehd.scot.nhs.uk/mels/CEL2012_30.pdf

61. Cancer Care Nova Scotia. Systemic Therapy Program: Standards of Practice – Oral Systemic Therapy for Cancer [Internet]. 2016. Available from: http://www.cdha.nshealth.ca/system/files/sites/77/documents/oral-chemo-standardjul-16.pdf

62. Eastern Health. Community Adult Chemotherapy Program Resource Manual. 2014.

63. Accreditation Canada. Accreditation Report: Alberta Health Services. Edmonton, Alberta; 2016.

64. Dike SN, Johnston PA, Ogunmakin TD, Pokluda MD, Shank LA, Yates JL, et al. Implementing a standardized home chemotherapy spill kit: A Nurse-Led interprofessional approach to best practice. Clin J Oncol Nurs. 2014;18(6):650–3.

65. Pardhan A, Vu K, Gallo-Hershberg D, Forbes L, Gavura S, Kukreti V. Enhancing the delivery of take-home cancer drugs in Ontario. Toronto, ON; 2019.

66. Dalby M. Current models of support from community pharmacies for patients on oral anticancer medicines. J Oncol Pharm Pract [Internet]. 2019;25(1):140–7. Available from: https://doi.org/10.1177/1078155217732399

67. Cancer Care Ontario. Think Tank: Enhancing the Delivery of Take-Home Cancer Therapies in Ontario. Toronto, ON; 2014.

68. Spoelstra SL. Why patients prescribed oral agents for cancer need training: A case study. Clin J Oncol Nurs. 2015;19(3):3–5.

69. Eastern Health. Adult Chemotherapy Home Infusion Program - Policies. Newfoundland and Labrador; 2005.

70. Cancer Care Ontario. Quality Person-Centred Systemic Treatment in Ontario 2014-2019: Systemic Treatment Provincial Plan [Internet]. 2014. Available from: https://www.cancercareontario.ca/sites/ccocancercare/files/assets/CCOSystemicTreatmentPlan.pdf

71. University of Michigan Hospitals and Health Centers. Safe Handling of Hazardous Medications in the Home. 2015.

72. Gavin N, How C, Condliffe B, Depledge J. Cytotoxic chemotherapy in the home: A study of community nurses' attitudes and concerns. Br J Community Nurs. 2004;9(1).

73. Ministry of Health and Long-Term Care & Cancer Care Ontario. Quality-Based Procedures Clinical Handbook for Systemic Treatment [Internet]. 2013. Available from: https://www.health.gov.on.ca/en/pro/programs/ecfa/docs/qbp_chemo.pdf

74. Western Health. Ambulatory Cancer Services Oncology Hospital in the Home Admission Form. Victoria, AU.

75. BC Cancer. Systemic Therapy Treatment Delivery Process. 2017.

76. Boothroyd L, Lehoux P. Home-based chemotherapy for cancer: Issues for patients, caregivers, and the health care system [Internet]. 2004. Available from: https://www.inesss.qc.ca/fileadmin/doc/AETMIS/Rapports/Cancer/2004_02_en.pdf

77. HomeMed. Nursing Orientation Manual for Our Contracted Nursing Partners. Michigan, US.

78. Ewen BM, Combs R, Popelas C, Faraone GM. Chemotherapy in Home Care. Home Healthc Nurse. 2012;30(1):28–37.

79. Cass Y, Connor TH, Tabachnik A. Safe handling of oral antineoplastic medications: Focus on targeted therapeutics in the home setting. J Oncol Pharm Pract [Internet]. 2017;23(5):350–78. Available from: https://doi.org/10.1177/1078155216637217

80. A day in the life of HITH v 3. Victoria, AU.

81. Chavis-Parker P. Safe Chemotherapy in the Home Environment. Home Healthc Now. 2015;33(5):246–51.

82. Yagasaki K, Komatsu H. The need for a nursing presence in oral chemotherapy. Clin J Oncol Nurs. 2013;17(5):512–6.

83. Goodin BS, Griffith N, Chen B, Chuk K, Doreau C, Patel RA, et al. Safe Handling of Oral Chemotherapeutic Agents in Clinical Practice: Recommendations from an International Pharmacy Panel. 2011;7–12.

84. NHS. 362 - Guidelines for the Management and Administration of Systemic Anti-Cancer Therapy [Internet]. 2018. Available from: https://www.hey.nhs.uk/wp/wp-content/uploads/2018/08/managementAndAdministrationSACT.pdf

85. UK Oncology Nursing Society. Systemic Anti-Cancer Therapy (SACT) Competency Passport [Internet]. 2017. Available from: https://www.hee.nhs.uk/sites/default/files/documents/CapitalNurse

Appendix A: Terms of Reference

APPENDIX A1. STIHC STEERING COMMITTEE TERMS OF REFERENCE

Ontario Health (Cancer Care Ontario)/Home and Community Care Support Services
Systemic Treatment in the Home/Community Steering Committee Terms of Reference 2020/21

Overview

Providing consistent, safe care for existing systemic treatment services in the home/community is a shared strategic priority for Ontario Health (Cancer Care Ontario) and Home and Community Support Services. In 2014 and 2017, Cancer Care Ontario (now part of Ontario Health) conducted current state assessments to understand practices in the delivery of systemic treatment in the home/community, which included an environmental scan, literature review, regional consultations, and process mapping. The results demonstrated significant regional variation, specifically in the services offered, treatment protocols, referral forms, and administration devices and equipment (e.g., pumps).

In the late Summer of 2019, Shared Services Ontario and Cancer Care Ontario (both of which are now business units of Ontario Health), and Home and Community Care Support Services acknowledged their commitment and capacity to standardize the care for systemic therapy administration that is currently being delivered in the home/community. Ontario Health (Cancer Care Ontario) agreed to develop evidence informed recommendations to support Home and Community Care Support Services in delivering community based systemic treatment (Phase 1). The areas of focus will be on safety, standards, co-ordination and education. Once finalized, Home and Community Care Support Services would be responsible for the local implementation of the recommendations (Phase 2).

Purpose and Objectives

As the executive sponsors for the Systemic Treatment in the Home/Community initiative, the **Steering Committee** will have oversight for the initiative and will be responsible for:

- Approving the strategy and approach for Phase 1, led by Ontario Health (Cancer Care Ontario)
- Approving the development of the Phase 1 recommendations and other products by the Project Working Group

Membership

Co-Chairs:

- Dr. Leta Forbes, Provincial Head, Systemic Treatment, Ontario Health (Cancer Care Ontario)
- Lorraine Martelli, Provincial Head, Oncology Nursing, Ontario Health (Cancer Care Ontario)

Ontario Health (Cancer Care Ontario) Representation:

- Elaine Meertens, Director, Diagnosis and Treatment
- Colleen Fox, Director, Person-Centred Care
- Daniela Gallo-Hershberg, Manager, Systemic Treatment Program
- Anita Rombough, Manager, Oncology Nursing Program
- Systemic Treatment and Oncology Nursing Program Staff

Home and Community Care Support Services Representation:

- Henrietta Simmons, Manager, Home and Community Care Support Services Champlain
- Colleen Briggs, Director, Home and Community Care Support Services Central
- Lisa Parish, Director and Nursing Lead, Home and Community Care Support Services North Simcoe Muskoka

Ontario Health (Shared Services) Representation:

- Janet McMullan, Clinical Program Lead, Ontario Health (Shared Services)

Membership Responsibilities

- Regular attendance at steering committee meetings
- Prepare for meetings by reviewing material
- Active contribution to steering committee meeting discussions
- Review and approve deliverables by email (as needed, off meeting cycle)

Meeting Schedule

The estimated term for this working group is 12 months. The working group will meet via teleconference on a quarterly basis for approximately 60-90 minutes starting September 2019. Additional meetings may be scheduled if required.

Meeting Minutes

High-level minutes will be kept of all meetings and distributed to working group members following each meeting by Ontario Health (Cancer Care Ontario) staff.

Decision Making Process

The Systemic Treatment in the Home/Community Steering Committee is a formal-decision making table accountable for this initiative. All relevant products from the Project Working Group will be brought forward to this table for approval. If consensus cannot be achieved, the resolution will be at the discretion of the Co-Chairs. Since Phase 1 is an Ontario Health (Cancer Care Ontario)-led initiative, the Ontario Health (Cancer Care Ontario) Leads of the Clinical Institutes and Quality Programs and Population Health and Value-Based Health Systems portfolios have final decision-making authority.*

*Based on current Ontario Health (Cancer Care Ontario) organizational structure; subject to change.

Participation Agreement

Members will be required to sign a Participation Agreement, which addresses confidentiality and conflict of interest obligations as well as other issues.

APPENDIX A2. STIHC PROJECT WORKING GROUP TERMS OF REFERENCE

Ontario Health (Cancer Care Ontario) Home and Community Care Support Services
Systemic Treatment in the Home/Community Project Working Group Terms of Reference 2020/21

Overview

Providing consistent, safe care for existing systemic treatment services in the home/community is a shared strategic priority for Ontario Health (Cancer Care Ontario) and Home and Community Care Support Services. In 2014 and 2017, Cancer Care Ontario (now part of Ontario Health) conducted current state assessments to understand practices in the delivery of systemic treatment in the home/community, which included an environmental scan, literature review, regional consultations, and process mapping. The results demonstrated significant regional variation, specifically in the services offered, treatment protocols, referral forms, and administration devices and equipment (e.g., pumps).

In the late Summer of 2019, Shared Services Ontario and Cancer Care Ontario (both of which are now business units of Ontario Health) and Home and Community Care Support Services acknowledged their commitment and capacity to standardize the care for systemic therapy administration that is currently being delivered in the home/community. Ontario Health (Cancer Care Ontario) agreed to develop evidence informed recommendations to support Home and Community Care Support Services in delivering community based systemic treatment (Phase 1). The areas of focus will be on safety, standards, coordination and education. Once finalized, Home and Community Care Support Services would be responsible for the local implementation of the recommendations (Phase 2).

Purpose and Objectives

As important stakeholders that are involved in delivering systemic treatment in the community, the **Project Working Group** will be asked to apply their unique perspective to inform, validate and support the development of Ontario Health (Cancer Care Ontario)'s recommendations and other outputs for Phase 1.

Membership

- Dr. Leta Forbes, Provincial Head, Systemic Treatment, Ontario Health (Cancer Care Ontario)
- Lorraine Martelli, Provincial Head, Oncology Nursing, Ontario Health (Cancer Care Ontario)
- Lisa Rambout, Staff Pharmacist/Professional Practice Coordinator, The Ottawa Hospital
- Jennifer Hudder, Advanced Practice Leader-eHR, Saint Elizabeth Health Care
- Leslie Marvell, National Clinical Practice Leader, Bayshore Healthcare
- Kardi Kennedy, Regional Director, Oncology, South East Regional Cancer Program
- Erin Laframboise, Care Coordinator, Home and Community Care Support Services Central
- Julianne Labelle, Pharmacy Director, Royal Victoria Hospital
- Kayla Gerrity, Oncology Nurse, Royal Victoria Hospital
- Ex officio members will include staff from Ontario Health (Cancer Care Ontario)'s Systemic Treatment

and Oncology Nursing Programs

Please note that Patient and Family Advisors will be engaged separately

Membership Responsibilities

- Regular attendance at working group meetings
- Prepare for meetings by reviewing material
- Active contribution to working group discussions
- Review materials by email (on occasion in place of meeting)

Meeting Schedule

The estimated term for this working group is 12 months. The working group will meet via teleconference on a monthly or bi-monthly basis as needed for approximately 60-90 minutes starting in early 2020. The term of the working group and meeting schedule may be adjusted as needed.

Meeting Minutes

High-level minutes will be kept of all meetings and distributed to working group members following each meeting by Ontario Health (Cancer Care Ontario) staff.

Decision Making Process

The Systemic Treatment in the Home/Community Project Working Group is a strategic advisory body that makes recommendations by consensus. It is not a formal decision-making table for this initiative. All relevant products from this table will be presented to the Systemic Treatment in the Home/Community Steering Committee, which is accountable for program delivery and is the final decision-making table for this initiative. Note: Since Phase 1 is an Ontario Health (Cancer Care Ontario)-led initiative, the Ontario Health (Cancer Care Ontario) Leads of the Clinical Institutes and Quality Programs and Population Health and Value-Based Health Systems portfolios have final decision-making authority.*

*Based on current Ontario Health (Cancer Care Ontario) organizational structure; subject to change.

Participation Agreement

Members will be required to sign a Participation Agreement, which addresses confidentiality and conflict of interest obligations as well as other issues.

Appendix B: Environmental Scan Methodology

APPENDIX B1. LITERATURE REVIEW

Purpose of the Review

The purpose of the review was to identify the guidelines, recommendation reports, or standards that exist to inform recommendations for the delivery of STIHC to patients with cancer.

Methods

An initial literature search was conducted on October 16, 2019, using the following bibliographic databases: Ovid MEDLINE(R) and Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Daily and Versions(R) <1946 to October 15, 2019>, Ovid Embase <1996 to 2019 Week 41>, and Ebsco CINAHL, version October 16, 2019. Methodological filters were applied to limit retrieval to Clinical Practice Guideline publication types. A subsequent literature search was conducted on November 11, 2019, using the following bibliographic databases: Ovid MEDLINE(R) and Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Daily and Versions(R) <1946 to November 08, 2019>, Ovid Embase <1996 to 2019 Week 45>, and Ebsco CINAHL, version November 11, 2019. Methodological filters were applied to limit retrieval to systematic reviews and other knowledge synthesis publication types. The search strategy used a combination of key words and free text terms related to cancer, chemotherapy/systemic treatment, community health/home care setting, and adult (Appendix B1.1). Results from both searches were limited to English-language documents published between January 1, 2009, and December 31, 2020. After manual removal of duplicates in EndNote version 8, the remaining citations were exported to an Excel database to screen title and abstracts and to manage findings. A single reviewer screened the search results against the eligibility criteria in Appendix B1.2. To ensure accuracy and transparency, abstracts were cross screened by a second reviewer.

Additional articles were included through reference chaining.

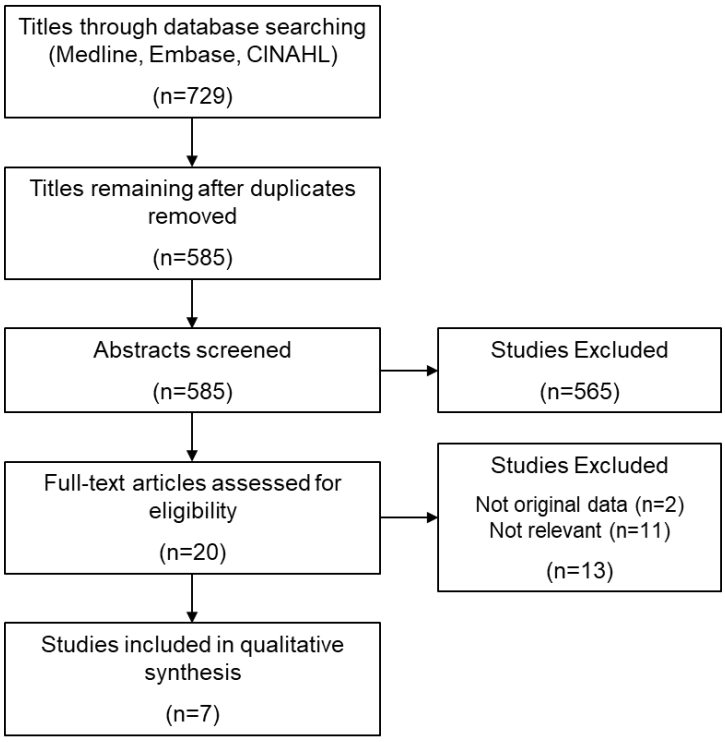
In addition, grey literature was located through a targeted Internet search, as well as utilizing previously identified Canadian and international organizations and sources. The search strategy used a combination of key words and free text terms related to systemic therapy/chemotherapy/targeted treatment, and home care/primary care/community care/ambulatory care settings (Appendix B1.3).

Results of Literature Review

Literature Search

- The search strategy identified a total of 585 unique articles (refer to Figure 1). After reviewing titles and abstracts, 20 articles were identified as potentially relevant. Upon reviewing the full text, 7 articles were included.
- The review identified literature from 3 jurisdictions. Among the included articles, 2 were from the United Kingdom, 4 were from the United States, and 1 was from Canada.
- Accreditation Canada was also searched for relevant literature.

Figure 1. Study Selection Process (PRISMA Diagram)



- Articles discussed safe handling and administration of oral anti-cancer drugs and/or chemotherapy in the home or community setting, and the role of various health care professionals. Refer to Appendix C1 for summary of evidence.

Reference Chaining

- A total of 15 articles were identified. After reviewing the full text, 7 articles were included.
- Reference chaining identified literature from 4 jurisdictions. Among the included articles, 2 were from the United Kingdom, 3 were from the United States, 1 was from Japan, and 1 was from an International Pharmacy Panel.

Grey Literature

- A total of 32 documents were identified. After reviewing the full text, 11 articles were included.
- Grey literature search identified literature from 2 jurisdictions. Among the included documents, 6 were from Canada and 5 were from the UK.

Appendix B1.1 Search Strategies

Tables 1, 2 and 3 present the search strategies developed for Ovid MEDLINE, Ovid Embase, and Ebsco CINAHL, respectively.

***Table 1**: Ovid MEDLINE Search Strategy*

#	Searches	Results
1	exp Neoplasms/ or (cancer* or neoplas* or tumo$r or tumo$rs or carcinoma* or metasta*).ti,ab,kw.	4054039
2	Chemotherapy/ or "Antineoplastic Agents"/ or "Antibodies, Monoclonal"/ or "Molecular Targeted Therapy"/	491000
3	(systemic treatment$ or systemic therapy or systemic therapies).ti,ab,kw.	22913
4	((Parenteral or oral or targeted or molecular or combined or combination or peripheral) adj (chemotherap* or immunotherap* or chemotreat* or therap* or anti-cancer* or anticancer* or antineoplas* or anti-neoplas* or cancer treatment*)).ti,ab,kw.	130635
5	(immunotherap* adj (drug$ or therapy or therapies or treatment$)).ti,ab,kw.	1411
6	(Molecular targeted therap* or monoclonal antibod*).ti,ab,kw.	186855
7	2 or 3 or 4 or 5 or 6	694873
8	1 and 7	393325
9	*"Community Health Centers"/ or *"Community Health Services"/ or *"Outpatients"/ or *Ambulatory care/ or *Day Care, Medical/ or *Family Practice/ or exp Home Care Services/	136018
10	(Community or home care or primary care or family practice or domiciliary or domicile or residence$ or ambulatory or outpatient$ or out-patient$ or home setting$ or home-based or GP surger* or GP office$ or GP clinic$ or community pharmac* or retail pharmac* or rural or remote).ti,ab,kw.	993449
11	9 or 10	1064863
12	exp Review Literature as Topic/ or exp Review/ or Meta-Analysis as Topic/ or Meta-Analysis/ or "systematic review"/	2664191
13	meta analysis.pt.	107640
14	review.pt.	2577804
15	(((systematic or state-of-the-art or scoping or literature or umbrella) adj (review* or overview* or assessment*)) or "review* of reviews" or meta-analy* or metaanaly* or ((systematic or evidence) adj assess*) or "research evidence" or metasynthe* or meta-synthe*).tw.	338284
16	12 or 13 or 14 or 15	2758816
17	8 and 11 and 16	1020
18	(Adolescent/ or Child/ or Infant/ or Pediatrics/ or (child or children or childhood or infant or infants or baby or babies or newborn or newborns or neonate or neonatal or neonates or	2069659

#	Searches	Results
	preemie or preemies or infancy or paediatric or pediatric or girl or girls or boy or boys or kid or kids or teen or teens or teenage or teenager or teenagers or youngster or youngsters or youth or youths or adolescent or adolescents or adolescence or preadolescent or preadolescence or pre adolescent or pre adolescence or preschooler or school age or school aged).ti,ab.) not (Adult/ or (adult or adults or adulthood or middle age or middle aged or elderly or senior or seniors or man or men or woman or women).ti,ab.)	
19	17 not 18	974
20	limit 19 to (english language and yr="2009 - 2020")	501
21	remove duplicates from 20	499

***Table 2**: Ovid Embase Search Strategy*

#	Searches	Results
1	exp Neoplasm/ or (cancer* or neoplas* or tumo$r or tumo$rs or carcinoma* or adenoma* or adenocarcinoma* or metasta*).ti,ab,kw.	4146785
2	chemotherapy/ or Antineoplastic Agent/ or monoclonal antibody/ or "Molecularly Targeted Therapy"/	525948
3	(systemic treatment$ or systemic therapy or systemic therapies).ti,ab,kw.	38313
4	((Parenteral or oral or targeted or molecular or combined or combination or peripheral) adj (chemotherap* or immunotherap* or chemotreat* or therap* or anti-cancer* or anticancer* or antineoplas* or anti-neoplas* or cancer treatment*)).ti,ab,kw.	193943
5	(immunotherap* adj (drug$ or therapy or therapies or treatment$)).ti,ab,kw.	1746
6	(Molecular targeted therap* or monoclonal antibod*).ti,ab,kw.	150307
7	2 or 3 or 4 or 5 or 6	759970
8	1 and 7	520632
9	*Health Center/ or *"Community care"/ or *"Outpatient"/ or *Ambulatory care/ or *Day Care/ or *health care delivery/ or *General Practice/ or exp Home Care/	155201
10	(Community or home care or primary care or family practice or domiciliary or domicile or residence$ or ambulatory or outpatient$ or out-patient$ or home setting$ or home-based or GP surger* or GP office$ or GP clinic$ or community pharmac* or retail pharmac* or rural or remote).ti,ab,kw.	1145872
11	9 or 10	1232158
12	systematic review/ or "systematic review (topic)"/ or meta analysis/ or "meta analysis (topic)"/	356177
13	(((systematic or state-of-the-art or scoping or literature or umbrella) adj (review* or overview* or assessment*)) or search: or "review* of reviews" or meta-analy* or metaanaly* or ((systematic or evidence) adj assess*) or "research evidence" or metasynthe* or meta-synthe*).tw.	759243

#	Searches	Results
14	12 or 13	841449
15	8 and 11 and 14	572
16	(Adolescent/ or Child/ or Infant/ or Pediatrics/ or (child or children or childhood or infant or infants or baby or babies or newborn or newborns or neonate or neonatal or neonates or preemie or preemies or infancy or paediatric or pediatric or girl or girls or boy or boys or kid or kids or teen or teens or teenage or teenager or teenagers or youngster or youngsters or youth or youths or adolescent or adolescents or adolescence or preadolescent or preadolescence or pre adolescent or pre adolescence or preschooler or school age or school aged).ti,ab.) not (Adult/ or (adult or adults or adulthood or middle age or middle aged or elderly or senior or seniors or man or men or woman or women).ti,ab.)	1585239
17	15 not 16	552
18	(abstract* or conference abstract* or note or letter or comment or commentary or editorial).pt.	5622104
19	17 not 18	306
20	limit 19 to (english language and yr="2009 - 2020")	187
21	remove duplicates from 20	184

***Table 3**: Ebsco CINAHL Search Strategy*

#	Query	Limiters/Expanders	Results
S35	S30 NOT S33	Limiters - Published Date: 20090101-20201231; English Language; Exclude MEDLINE records Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	41
S34	S30 NOT S33	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	151
S33	S31 NOT S32	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	650,671
S32	(MH Adult+ OR (TI adult OR adults OR adulthood OR middle age OR middle aged OR elderly OR senior OR seniors OR man OR men OR woman OR women) or (AB adult OR adults OR adulthood OR middle age OR middle aged OR elderly OR senior OR seniors OR man OR men OR woman OR women))	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	1,934,604

#	Query	Limiters/Expanders	Results
S31	(MH Adolescence OR MH Child OR MH Infant OR MH Pediatrics OR (TI child OR children OR childhood OR infant OR infants OR baby OR babies OR newborn OR newborns OR neonate OR neonatal OR neonates OR preemie OR preemies OR infancy OR paediatric OR pediatric OR girl OR girls or boy OR boys OR kid OR kids OR teen OR teens OR teenage OR teenager OR teenagers OR youngster OR youngsters OR youth OR youths OR adolescent OR adolescents OR adolescence OR preadolescent OR preadolescence OR pre adolescent OR pre adolescence OR preschooler OR school age OR school aged) or AB (TI child OR children OR childhood OR infant OR infants OR baby OR babies OR newborn OR newborns OR neonate OR neonatal OR neonates OR preemie OR preemies OR infancy OR paediatric OR pediatric OR girl OR girls or boy OR boys OR kid OR kids OR teen OR teens OR teenage OR teenager OR teenagers OR youngster OR youngsters OR youth OR youths OR adolescent OR adolescents OR adolescence OR preadolescent OR preadolescence OR pre adolescent OR pre adolescence OR preschooler OR school age OR school aged)	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	1,111,341
S30	S5 AND S19 AND S24 AND S29	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	160
S29	S25 OR S26 OR S27 OR S28	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	198,539
S28	TX (((systematic or state-of-the-art or scoping or literature or umbrella) w1 (review* or overview* or assessment*)) or "review* of reviews" or meta-analy* or metaanaly* or ((systematic or evidence) w1 assess*) or "research evidence" or metasynthe* or meta-synthe*)	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	196,449
S27	AB (((systematic or state-of-the-art or scoping or literature or umbrella) w1 (review* or overview* or assessment*)) or "review* of	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	104,524

#	Query	Limiters/Expanders	Results
	reviews" or meta-analy* or metaanaly* or ((systematic or evidence) w1 assess*) or "research evidence" or metasynthe* or meta-synthe*)		
S26	TI (((systematic or state-of-the-art or scoping or literature or umbrella) w1 (review* or overview* or assessment*)) or "review* of reviews" or meta-analy* or metaanaly* or ((systematic or evidence) w1 assess*) or "research evidence" or metasynthe* or meta-synthe*)	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	100,198
S25	MH Literature Review+ or MH Systematic Review+ or MH Meta-Analysis+	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	83,915
S24	S20 OR S21 OR S22 OR S23	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	655,205
S23	(TX Community or home care or primary care or family practice or domiciliary or domicile or residence$ or ambulatory or outpatient$ or out-patient$ or home setting$ or home-based or GP surger* or GP office$ or GP clinic$ or community pharmac* or retail pharmac* or rural or remote)	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	654,412
S22	(AB Community or home care or primary care or family practice or domiciliary or domicile or residence$ or ambulatory or outpatient$ or out-patient$ or home setting$ or home-based or GP surger* or GP office$ or GP clinic$ or community pharmac* or retail pharmac* or rural or remote)	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	467,441
S21	(TI Community or home care or primary care or family practice or domiciliary or domicile or residence$ or ambulatory or outpatient$ or out-patient$ or home setting$ or home-based or GP surger* or GP office$ or GP clinic$ or community pharmac* or retail pharmac* or rural or remote)	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	385,191
S20	MM "Community Health Centers" or MM "Community Health Services" or MM "Outpatients" or MM Ambulatory care or MM Day Care or *Family Practice/ or MH Home Care Services+	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	50,498

#	Query	Limiters/Expanders	Results
S19	S6 OR S7 OR S8 OR S9 OR S10 OR S11 OR S12 OR S13 OR S14 OR S15 OR S16 OR S17 OR S18	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	144,003
S18	(TX Molecular targeted therap* or monoclonal antibod*)	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	8,047
S17	(AB Molecular targeted therap* or monoclonal antibod*)	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	7,976
S16	(TI Molecular targeted therap* or monoclonal antibod*)	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	7,801
S15	TX (immunotherap* w1 (drug$ or therapy or therapies or treatment$))	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	326
S14	AB (immunotherap* w1 (drug$ or therapy or therapies or treatment$))	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	261
S13	TI (immunotherap* w1 (drug$ or therapy or therapies or treatment$))	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	54
S12	TX ((Parenteral or oral or targeted or molecular or combined or combination or peripheral or supportive) w1 (chemotherap* or immunotherap* or chemotreat* or therap* or anti-cancer* or anticancer* or antineoplas* or anti-neoplas* or cancer treatment*))	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	72,299
S11	AB ((Parenteral or oral or targeted or molecular or combined or combination or peripheral or supportive) w1 (chemotherap* or immunotherap* or chemotreat* or therap* or anti-cancer* or anticancer* or antineoplas* or anti-neoplas* or cancer treatment*))	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	23,655
S10	TI ((Parenteral or oral or targeted or molecular or combined or combination or peripheral) w1 (chemotherap* or immunotherap* or chemotreat* or therap* or anti-cancer* or anticancer* or antineoplas* or anti-neoplas* or cancer treatment*))	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	8,263
S9	(TX systemic treatment$ or systemic therapy or systemic therapies)	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	5,873

#	Query	Limiters/Expanders	Results
S8	(AB systemic treatment$ or systemic therapy or systemic therapies)	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	5,665
S7	(TI systemic treatment$ or systemic therapy or systemic therapies)	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	4,575
S6	MH "Chemotherapy, Cancer" or MH "Antineoplastic Agents" or MH "Antibodies, Monoclonal" or MH "Molecular Targeted Therapy"	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	76,542
S5	S1 OR S2 OR S3 OR S4	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	684,954
S4	(TX cancer* or neoplas* or tumo$r or tumo$rs or carcinoma* or metasta*)	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	639,471
S3	(AB cancer* or neoplas* or tumo$r or tumo$rs or carcinoma* or metasta*)	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	514,719
S2	(TI cancer* or neoplas* or tumo$r or tumo$rs or carcinoma* or metasta*)	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	507,152
S1	MH Neoplasms+	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	483,781

Appendix B1.2. Eligibility Criteria Checklist for Title and Abstract Screening

Eligibility Checklist

Inclusion Criteria

Item	Response Options	Notes
1. Is the article related to systemic cancer treatment in the home or community?	☐ Yes ☐ No	
2. Is the article related to policies or guidelines related to systemic cancer treatment in the home or community?	☐ Yes ☐ No	
3. Is the article related to oral chemotherapy policies or guidelines?	☐ Yes ☐ No	

Final eligibility:	
Moves to full text eligibility screening	☐ Yes ☐ Maybe ☐ No

Appendix B1.3. Web-based Search and Key Organizations

Research Evidence	Source
Web-based Search	1. Google Scholar 2. Cochrane Library 3. Trip Database
Organizations	**Canada** 1. BC Cancer Agency 2. BC Ministry of Health 3. AHS 4. NS Cancer Agency 5. NS Health 6. PEBC/CCO 7. Ontario Ministry of Health 8. Health Quality Ontario – OHTAC 9. Cancer Care Manitoba 10. CPAC 11. CMA Infobase **UK** 1. NHS Evidence 2. NICE 3. NHS Scotland 4. SIGN 5. NIHR **US** 1. AHRQ 2. NCI 3. Tripdatabase 4. CMS 5. ONS 6. ASCO **EU** 1. HAS 2. Belgian Health Care Knowledge Centre **Australia/New Zealand** 1. Best Practice Advocacy Centre New Zealand 2. Australian Government. Department of Health. 3. National Health and Medical Research Council (NHMRC) 4. Cancer Australia **Other International** 1. WHO

APPENDIX B2: JURISDICTIONAL SCAN

Purpose of the Jurisdictional Scan

The purpose of the jurisdictional scan was to understand various national and international STIHC programs and leverage lessons learned to support STIHC in the Ontario context.

Methods

The jurisdictional scan consisted of 12 semi-structured interviews with key informants from 12 unique systemic treatment in the home and community programs. Seven Canadian jurisdictions were interviewed including Alberta, British Columbia, Manitoba, Newfoundland & Labrador, Prince Edward Island, Quebec and Saskatchewan; and three international jurisdictions were interviewed including Australia, United Kingdom and United States. Interviews were conducted between November and December 2019 by two interviewers. Upon completion of each interview, a summary was shared with each informant for validation. The interview guide can be found in Appendix B2.1.

Results of the Jurisdictional Scan

A thematic summary of interview findings was presented to the Project Working Group. Themes included: coordination; relationship between home/community care providers and the hospital/health authority; documentation and communication; treatments administered in the home/community; competency requirements; and tools/resources.

Additionally, key informants shared tools and resources regarding systemic treatment in the home/community programs within their respective jurisdictions. In total, 26 documents were received from key informants from Australia, British Columbia, Newfoundland & Labrador, Saskatchewan, United Kingdom, and United States. Relevant documents received from key informants were screened, reviewed, and analyzed. After reviewing the full text, 10 resources were included to help inform Ontario's STIHC recommendation statements.

A complete summary of the key informant interviews may be found in Appendix C2.

Appendix B2.1. Key Informant Interview Guide

Theme: Governance and Accountability

1. How is care integrated across settings?
    a. Prompt: How is funding and payment structured?
    b. Prompt: Are community/home care providers employees of the hospital? Are they contracted through regional health authorities?
    c. Prompt: What provider requirements exist, if any (e.g., training, qualifications)?

Theme: Process

1. What is the pathway for the delivery of systemic treatment in the home/community?
    a. Prompt: What are some of the patient characteristics of those receiving systemic treatment in the home/community? What types of therapies are being delivered outside the hospital?
    b. Prompt: How is care coordinated between the hospital and community? What is the care pathway?
    c. Prompt: What are the roles and responsibilities of various providers?
    d. Prompt: What does the referral process look like?
    e. Prompt: What information is documented along the pathway? By whom? How?
    f. Prompt: How is information communicated between hospital and community? By whom? What type of information is communicated (e.g., general, clinical, incidents)?

Theme: Tools

1. What tools are used to support systemic treatment in the home/community?
    a. Prompt: What systemic treatment guidelines are followed?
    b. Prompt: Is there patient criteria? Are they consistent?
    c. Prompt: What patient education or training is provided?

Appendix C: Summary of Evidence

APPENDIX C1. SUMMARY OF EVIDENCE FROM ENVIRONMENTAL SCAN RESEARCH DOCUMENTS

Focus Area 1: Standards

Policies and Procedures

Overarching Policies & Procedures

- Treatment protocols are consistently followed to provide the same standard of care in all settings to all clients. (11)
- Protocols and procedures for reducing unnecessary variation in service delivery are developed, with input from clients and families. (11)
- Guidelines and protocols are regularly reviewed, with input from clients and families. (11)

Safe Handling of Agents and Devices

- There should be policies for all major processes involved in prescribing, dispensing, handling, and administering systemic treatment (i.e., how systemic treatment is prescribed, the use of standardized protocols, a process for order verification and independent double-checking; preparation and dispensing; pre-treatment assessment, catheter selection, maintenance and removal; monitoring; patient education and discharge documentation), as well as prevention, early detection, and the management of complications related to the catheter/device used and to the drug administered. (49)
- Follow regulatory standards for the safe handling of hazardous drugs, including drug receiving, storage, preparation, packaging, transportation administration and disposal, as well as personal protection equipment, spill management, waste disposal (used equipment and unused medication) and hand decontamination. (11,49,50)
- Policies, procedures, and/or guidelines regarding safe handling of oral anti-cancer drugs should be developed, implemented, and regularly revised and evaluated. (51)
- Cytotoxic drug management and administration should be provided by a multidisciplinary team in which doctors, specialist nurses and pharmacists work together to approve written protocols and provide integrated care both between hospital and community settings (including out-patient settings). (52)
- There should be policies and procedures in place to address accidental worker exposure to hazardous drugs. (49)
- Factors to determine whether a patient's drug/treatment regimen is appropriate for the Community Oncology Program of Saskatchewan are (53):
    - Treatment toxicity;

    - Treatment complexity; and
    - Effort to provide staff education
- Hospitals must have a written procedure in place to ensure that chemotherapy agents are transported safely, securely and under the appropriate storage conditions for that individual drug. If the leak-proof container is returned by the patient/carer, the process of transportation needs careful consideration. (54)
- There should be a complete description of precautions that need to be taken when starting and when monitoring intravenous treatment including standardized procedures for managing hypersensitivity/infusion reactions, allergic reactions, and extravasation. (49)
- Patients sent home with an ambulatory pump should be observed until the proper functioning of the pump can be verified, and possible allergic or hypersensitivity reactions can be excluded. (50,54,55)

Accountability, Communication, and Coordination

- If any of the chemotherapy activity is sub-contracted to another provider there must be clear and formal accountability processes and structures in place to ensure continuity of clinical care that is safe and effective. All work processes are to be protocol led and clearly defined both within the provider and with any other service provider. Any deviation from these protocols will be clearly documented and investigated with regular reviews, and where appropriate updated. (56)
- Standard Operating Procedures (SOPs) must be compiled for oral and IV anti-cancer treatment in the community identifying where the responsibility lies for each step of the process. The SOP must identify: which pharmacy has responsibility for the clinical check of the prescription, when blood results need to be checked and who has the responsibility of checking that blood results are appropriate for the patient to have chemotherapy etc. (42)
- Policies and procedures to securely collect, document, access, use (including disclosing health information for secondary use), store, retain and destroy client records are developed and followed. Applicable legislation may be provincial, territorial or federal. (11)
- Policies on the use of electronic communications and technologies are developed and followed. (11)
- A policy is followed to identify critical client information and ensure that this information is always available to team members providing services. Critical information is information required by other teams that if missed might cause harm to the client (e.g., allergies, do not resuscitate [DNR] orders, advanced care plans, infection issues). This information must be available to all teams providing services to the client. (11)
- The information that is required to be shared at care transitions is defined and standardized for care transitions where clients experience a change in team membership or location: admission, handover, transfer, and discharge. (11)
- The effectiveness of transitions is evaluated and the information is used to improve transition planning, with input from clients and families. (11)

Audit

- There should be audit and surveillance mechanisms in place to monitor standard outcome criteria on completion of intravenous therapy. This should include specific data on adverse drug reactions, vascular access complications, clostridium difficile-associated diarrhea and staphylococcus aureus bacteremia. (52)

Standardized Transition

- The individualized care plan should/may include (11,57):
    - Systemic treatment plan, which includes other decisions made for the patient such as surgery and radiation
        - The plan should ideally be in a computer-generated format and should be part of or filed with the patient record at all times. Any change in the plan of treatment (i.e., a new protocol is initiated, or a medication dose is changed), should be clearly documented on the treatment plan, noting the time the change was initially ordered.
    - Requirements related to nursing and allied healthcare staff
    - Planning for care transitions, including end of service
    - Survivorship care plan
        - Survivorship Care Plan includes diagnostic tests completed and results, tumor characteristics, dates of treatment initiation and completion, therapies provided, key providers information, and a follow-up care plan which includes any recommended next steps, surveillance, signs of recurrence, treatments, or testing
    - Follow-up care plan
        - Follow-up services may include primary care, home and community services, community-based rehabilitation, psychological counselling services, and recommendations for ongoing care
- Organizations should have written protocols and procedures for patient pretreatment assessment by clinicians. (50)

Education

- Organizations should have policies and procedures in place that address an ongoing and sustained competency program for all professionals caring for persons receiving chemotherapy that regularly (i.e., annually) evaluates maintenance of competency and adherence to policies and procedures. (11,50)
- Organizations should have policies and procedures in place that address education of health professionals specifically regarding the prevention, management and reporting of side effects and adverse events. (50)
- Organizations should have policies and procedures in place that address education and promotion of self-management in persons receiving chemotherapy (e.g., on prevention, management and reporting of side effects and adverse events). (50)

- Organizations should have policies and procedures in place that address education and skill development of professionals to establish competence in caring for persons receiving chemotherapy and in operating any equipment required to provide this care. (11,50)
- There is a process to provide clients with detailed instructions regarding the administration and safe handling of oral systemic cancer therapies. (11)

Focus Area 2: Safety

Systemic Treatment Practice Standards

Patient Assessment & Treatment Plan

- Prior to the initial commencement of chemotherapy**,** an assessment of the patient's physical and psychosocial health will be carried out to determine their suitability for treatment. (11,49,58,59)
    - The assessment for systemic treatment administration should include, but may not be limited to, the following:
        - Baseline observations, specific to the protocol
        - Patient history (e.g., comorbidities)
        - Best Possible Medication History (BPMH) including alternative therapies
        - Presence of allergies or other hypersensitivity reactions
        - Patient performance status and physical findings that may impact on the treatment process
        - Patient weight, height, and body surface area
        - Laboratory results
        - Response to previous treatment and previous toxicities that may impact on treatment
        - Compliance with home pre-medication treatment
        - Assessment for and maintenance of access devices required for administration
        - Presence of psycho-social concerns
- The client's medical treatment plan includes evidence-informed strategies to prevent, assess, and manage symptoms specific to the treatments the client is receiving. (11)
- Information about the client is gathered as part of the intake process and as required. The information is validated and reviewed. It is used to determine if the organization's services fit with the client's needs and preferences, identify the client's immediate needs, and decide on service priorities. The intake process is adjusted as needed for clients and families with diverse needs such as language, culture, level of education, lifestyle, and physical or mental disability. (11)
- The client's physical and psychosocial readiness for transition, including their capacity to self-manage their health, is assessed. (11)
- The assessment process should be as streamlined and straightforward as possible and demonstrate no lesser standard or quality than expected of acute care provision. Where applicable, an interdisciplinary or collaborative assessment may be completed with the client, family, and appropriate team members. (11,60)

Independent Double Check

- In cases of home infusion, independent double checks of infusion pumps are conducted before the client leaves the hospital. (11)(11)
- Systemic treatment preparation and delivery should include the following (49):
    - Verification and independent double-checking processes should be regulated by oncology-specific policies and procedures and training and certification programs to maintain accuracy and quality;
    - Independent double checking at various points of the systemic treatment preparation process including the order and preparation of product; and
    - Independent double-checking during the systemic treatment preparation process is completed by a second pharmacist, by a pharmacy technician (verification procedure where one technician checks the order-filling accuracy of another), or by another healthcare professional with appropriate knowledge, skills and training to perform this function
- Pump programming should be independently double checked by two registered nurses with the appropriate training for the particular brand and model of volumetric pump. (49)

Drug Orders

- Each order for cancer systemic therapy will be verified by at least one oncology health professional (oncology pharmacist and/or oncology nurse) BEFORE the order is given to the patient, or transmitted to the community pharmacy, or sent to the hospital pharmacy for dispensing. All intravenous chemotherapy solutions are to be administered at the recommended rate as per the drug monograph. (61,62)
- Telephone or verbal orders/prescriptions for cancer systemic therapy are not acceptable, including telephone orders to a community pharmacy. Orders written by a prescriber may be clarified over the telephone by the nurse or pharmacist. (61)

Devices

- A limited variety of infusion pumps are clearly labelled with easy-to follow instructions that follow formal guidelines to meet standards related to competency in the use of the infusion pumps. Instructions are typed, not handwritten, and include step-by-step instructions on programming. Instructions do not include abbreviations, dashes, or symbols that could be misinterpreted. (11,63)
- Patients take home kit should also include: connection/disconnection sheet; syringes; batteries; laminated cheat sheet/common alarms; the instruction for its operation and maintenance. (54,55)

Spill Kit

- Chemotherapy drug spill kit must be available and used as necessary. Spill kit contents: two pairs of nitrile gloves, one disposable gown, one surgical mask, one chemotherapy waste bag, one chemotherapy waste biohazard bag, self-lock ties, and one tamper-evident bag. Patients also instructed to use paper towels or disposable rags. (11,54,64)

- Where patients are receiving the infusion at home, they must be supplied with a spill kit and be educated on how to recognize and manage a spill. (49)

Alignment with Guidelines

- There is a standardized procedure to select evidence-informed guidelines that are appropriate for the services offered. Guidelines may be selected by a committee, council, or individual who makes recommendations to the team on which guidelines to use and how they can be integrated into service delivery. Guidelines from other organizations or associations can be adopted by the team. The process for selecting guidelines is standardized and formalized. It may include using content experts; a consensus panel; Grades of Recommendation Assessment, Development and Evaluation (GRADE); or the Appraisal of Guidelines Research and Evaluation (AGREE) II instrument, which allows organizations to evaluate the methodological development of clinical practice guidelines from six perspectives: scope and purpose, stakeholder involvement, rigour of development, clarity and presentation, applicability, and editorial independence. The procedure to select evidence-informed guidelines is reviewed, with input from clients and families, teams, and partners. (11)

Drug Preparation/Delivery

- Mail order programs would be required to ensure timely delivery [within 24-48 hours] from the date the completed prescription (with approved drug coverage, where applicable, is received by the pharmacy) with signature upon receipt and to maintain the cold chain for refrigerated items. Mail delivery may reduce face-to-face education opportunities with patients/or caregivers, but centres can conduct consultations or patient counselling over the phone or through telehealth, where appropriate. (65)
- Chemotherapy should not be held in transport for more than 4 hours and intravenous chemotherapy should not be stored in a patient's home for more than 2 days. (42)
- Two-way communication between the community pharmacist and the cancer care team is crucial to make collaboration efficient and effective. (61,65)
    - E.g., Pharmacists able to access the EMR to review the physician and nursing notes to confirm treatment plan
- For pharmacies that are providing a dispensing service, there needs to be a governance structure in place to ensure a safe and efficient service to the patients. E.g., Community pharmacist access to chemotherapy hospital protocols, patient treatment plans, clear communication pathways with the hospital and possibly a link pharmacist at the hospital to provide support to the community pharmacy team. (66)
- The following key points have been utilized in order for community pharmacies to safely provide a support service to patients receiving oral anticancer therapy (66):
    - Training on cancer and oral anticancer medications for community pharmacy staff;
    - Community pharmacy access to chemotherapy protocols and patient treatment plans;
    - Good communication between the hospital and community pharmacies;
    - A key link person at the hospital that the community pharmacy staff can contact;

    - A referral system that safely delivers key patient information in a confidential way that involves a closed loop (i.e., information back to the hospital);
    - Patient consent;
    - Cancer targeted MUR (medicines use reviews); and
    - Information for community pharmacy staff for signposting
- In order to ensure continuity of care, pharmacists must have relevant health information from the cancer care team (e.g., diagnosis, blood results) to support clinical/cognitive verification, to avoid duplication of effort and to make for a more person-centred experience. (65)
- Study showed that a referral to consult with a community pharmacist post discharge (not cancer specific), using a referral template, lowered readmission rates. The community pharmacy receives a discharge summary and a referral note detailing the next steps required by the community pharmacy. For cancer systems that rely on community pharmacies, it is important to ensure quality-assurance measures are in place for dispensing cancer medications. (11,66,67)

Patient Monitoring

Patient Monitoring

- The oncology nurse follows-up by phone and during office visits, as needed. Examines medication bottles to ensure prescription is correct, makes sure regimen is being followed as prescribed, assists with self-management, and provides additional information and answers questions. (68)
- Plan, in collaboration with the community pharmacist, a time with the patient and family for a follow up telephone call or visit within 48 to 72 hours of starting the cycle, to monitor adherence and any adverse effects experienced. The call may be made by either the oncology health professional or the community pharmacist. (61)
- Patients require support systems for 24/7 care and side-effect management, and they need comprehensive instruction on side-effect management. (11,55,67,69)

Monitoring Plan

- When initiating a new therapy of take-home cancer drugs, a proactive monitoring plan (i.e., the schedule for follow-up contact/visits) should be put in place and communicated to the patient and/or caregiver, and home/community care partners. The plan should be tailored to specific patient groups and drugs/protocols. The plan should be reassessed, and dose modified, if necessary. Patients/caregivers and home/community care partners should report back to the cancer care team promptly if there are (60,61,65):
    - Adverse drug reactions;
        - Adverse events should be graded using a recognized toxicity grading system, such as CTCAE criteria.
    - Medication-related incidents;
    - Device-related complications;
    - Problems with adherence to take-home cancer drugs;
    - Potentially severe near misses; and

- Change in patient- and condition-related factors (e.g., cognitive decline)

- All patients on oral chemotherapy should receive an individualized, proactive monitoring plan to enable regular assessment of patient adherence and monitoring, and drug interactions with other substances, for side effects and toxicity. (70)
  - Best Possible Medication History (BPMH) will be conducted at each initial consult as well as change of systemic treatment regimen.
  - Regions will ensure that at each dose modification, or as otherwise needed, the monitoring plan will be reassessed and modified.
  - CCO, in partnership with the regions, will assess and endorse validated tools to support adherence to treatment, such as: Patient calendars; Call-back programs; Electronic tools; Tools to assess risk factors/ risk levels.
- If a patient currently receiving oral systemic therapy is admitted to the Emergency Department or to an inpatient bed in a health care facility, the oncologist will be notified and will determine if the systemic therapy will be continued. The order to continue this oral systemic therapy will be prescribed by or in direct consultation with an Oncologist (or Community Specialist or Oncologist Delegate in consultation with an Oncologist). The admitting or attending physician will not prescribe oral systemic therapy nor allow for the patient to continue use of their own medications without consultation. (61)
- An oncology health professional and/or community pharmacist will contact the patient and family by telephone, as scheduled during the verification process, to monitor adherence and any adverse effects experienced. This contact may also be used to reinforce patient education on the drug(s) and the overall cancer therapy. (61)
- Create an infrastructure for patient support and side-effect management including assessment at appropriate intervals and grading using a recognized toxicity grading system (e.g., CTCAE). (60)

Monitoring/Reporting on Device Complications, Spills, and Other Incidents

- Surveillance programs should be in place to monitor for device-related complications and conduct systematic error analyses on incident events.(49)
- Spills that occur in the home/community should be submitted in a Safety Report and investigated as part of quality assurance. (54,71)
- Adverse incidents involving equipment must be recorded. (42)
- The dispensing medical team need to be informed [of a spill] as the loss of dose may have affected the patient's treatment. Initially, this should be done verbally, but formal documentation should be completed as soon as possible. (11,54,64)
- The most responsible physician (MRP) should be notified of the incident. (54,61)
- Medication infusion will be stopped immediately if any adverse reaction, extravasation or no blood return for vesicant occurs and the physician will be notified. (55,69)
- Adverse reactions will be documented. (55)

Incident Reporting

- All services must have clear and written protocols relating to actions to take in the event of serious adverse events, including a procedure to document and review errors. (42)
- There should be a policy to track incidents electronically and to review all critical medication events in a multidisciplinary approach. (49)
- Near misses and/or medication-related incidents that occur in the home/community setting should be investigated appropriately and reported to incident-based reporting systems. (65)
    - E.g., local reporting systems, Assurance and Improvement in Medication Safety (AIMS) Program, Canadian Medication Incident Reporting and Prevention System (CMIRPS) Program, safemedicationuse.ca
- If incidents are reported through a corporate community pharmacy incident reporting system, anonymized data should be shared with ISMP Canada or other expert groups to ensure opportunities to learn and reduce the risk of future events.(51)

Focus Area 3: Coordination

Roles and Responsibilities

General

- Delivery of the program is a collaborative effort by a multidisciplinary team, including the physician, pharmacist, oncology and community nurse coordinators, community health nurse, client and support persons (e.g., dieticians, social workers, psychologist). Each role and associated responsibilities should be clearly defined in the care pathway. (62,68,72,73)
- All health professionals should have a role in discussing a patient's goals of care and preferences for palliative care services. (49)

Ontario Health (Cancer Care Ontario)

- System oversight for take-home cancer medications should be consistent with the one in place for hospital-administered drugs. A single administrator should be tasked with monitoring the accessibility, safety and overall quality of outpatient cancer medication delivery and the cancer system's performance (including evaluation of public spending and the value of take-home cancer medications). (67)

HCCSS & SPOs

- The following individuals review and accept/reject a proposal for a patient to be entered into the Community Oncology Program of Saskatchewan (COPS) (53):
    - COPS Manager
    - Pharmacy Manager
    - Chair of Systemic Oncology Operations
    - Chair of Pharmacy Therapeutics
    - COPS Physician Advisor

- If the COPS proposal is accepted, the COPs Manager will collaborate with pharmacy and nursing to implement the approved drug/treatment regimen. (53)
- Develops and maintains program policies and procedures in collaboration with interdisciplinary team members. (62,69)
- Conducts ongoing evaluation of the program including collection of statistical data and program indicators. (62,69)
- There should be audit and surveillance mechanisms in place to monitor standard outcome criteria on completion of intravenous therapy. This should include specific data on adverse drug reactions, vascular access complications, clostridium difficile-associated diarrhea and staphylococcus aureus bacteremia. (52)

Systemic Treatment Facility

- Referrals are made electronically. (69)
    - Roles/Responsibilities: Referrals are made to the Care Coordinator of the Program by the medical oncologist. general practitioner in oncology or nurse practitioner
- Referring Consultant/treating unit completes admission package which includes (58,74):
    - Admission form;
        - Adequate referral documentation containing all relevant information must be provided to community nurses, and local protocols must be in place to ensure this
    - Patient consent to transfer to treatment in the home; and
    - Patient information sheet describing benefits of treatment in the home, patient responsibilities, and important contact numbers
- Within the Community Oncology Network, medical oncologists, hematologists, internal medicine consultants and general practitioners in oncology may prescribe cancer treatments in accordance with the plan developed by the most responsible physician for systemic therapy. (75)
- The Medical Oncologist, or designate, will obtain consent for the particular chemotherapy regimen and make arrangements for Central Venous Access Insertion. (69)
- The treating consultant should retain clinical responsibility for the patient. (42)
- (Study noted that) family physicians needed clear information from the oncologist on prognosis, treatment options, and side effects. (76)
- Prior to either providing the patient a prescription for oral systemic therapy (to be filled by their community pharmacy) or to the administration of oral systemic therapy within a health care facility, a pre-treatment assessment will be completed. Assessment is to be a shared responsibility among the Oncologist, Oncologist Delegate, Community Specialist, Oncology Nurse, Registered Nurse with Chemotherapy Certification, and Oncology Pharmacist. (61)
- A systemic treatment plan should be documented and available and should include other decisions made for the patient such as surgery and radiation therapy, as well as requirements related to nursing and allied healthcare staff. The plan should ideally be in a computer-generated format and should be part of or filed with the patient record at all times. Any change in the plan of treatment (i.e., a new protocol is initiated or a medication dose is changed), should be clearly documented on

the treatment plan, noting the time the change was initially ordered. A copy of the treatment plan should be distributed to all facilities involved in the patient's care as well as the patient's primary care healthcare provider. (57,61)

- A communication plan should be established by the prescribing institution and shared with the patient and/or caregiver and all members of the cancer care team, across the cancer treatment continuum, to facilitate an integrated approach to care. (65)
- In the transition from hospital to home, an individualized care plan should be created in collaboration with the patient, caregiver, physician, other teams and organizations. (11,77)
- The team has discussions with each client and family regarding the medical treatment plan, potential side effects, and what to expect during treatment, progress toward achieving goals and expected results. Health status is monitored in partnership with the client, and the information is used to adjust/update the care plan as necessary. (11)
- The patient should be given the option of community care or receiving treatment within the Trust. They must be given all the relevant information and be given time to consider the option before making the decision. Patients must also have to option of returning to the hospital for their treatment. (42)
- Home care agency is notified of patient's name diagnosis, demographics, drug name, tentative start date, access type, and pump type by infusion company. (78)

Pharmacist

- The community pharmacist collaborates in the overall care including(51,61,68,79):
    - Education reinforcement (medication counselling including instructions for use, handling missed doses, importance of adherence, special storage, disposal);
    - Ensuring optimal patient safety by following the specific dispensing procedures;
    - Advising the patient on supportive care products and measures during active systemic treatment; and
    - Follow-up telephone calls and/or patient visits to screen for adverse effects and adherence issues
- The Pharmacist reviews the chemotherapy orders and the client's blood work before filling the chemotherapy order. (62)
- Mixing and preparation of chemotherapy drugs should be the responsibility of the oncology pharmacist (either at the hospital or in the community, where possible) so that the nurse does not have to do this in the home. (76)
- If chemotherapy is being outsourced or an external company has been commissioned to deliver this service, the trust pharmacy will still screen any prescription and this will be recorded in the patient's medical record. (42)

Care Coordinator

- The nursing coordinator oversees the program, plans home treatment, ensures the proper patient training and discharge practices are implemented, maintain contact with and follow the patient over the course of the prescribed therapy, coordinate communication with other personnel (e.g., pharmacists, nurses, physicians, laboratories), ensure continuity of care (e.g., by referring the patient to community nursing services for home visits, or to respond to a patient's needs for psychological support or domestic help), and to coordinate emergency response procedures. (76)
- Reviews chart and reviews and verifies orders. (62,69,77)
- Coordinates the referral process and organizes all aspects of patient care. Ensures (62,69,77):
    - Patient learning agreement and consent is complete;
    - The provision of supplies, medications and equipment;
    - Patients and caregivers receive education regarding adverse effects and complications of therapy and appropriate management;
    - Patients and caregivers receive education on drug delivery system, venous access device, cytotoxic precautions and home spills; and
    - Documentation is complete
- Members of the care team should negotiate in advance who will contact the patient at what times, to synchronize call backs and visits. The call back and visit schedule will be coordinated by the oral systemic therapy case manager (when available) or oncology nurse. (61,62,69)
- Check for new referrals. (80)
- Confirm patient appointments. (80)
- Ensure orders for the next day (or further along) have been completed (e.g., pathology checked, GBPS results checked). (80)
- The Nurse Coordinator will act as the most responsible care provider, referring the patient to appropriate resources as required. (69)
- All services received by the client, including changes and adjustments to the care plan and client's health status, are documented in the client record. (11,63)
- Clients and families are made aware of the team member who is responsible for coordinating their service, and how to reach that person for problems with the home chemotherapy infusion such as leakage or dislodgement of the noncoring needle. May require a 24/7 service. (11,55)
- Information about the client is gathered as part of the intake process and as required. The information is validated and reviewed. It is used to determine if the organization's services fit with the client's needs and preferences, identify the client's immediate needs, and decide on service priorities. The intake process is adjusted as needed for clients and families with diverse needs such as language, culture, level of education, lifestyle, and physical or mental disability. (11)
- The client's physical and psychosocial readiness for transition, including their capacity to self-manage their health, is assessed (11).
- Eligibility Criteria (72):
    - IV cytotoxic drugs are administered via a central line

- Community nurses have direct access to the referring unit; the patient is to remain under the care of the unit and not formerly discharged until treatment is completed
- Units are required to complete an information form providing all treatment details of the patient
- A patient would not be accepted unless all the criteria were met

- Patients should have access to supportive care services to address specific patient needs (e.g., psycho-social support). (49)
- Manages unusual incidents according to policy and professional practice standards. (62,69)
- Develops and maintains Community Chemotherapy Program Resource Manual. (62,69)
- Participates in meetings of the Community Adult Chemotherapy Advisory Committee to review the program, consults on program issues and adjust and accommodate to changing demands. (62,69)
- Acts as a resource person for Community Health Nurses. (62,69)

Management

- Position profiles with defined roles, responsibilities, and scope of employment or practice exist for all positions. Position profiles include a position summary, qualifications and minimum requirements, the nature and scope of the work, and reporting relationships. They are developed for all team members including those who are not directly employed by the organization (e.g., contracted team members, partners, and client and family representatives). Role clarity is essential in promoting client and team safety as well as a positive work environment. Understanding roles and responsibilities and being able to work to one's full scope of practice helps create meaning and purpose for team members. (11)
- Responsibility for acquiring, receiving, storing, preparing, administering, transporting, and disposing of systemic cancer therapy medications and contaminated supplies is identified. (11)

Home Care Nurse

- The role of the community nurse is to support the care initiated in specialist units and continued in the home. They would then be responsible for changing infusors, flushing, taking down and discontinuing completed programmes of treatment and disposing of equipment. In doing so, they would be responsible for the continuous assessment of the status of the patient, managing and reporting on adverse events, contributing to the management of risk and side-effects and providing appropriate support and counselling. (72,76)
- Nurses working in the community setting have a responsibility to familiarize themselves with the local policies and protocols governing processes that should be undertaken to document and report patient assessment data, so that this information can be shared with relevant team members in a timely manner. (58)
- Community nurses need to disclose their level of knowledge of cytotoxic agents and their level of knowledge on care of different types of centrally-placed lines and devices (as appropriate). (54)
- Community nurses to communicate the type of equipment they will require. (54)
- Connection & Disconnection sheet (55):

    - Sheet is to be filled out by the home care nurse and placed back into the patient's fanny pack
    - A HomeMed nurse will take the sheet when the patient returns to the cancer center for their next cycle
- The Nurse Coordinator will ensure that all patients who are enrolled in the Program are given comprehensive teaching and educational material related to all aspects of the Program. Patients will be given the opportunity to demonstrate to the Nurse Coordinator all learned skills related to Central Venous Access Device (CVAD) care, elastomeric pump and cytotoxic precautions. (69)
- Nurse to document progressive teaching in nursing note including: documentation of the patient/carer response (able to teach back, able to demonstrate); any barriers and actions to overcome. (55)
- The Nurse Coordinator will teach (69):
    - Drug information and side effects and management of same;
    - Monitoring of the medication administration including troubleshooting infusor;
    - Monitoring and/or maintenance of access site;
    - Safe handling and disposal of equipment;
    - Home chemotherapy precautions;
    - Contact numbers if problems arise; and
    - Spill containment and clean-up

- Process in Australia (80):
    - Check for any changes to patients' treatment
    - When chemotherapy/medications arrive from pharmacy, confirm that you have all the medication for that day and make sure any changes are taken into account
    - Make bags for patients (bags should contain what you would need to treat the patient in their home included access (IVC/PORT/PICC (dressing equipment)), fluids, lines, adder lines, dressing packings and urine spec containers; emergency medication; collect pre-medications and Hep-salines from Drug Room
    - Before leaving, check all medications with another RN
    - When in transit, ensure logbook is filled out appropriately, including arrival and departure times for patient visits
    - Complete patient notes in the home
- Process in Eastern Health (62):
    - Conduct an assessment of the client and plan, implement and evaluate all aspects of client care
    - Reinforce education provided to the client
    - Monitor the administration of chemotherapy and disconnect the Infusor when the treatment is complete as per the protocol
    - Discard all cytotoxic waste per appropriate disposal protocols
    - Complete documentation on the client's health record
    - Ensure the client has a contact phone number for the clinic nurse and the on-call nurse

- Participates in data collection for the program and submit to the Home Care Nursing Coordinator [LHIN]
- Consults and collaborates with the Home Care Nursing Coordinator [LHIN] for program planning and evaluation

- Home healthcare nurses assess patients as well as the infusion sites. (81)
- If chemotherapy is to be administered to a patient at home by an appropriately qualified nurse, an assessment should be carried out to identify any actual and potential risk factors that may compromise the safety of either the patient or the nurse. Such risks may include environmental hazards or issues related to drug transportation or disposal of waste. (43,58)
- A thorough patient assessment is to be carried out prior to the start of each treatment cycle. Generally, this will be conducted by specialist or senior nurses who have the experience, knowledge and expertise to assess the patient's suitability for further treatment. (43,58)
- The chemo pump is programmed by a HomeMed nurse clinician.(55)
- Connection to the home chemotherapy pump is done by HomeMed nurses only. (55)
- Healthcare professionals and where applicable patients and/or caregivers should monitor for early signs and symptoms of (49):
  - Access device-related partial or total occlusion;
  - Local and systemic catheter-related infections on insertion, during infusion and maintenance of the access device; and
  - Venous thrombosis
- The community nurse must be aware of important contact details where they can obtain help or clarify issues when needed. (58)
  - Management of toxicities may involve prompt referral to other members of the healthcare team and early decisions re: appropriate preventative and management strategies may depend primarily on the nurses' initial assessment.
  - Where available, contact with acute oncology services must also be made to obtain relevant advice regarding assessment, treatment and referral and to improve the patient experience if admission to hospital is required.

Patient

- Client and family representatives are regularly engaged to provide input and feedback on their roles and responsibilities, role design, processes, and role satisfaction, where applicable. (11)
- Patients (or their substitute decision makers) should play a major role in preventing medication errors by being actively involved and regularly engaged in all phases of the treatment process and to provide input and feedback on their roles and responsibilities, processes, and role satisfaction. Healthcare providers need to be open, receptive, and responsive to patient questions. (57,63)

Standardized Transition/Communication

General

- Care is coordinated for clients who are receiving multiple services and/or treatments to provide safe, client-centred care. (11)
- Cancer services, including the delivery of outpatient cancer medications, need to be coordinated and integrated across provider locations—whether in the community or hospital—to support seamless, person-centred care. (67)
- Oncology nurses should coordinate patient care and facilitate interpersonal relationships among health care providers. (82)

Transition Plan

- The transition plan is documented in the client record. Transition plans include a summary of the medical treatment plan. Information relevant to the care of the client is communicated effectively during care transitions. (11,63)
- Information about the client is gathered as part of the intake process and as required. The information is validated and reviewed. It is used to determine if the organization's services fit with the client's needs and preferences, identify the client's immediate needs, and decide on service priorities. The intake process is adjusted as needed for clients and families with diverse needs such as language, culture, level of education, lifestyle, and physical or mental disability. (11)
- The client's physical and psychosocial readiness for transition, including their capacity to self-manage their health, is assessed. (11)
- During care transitions, clients and families are given information that they need to make decisions and support their own care. (11)
- In the patient's initial delivery, the agency provides nurses documentation which includes (77):
    - Copies of the prescription, including drug, dose, frequency, diluents, amount of diluent, method of administration, duration of therapy, dressing change frequency and type;
    - The labs and frequency the physician has ordered;
    - Infusion pump programming sheet (if applicable);
    - Lab requisition (if applicable); and
    - Medication information sheet

Communication Plan

- The effectiveness of communication is evaluated and improvements are made based on feedback received. Evaluation mechanisms may include (11,63):
    - Audit tool (direct observation or review of client records) to measure compliance with standardized processes and the quality of information transfer;
    - Asking clients, families, and service providers if they received the information they needed; and
    - Evaluating safety incidents related to information transfer (e.g., from the patient safety incident management system)

- Procedures/standardized communication tools must be in place to ensure seamless medical information transfer, increase consistency, minimize duplication, and improve teamwork while promoting patient safety. (11,77)
- Team members are trained on organizational policies and practices regarding standardized communication tools. (11,77)
    - E.g., Have patients go to specific labs that share information with hospitals, have patients keep data sheets that they bring to appointments
    - E.g., SBAR tool
- There is a process to respond to changes in medical treatment plans. Regardless of the reason, teams must establish processes to alert or respond to changes in treatment plans. Processes include conducting interdisciplinary case conference rounds and posting alerts in the client file or electronic medical record (EMR). (11)
- Communication channels must involve two-way, timely dialogue to address critical findings, questions and concerns (e.g., prescribers to provide direct contacts, development of a portal for information sharing). Community staff should be invited to participate in the planning and management of patient care from the beginning to avoid miscommunication or duplication of efforts/services. Regimen-specific information should be sent to the community nurse so they are acquainted with the protocol. (11,54,61,65)
- Providers need systems and platforms to facilitate real-time patient engagement. The creation of innovative e-tools to provide such support was promoted, as was the leveraging of current technologies, such as telehealth or Skype. (67)

Up-To-Date Records accessibility

- Clients are able to access information in their records, including electronic medical/health records, in a routine, client-centred, and timely way. (11,63)
- All cancer care providers should have access to their patients' complete medical records, including information on diagnoses, treatment plans, current medications and laboratory and imaging tests in a secure setting where confidentiality and privacy are assured. (65,67)
- Up-to-date information about systemic cancer therapy regimens and medications provided in the organization is accessible to the team, updated on an ongoing basis, documented and communicated. Information is stored in an easily accessible location either in hard copy or electronically. All team members know how and where to access this information. Information includes uses, dosing, preparing, administration guidelines, side effects (both common and uncommon), client monitoring, and how to manage an overdose. Any change in the plan of treatment (i.e., a new protocol is initiated or a medication dose is changed), should be clearly documented on the treatment plan, noting the time the change was initially ordered. (11,57)

Data Sharing

- IM and IT infrastructure and telehealth/virtual care/remote monitoring needs to be in place to support better data sharing, communication and patient monitoring. (65,67)

- Create a system for robust data collection at all points of care. Data collection for take-home cancer medications is extremely limited when compared to hospital administered drugs. Participants suggested a centralized and integrated system to collect treatment data at all points of care. (67)

Focus Area 4: Education

Training and Education for Providers

Policies & Procedures

- Organizations should have policies and procedures in place that address an ongoing and sustained competency program for all professionals caring for persons receiving chemotherapy that regularly (i.e., annually) evaluates maintenance of competency and adherence to policies and procedures. (11,50)
- Organizations should have policies and procedures in place that address education of health professionals specifically regarding the prevention, management and reporting of side effects and adverse events. (50)
- Organizations should have policies and procedures in place that address education and promotion of self-management in persons receiving chemotherapy (e.g., on prevention, management and reporting of side effects and adverse events). (50)
- Organizations should have policies and procedures in place that address education and skill development of professionals to establish competence in caring for persons receiving chemotherapy and in operating any equipment required to provide this care. (11,50)
- A comprehensive orientation is provided to new team members. (11)

General

- Education and training are provided to team members on how to work respectfully and effectively with clients and families with diverse cultural backgrounds, religious beliefs, and care needs. (11)

Provider Education

- Health care organizations/employers involved in one or more of prescribing, handling, dispensing, patient education and/or monitoring take-home cancer drugs should develop a plan to ensure that providers are appropriately trained and maintain the knowledge and skills required for their job function. The organizational plan should include methods for standardized oncology training and routine performance assessment. Health care organizations/employers should also support health care providers to receive this initial training and continued professional education. (65)
- Health care providers involved in one or more of prescribing, handling, dispensing, patient education and/or monitoring take-home cancer drugs should have oncology specific training and demonstrate ongoing competency in oncology care. (65)
- Training and/or certification programs should be available for staff involved in the handling of hazardous agents and have a policy on re-training. (49)

- Educational programs and skills development should be available to establish competence in caring for persons receiving systemic treatment and in operating any equipment required to provide care. Elements could include but not limited to (11,49):
    - Preventing, managing and reporting of side effects and adverse events using standardized tools, where available; and
    - Training related to care of, and identification of complications including extravasation, phlebitis, infiltration, flare reaction, hypersensitivity/infusion and allergic reactions which are monitored in collaboration with the patient
- All registered nurses (RNs) administering systemic parenteral therapy to patients affected by cancer, regardless of setting, should be certified which includes completion of standardized education. (49)
- All RNs administering parenteral systemic treatment to patients with cancer, regardless of setting, should maintain certification which includes the completion of standardized education.(49)
- All RNs, clinical nurse specialists (CNSs) and nurse practitioners working primarily with patients and families with cancer in the Regional Cancer Programs (L1-4 facilities) should obtain and maintain Canadian Nursing Association (CNA) certification as the nationally recognized nursing specialty credential by their 5th year of practice. All RPNs should complete a relevant foundations course. (49)
- Nurses working in practice settings that less frequently encounter patients and families affected by cancer should have access to CNA certified nurses to support their care OR complete a foundations course in Oncology/Palliative care OR obtain and maintain CNA certification CON(C) or CHPCN(C). (49)
- Training programs should be available for all staff involved in systemic treatment including receiving, storage, transport, spill management, environmental cleaning, preparation, administration, and waste disposal. (42,49)
    - Competence should be reviewed on an annual basis with written records kept of training and competency reviews in accordance with policies and procedures
    - Training programs should be regularly evaluated and updated
- Home nurses should be trained and be familiar with implanted ports, infusion pump devices, systemic treatment home disconnections, aseptic techniques, clinical oxygen, anaphylaxis kits, and extravasation kits. (11,42,55,58,62)
- Home nurses should complete lone workers safety training, covering violence and aggression protocols. (42)
- Ongoing professional development, education, and training opportunities are available to each team member. (11)
- Health care professionals should attend orientation programs and routine training courses specific to their roles. They should also complete competencies associated with these training programs, along with an accompanying assessment for licensing qualification if applicable. The training programs should be approved by an oncology organization or appropriate local organizations. (83)
- Within a health care institution, a primary educator should be established as a source of referral and continued education for training health care professionals on oral chemotherapy, allowing for consistent education, training, and monitoring across the multidisciplinary team. (83)

- All clinical staff who are likely to come in contact with oral chemotherapeutic agents or with waste from patients who have received these agents (e.g., clerks, hygiene workers, sanitation workers) should undergo appropriate training. (83)
- Health care workers involved in the handling of oral chemotherapeutic agents should be trained and competent to treat individuals accidentally exposed to chemotherapeutic agents and on the disposal of cytotoxic medications. (83)
- All staff required to handle, administer or care for patients receiving systemic anti-cancer drugs must have access to appropriate information, education and training. The nurse administering chemobiological agents should have knowledge of the disease process, drug classification, indications, actions, side-effects, adverse reactions, method of administration, rate of delivery, treatment goal, drug properties and specific drug calculations of dose and volume relative to age and body surface area. (84)
- Yearly updates of continuing education, training and supervised practice will monitor that qualified professionals undertaking administration of systemic anti-cancer drugs have sufficient knowledge and experience to demonstrate competence in the administration of systemic anticancer therapies including (84):
    - Drug names;
    - Short- and long-term side-effects;
    - Toxicity;
    - Complications;
    - Dose ranges related to different routes of administration;
    - Common regimens; and
    - Particular health risks of handling specific drug
- Nurses must demonstrate their competency on an annual basis and keep written records of their training and competency reviews. (84)
- Staff must complete training in the use of mechanical intra-venous infusion devices and have their competency assessed and recorded. (84)
- All staff involved in the care and management of these lines should undertake formal training and assessment in aseptic techniques. (84)
- All clinicians should be able to complete the following (85):
    - Demonstrate knowledge of professional and legal accountability and responsibility in relation to the administration of systemic treatment;
    - Demonstrate ability to detect and manage hypersensitivity and anaphylactic reactions in conjunction with other members of the multidisciplinary team;
    - Demonstrates competence in handling systemic treatment drugs to ensure the safety of patients, staff and the environment;
    - Demonstrates knowledge of procedures for dealing with a spillage of systemic treatment;
    - Demonstrates competence in handling oral systemic treatment;
    - Demonstrates proficiency in administering SACT by intramuscular and / or subcutaneous injection;

- Demonstrates proficiency in administering intravenous systemic treatment via a peripheral or central venous access;
- Demonstrates knowledge of the signs and symptoms of extravasation and the immediate treatment;
- Demonstrates competence in administration of ambulatory continuous infusional systemic treatment;
- Demonstrates competence in supporting patients and significant others in managing side-effects of other drugs used in conjunction with systemic treatment regimens; and
- Demonstrates competence in supporting & educating patients and significant others in managing side-effects of oral systemic treatment

Training and Education for Patients and Caregivers

- Patients require consistent, standardized and comprehensive education and navigation through all stages of the treatment journey. (67)
- Clients and families are provided with information about self-care management and are empowered to self-manage conditions by receiving education, tools, and resources, where applicable. (11)
- When treatment is initiated, the oncology nurse provides verbal training and written materials to the patient and caregiver. Information provided should include drug information (e.g., potential interactions, use with foods and drinks), regimen schedule (e.g., number of pills to be taken, time of day to be taken), what to do if a dose is missed or if unable to obtain a prescription, potential side effects and symptom management, adherence, safety, communication with healthcare providers, and pharmacy name and phone number. (68)
- Education should include diagnosis, intent of treatment, treatment plan, side effects, and how to manage intravenous and oral treatments in the home including recognizing pump malfunction, disposal, and safe handling. Approach to education should be standardized using validated teaching tools (e.g., Multinational Association for Supportive Care in Cancer (MASCC) Oral Agent Teaching Tool [MOATT]) and developed with patient and family advisors. (49,65)
- Patients who are going to receive or who are already receiving systemic treatment should be provided with information (ideally oral and written) that enables them to comprehend the intended aims, plans, effects, and outcomes of the proposed or ongoing treatment. Information should cover the following, at a minimum (49,57):
    - Diagnosis;
    - Intent of Treatment;
    - Treatment plan (e.g., drugs, schedule, follow-up);
    - Short and long-term effects; and
    - Management of side effects
- The technical and safety training required for patients and caregivers can include the following (76):
    - For intravenous delivery, catheter care (e.g., flushing), central line dressing change, and pump operation and maintenance;
    - Management of side effects and complications;

    - Self-care related to living with infusion pumps (e.g., managing pump checks and alarms, and dressing and bathing);
    - Special monitoring of vesicant drug delivery;
    - Handling of patient excretions (urine, stool, vomit, and blood may contain the drug for up to 72 hours after administration);
    - Drug administration precautions and procedures (e.g.; drawing up and adding intravenous medications);
    - Aseptic techniques (e.g.; hand-washing, sterile gloving);
    - Handling and disposal of items that were in contact with the drug at the end of treatment; and
    - Emergency responses and use of spill kits (e.g., reacting to symptoms, alarms, and technical errors)
- Patients/caregivers involved in administering hazardous drugs in the home should be provided with a process for the appropriate disposal of hazardous waste, including left-over drugs. A spill kit should be readily available in the home in case of accidental spills. There should be a clear process in place to address the disposal of hazardous waste from patients in their homes, in compliance with municipal or local hazardous waste rules. (49)
- Patients are to be informed of symptoms associated with an adverse event (69):
    - If symptoms of an adverse event occur, the patient will be directed to stop the infusion and notify their contact person, where they will receive further direction
    - If it is a medical emergency, patients will be directed to the ED or to call 911
- The client and family are provided with education regarding preventing, recognizing, and managing side effects related to cancer therapy. (11)
- Patient and family members/caregivers shall be taught the dangers of exposure to chemotherapeutic agents, especially if children, pregnant or lactating women are in the home. (71)
- Patients and caregivers must be educated to observe for and report signs and symptoms of infiltration, extravasation, infection, and air embolism. (81)
- Prior to starting therapy, Training Team Nurses and dietitians work directly with patients and their caregivers to teach individuals their medications, determine the best ways to provide therapy that is convenient, educate them and develop therapy goals. (77)
- At the time of discharge, the patient is to receive: Instruction sheets on how to administer the medication, catheter care, drug information sheet, a copy of the prescription, cost estimate sheet, and an admission packet that describes patient rights and responsibilities, basic home safety, return policy, advance directives, how to dispose of needles and hazardous waste, infection control, and emergency/disaster planning. (77)
- Education on spills includes four components (64):
    - Information on using the home spill kit and safely cleaning spills;
    - Handout providing step-by-step procedure for actions to take in case of a spill, how to clean up the spill using the spill kit, and how to dispose of contaminated materials that was created, to be placed in each spill kit;

    - Form used by nurses to document patient education was revised to include information about the home spill kit use; and
    - A form for patient acknowledgement of receipt of the kit and teaching about safe handling of chemotherapy spills at home
- Community pharmacists shall provide patient education including, at minimum (51):
    - Special storage, handling and disposal instructions. Specifically, patients should be made aware of any recommendations regarding PPE use when opening dispensed packaging and administering or applying medication; storing medication away from children and pets; and return of unused medication to a pharmacy, ideally the dispensing pharmacy;
    - Instructions for use, handling missed doses, managing side-effects, importance of adherence, breastfeeding, and reproductive precautions for men or women thinking of or preparing to have children; and
    - Early and periodic adherence monitoring and toxicity assessment either by phone or other means of communication
- Patients on take-home medication need to understand how to take their medication, manage their side-effects and safely store and/or dispose of their medications. Education gaps may include guidance on safe handling, disposal, drug interactions and how to deal with missed doses. (67)
- Information regarding the correct storage requirements for the drug during transportation and at the patient's home should have been given. (54)
- Clients are provided with education about care for vascular access devices and infusion sites. (11)
- Patients who are going to be sent home with an ambulatory pump (e.g., volumetric or elastomeric) should understand who to contact for issues/concerns and before leaving the site, should be observed to ensure (49):
    - Volumetric: The pump is functioning correctly
    - Elastomeric: The site is intact and the patient has information about how to recognize when the pump is not functioning properly
    - There are no allergic or hypersensitivity/infusion reactions after the pump is connected.
- Patients and caregivers are trained in the management of the pump, and they attend a central venous catheter class which uses a teach-back method to verify that they are able to complete dressing changes and disconnect infusions from the catheter. This education is also provided in a video format that may be accessed from any location. (64)
- Return demonstration and feedback should be used to ensure the intent of the messages have been received. (81)
- In Michigan, patients and their caregivers go through an extensive training program at the Systemic Treatment Facility. Patients and caregivers are asked to perform a return demonstration of: flushing PICC, bag change, and disconnection. (55)
- The patient is able to demonstrate competency in the care and management of (69):
    - Central Venous Access Device;
    - Elastomeric pump;
    - Cytotoxic precautions;

    - Chemotherapy Spills; and
    - Side effects and complications
- If patient/caregiver is unable to aspirate catheter or a nurse is not present, instruct patient/caregiver to (55):
    - Stop infusion pump;
    - Clamp IV tubing;
    - Apply cold compress as indicated; and
    - Immediately go to emergency room, Cancer Center Infusion Room, or MD office
- Clients are provided with comprehensive information regarding home infusion and signs of malfunction. The information includes what to expect, functioning of the pump, care for the pump, any changes that will be displayed, signs of malfunction, when to contact the organization, when to return to the organization, and when to contact emergency services. (11)
- Patients need to be educated about the alarms of the pump, which indicate problems or completion of the infusion. Patients and caregivers must also be educated about changing batteries in infusion pumps, protection of tubing and infusion containers. (81)

APPENDIX C2: SUMMARY OF EVIDENCE FROM KEY INFORMANT INTERVIEWS

1. South Australia, Australia

Program Overview:

- Home chemotherapy infusion is provided through the hospital.

Focus Area	Description
Safety	Systemic Cancer Treatment Practice Standards • National standards from the Clinical Oncology Society of Australia guide the production and administration of chemotherapy. • Hospital, nursing and pharmacy work together to deliver home chemotherapy infusion according to state standards.
Coordination	Roles and Responsibilities • The cancer care coordinator within the hospital refers the patient to a home care coordinator. • The home care coordinator arranges home infusion with the home infusion nurse and pharmacy within the hospital. They also arrange drugs and supplies with the hospital pharmacy. • The hospital pharmacy prepares and delivers medications and supplies. Standardized Transitions/ Communication • All coordination/ administrative/ pharmacy activities occur within the hospital. • Information is shared via single hospital EMR.
Education	Training and Education for Providers • Home care providers must have credentials for administering chemotherapy in the home. • Home infusion nurses are employed by the hospital and all training is provided by the respective hospital.

2. Victoria, Australia

Program Overview:

- Network of 3 hospitals, one of which houses the Day Oncology Clinic, which operates the home chemotherapy program.

Focus Area	Description

Safety	Systemic Treatment Practice Standards
	• Follow-up cycles can be initiated in the patient's home.
	• Drugs are approved for home infusion depending on their risks and infusion times.
	  o The list of approved drugs is reviewed every year.
	  o Approval criteria include: drug infusion less than 1 hour; low risk; expiry of prepared medications; manufacturing/ transport of medications; and patient factors (close proximity to the hospital, which the catchment area).

Coordination	Roles and Responsibilities • The hospital conducts the initial assessment and the first infusion. • The ambulatory oncology clinic nurse administering the first infusion flags whether a patient is eligible for the home infusion program and completes a referral form, including a home environment assessment. • The home infusion nurse receives the referral. • The home infusion nurse assesses the home infusion program's capacity for patient intake and books the appointment with patients. • The home infusion nurse is responsible for patient care coordination. • The home infusion nurse completes the independent double check with a nurse in the clinic and confirms all information with patient identification in the home. • The hospital pharmacy compounds the drugs and the pharmacists conduct an independent double check. • The home infusion nurse gathers all drugs and supplies in the morning of the home infusion. Standardized Transitions/ Communication • Service is owned and operated by the hospital. The care is well-integrated with the in-clinic services.

Focus Area	Description
	• Patient can be referred back to the hospital if the home infusion nurse deems it necessary. Patient movement from the clinic to home is fluid and flexible. • Information is shared through EMR and manual entry. • Chemotherapy is prescribed by paper and pre-printed order and then uploaded to the EMR. • Nurses in the home document on paper charts which are subsequently scanned into the electronic system.
Education	Training and Education for Providers • Home infusion nurses are advanced systemic therapy nurses from the day clinic. They are provided additional training for the home setting.

3. Alberta, Canada

Program Overview:

- Efforts are made to bring cancer care closer to home in the form of Community Cancer Centres; there are no home infusions.
- Tertiary and regional sites (which are each responsible for various cancer disease sites) are encouraged to refer patients to Community Cancer Centres for follow-up care.
    - There are two tertiary sites affiliated with academic centres and conduct research
    - There are four regional sites which house nurse navigators and focus on the top 4-5 cancer disease sites
- The North Alberta Cancer line receives referrals and supports transfer of patients from tertiary sites to the Community Cancer Centres.

Focus Area	Description
Standards	Drug Preparation/Delivery • Tertiary and Regional centres provide remote drug delivery to some of the Community Cancer Centres. • Some Community Cancer Centres compound their own medication out of an on-site or local pharmacy.
Coordination	Roles and Responsibilities • Care is integrated between nursing coordinators at each level of care.

Focus Area	Description
	• Tumour coordinators and nurse navigators at the Regional and Tertiary hospital sites refer patients to the Community Cancer Centres. • The Community Cancer Centre registered nurse or nurse navigator coordinates subsequent patient care in the local hospital. • In Northern and remote areas, a clerk coordinator at the North Alberta Cancer Line receives a referral from a northern tertiary site and coordinates administrative processes with local Community Cancer Centres. • Clinical systemic therapy nurses (Alberta Cancer Line clinical coordinator) support the Northern Community Cancer Centres. <u>Standardized Transition/Communication</u> • In most instances, nurses/coordinators from large hospitals refer patients to the Community Cancer Centre coordinator to arrange for local hospital infusion/continuation of care. • For remote northern patients, a tertiary hospital in the North refers patients to the Community Cancer Centre, which is intermediated by the North Alberta Cancer Line. • Information for cancer care is shared via EMR; this EMR enables all levels of cancer facilities to share information. A separate, disconnected EMR is used for home care. However, Alberta intends to move to a single provincial EMR across settings shortly. • If a patient receives cancer care and home care, home care may be given access to document within the cancer care EMR. • Data sharing between cancer and home care is made difficult by the zoned intake of home care; home care is not provincially standardized.
Education	<u>Training and Education for Providers</u> • Community Cancer Centres are staffed with general oncology practitioners (physicians and nurses) who have formal training and certification in oncology care. • All nurses, regardless of facility-level, receive the same orientation, training and learning opportunities.

4. British Columbia, Canada

Program Overview:

- The BC Cancer Agency is a regulatory body that provides direct patient care overseeing not only cancer drugs but physician payment.
- Patient is seen at the Regional Cancer Centre (RCC) by the oncologist and then care either remains in the RCC or is transferred to a local ambulatory clinic so that the patient may receive care closer to home.
- Cancer services are centralized.
- Home care does not have a role in systemic treatment in British Columbia at this time.
- All administration, teaching and disconnect are conducted in the RCC or ambulatory clinic settings.
- BC Cancer Agency is comprised of four levels of care:
    - Level 4 sites prepare and deliver oral and parenteral outpatient chemotherapy agents; including first-dose treatment and the full spectrum of outpatient chemotherapy protocols delineated by BC Cancer
    - Level 3 sites manage all types of outpatient IV and oral chemotherapy protocols including first cycle and trained in the care and management of central venous access devices
    - Level 2 sites have limited chemotherapy services offered
    - Leve 1 sites have minimal amount of oncology services offered

Focus Area	Description
Standards	• Protocols/standards set by BC Cancer and health authorities are readily available online. • The Shared Health Organizations Portal (SHOP) is a central access point for policies and decision support tools, such as guidelines.
Safety	Systemic Treatment Practice Standards • Ambulatory clinics located within local hospitals practice based on protocols set out by BC Cancer Agency. • There are no specific patient eligibility criteria; eligibility and level of care required by the patient is determined by the oncologist or general practitioner in oncology (GPO).
Coordination	Roles and Responsibilities • All administration, teaching and disconnects are conducted in the RCCs or ambulatory clinic. • RCCs are responsible for providing initial assessments and diagnostic services, chemotherapy, radiation therapy, and supportive care.

Focus Area	Description
	• Oncologist at the RCC determines patient eligibility to be transferred to ambulatory clinics and submits request for transfer of care. • A designated coordinator at the local ambulatory clinic receives and processes the referral. • Ambulatory clinics are staffed with general practitioners in oncology who can accept care, but treatment decisions are ultimately made by an oncologist. • Since patients are within BC Cancer jurisdiction, roles of each health care provider fall within traditional scopes of practice. • The health care provider in the RCC or ambulatory clinic provides specific treatment education for the patient. <u>Standardized Transition/Communication</u> • Patient enters the cancer care system via initial assessment with oncologist or GPO. • Patient's care may be transferred to local ambulatory clinic depending on level of care required/distance of travel. • Requests for transfer of care for chemotherapy treatments and medical care to a local ambulatory clinic are submitted via Community Oncology Network Referral Process (CONRef). CONRef allows for secure electronic transfer of patient information, referral details, relevant protocol, and pre-printed orders. • Patient information may be accessed via the BC Cancer Agency Information System (CAIS). Access to CAIS varies depending on the site level. Level 4 sites have full access; level 2 and 3 have read access only, and level 1 have no access. • Clinics with CAIS access, receive notification with patient demographics, a clinical summary, and a suggested treatment course. • Referring physicians will receive an email notification once the referral has been received by the ambulatory site. • There is a forced function that the Hospital referral must include instructions of when to send a patient back to the BCCA MRP (via CONRef). • Process has feedback mechanism via the forced function so the MRP can advise on ongoing management or close the loop at the end of a course of therapy. • For sites without CAIS access, requestor must identify the required patient specific documents which need to be attached to the referral (e.g., consultation notes, pathology, imaging, etc.).

Focus Area	Description
Education	Training and Education for Providers • **GPO**: GPO Education Program = 8 week learning program + 30 days of clinical rotation completed at the Cancer Centre where participants' patients are referred. • **Nurses**: Required to be certified to administer chemotherapy and must treat 50 patients annually to maintain certification. • **Pharmacist**: Residency program at RCC and an internal training program from BC Cancer. Education for Patients and Caregivers • General introduction to BC Cancer is available online • Specific treatment education is provided by the health provider in RCC or ambulatory clinic • Patients may be taught to self-disconnect

5. Manitoba, Canada

Program Overview:

- There is no chemotherapy in the home. However, Manitoba does have home chemotherapy continuation (e.g., for long infusions like blinatumomab) and completion of infusion in the home.
- Home injections (e.g., neupogen, cytarabine) do occur in the home and are self-administered by the patient.

Focus Area	Description
Safety	Systemic Treatment Practice Standards • All infusions start in the hospital.
Coordination	Roles and Responsibilities • The oncologist or oncology nurse refers patients to home care via fax. • The oncology nurse determines patient eligibility for home injection. • The home care nurse/coordinator arranges home care. • The hospital pharmacy dispenses infusion drugs; drugs are usually dispensed in the hospital unless the patient is part of the Home Injection Program. • Some injections can be dispensed in retail pharmacies. Standardized Transition/Communication • Information sharing is not standardized between the cancer care team and home care. • Patient treatment details may be communicated back to the referring team.
Education	Education for Patients and Caregivers • For chemotherapy continuation in the home, patients are given a spill kit, education about the pump, and a number to call if there are any issues. • For home injections, education is provided by nurses. • Patients with balloon pumps are taught to self-disconnect.

6. Newfoundland and Labrador, Canada

Program Overview:

- The program delivers systemic infusional 5-Fluorouracil (5-FU) to clients with colorectal cancer in the adjuvant or metastatic setting requiring first or second line chemotherapy that meet the selection criteria of the program; patients residing in or around St. John's.
- The Regional Health Authority has oversight over cancer care and home care, however they are distinct programs within the Regional Health Authority.

Focus Area	Description
Standards	• Hospitals are responsible for setting training requirements and providing training to chemotherapy nurses. • The Regional Health Authority has respective standards and oversight over the cancer care and home care programs. • Regional Health Authority Policy for management of exposure to hazardous medication.
Safety	Systemic Treatment Practice Standards • Infusions start in the hospital but may be disconnected in the home or a community clinic for long infusions (e.g., 5-FU). • Government sets out general standards. • Hospitals are responsible for setting training requirements and providing training to chemotherapy nurses.
Coordination	Roles and Responsibilities • The Specialized Oncology Nurse makes a referral to the Community Nurse Coordinator (within the hospital) for eligible colorectal patients on 5-FU. • The Community Nurse Coordinator liaises with the Community Health Nurse (in the community). • Community care connects with the patient to arrange for care in their residential zone. • The Community Health Nurse checks on the patients in the community and disconnects occur in the home or at a community clinic. • The Community Health Nurse completes documentation in the client's health record, participates in data collection, and submits to the Community Nurse Coordinator. • Government sets out general standards.

Focus Area	Description
	• Hospitals are responsible for setting training requirements and providing training to chemotherapy nurses. <u>Standardized Transition/Communication</u> • Standardized referral form is completed electronically by the hospital nurse. • The referral form is printed, scanned and emailed to the patient's residential zone for coordinator of services via community care. Information includes: o Diagnoses; o Updated medications; o Home environment profile; o Patient performance status; and o Required therapy at home • There is no particular standard for information sharing.
Education	<u>Training and Education for Providers</u> • Nursing guidelines are set by via the Eastern Health Authority. Hospitals are responsible for setting training requirements and providing training to chemotherapy nurses. • In-house training and certification are required for hospital chemotherapy nurses, but not required for home nurses doing disconnects. • Required course (e.g., exposure to hazardous medication) available for all staff on Learning platform for the Regional Health Authority. • All tools are made available through a single provincial platform.

7. Prince Edward Island, Canada

<u>Program Overview</u>:

- Care is contained within the Cancer Treatment Centre.

Focus Area	Description
Coordination	<u>Roles and Responsibilities</u> • The primary care provider refers the patient to the Prince Edward Island Cancer Treatment Centre. • The patient care coordinator reviews the referral and connects with the patient for their appointment.

Focus Area	Description
	• The medical oncologist assesses, diagnosis, and provides supportive care to the patient and may coordinate treatment provided by other specialists. • The patient navigator helps patients and families understand any challenges they may face. • The clinical pharmacist ensures drug safety and delivers patient education. • The oncology nurses specialize in delivering cancer treatment. • The patient care coordinators are clerical staff who helps keep the treatment plan on track so that patients: o Proceed through each process in a timely, organized fashion; o Follow the oncologist's orders properly; and o Be kept informed about schedule of treatments and procedures • Since patients are under the care of a hospital, roles of each health care provider fall within traditional scopes of practice. <u>Standardized Transition/Communication</u> • The primary care provider refers the patient to the Prince Edward Island Cancer Treatment Centre.

8. Quebec, Canada

<u>Program Overview</u>:

- There are no home services offered for home infusion.
- Community clinics disconnect 5-Fluorouracil (5-FU) only.

Focus Area	Description
Safety	<u>Systemic Treatment Practice Standards</u> • All infusions start in the hospital; 5-FU may be disconnected in a community clinic.
Coordination	<u>Roles and Responsibilities</u> • The 5-FU infusion begins in the hospital. • The hospital nursing coordinator refers the patient to a local service centre. • The local service centre connects with the patient to coordinate disconnect at the local service centre. • The local service centre disconnects upon completion of the infusion.

Focus Area	Description

	Standardized Transition/Communication
	• A standardized referral form is used to refer the patient from the hospital to a local service centre.
	  o Of note, the local service centres have merged with the hospital
	• The standardized referral includes the contact number of the referring nurse.
	  o If communication is required, it is done via phone
	• Home and hospital settings use different charting systems; however, the recent merger of hospitals and local service centres will eventually enable record sharing.
	• Currently there are no standard requirements for report back.

Education	Training and Education for Providers • There is no specific training provided for nurses at the local service centre, though they are equipped with general knowledge of chemotherapy and provided a spill kit and personal protective equipment.

9. United Kingdom

Program Overview:

- Home outreach program operates out of the hospital that includes:
  - Delivery of simple chemotherapy (mainly subcutaneous chemotherapy such as azacytidine, bortezomib, and rituximab maintenance);
  - Confirming blood work;
  - Patient reviews to prevent emergency department visits; and
  - Support patient system navigation (i.e., organize transfusions on the day unit)

Focus Area	Description
Standards	• Program includes a lone worker policy. o Each referral is risk assessed (e.g., patient's home environment is assessed for risk)
Safety	Systemic Treatment Practice Standards • The NHS Pan Birmingham Cancer Network *Guideline for the delivery of chemotherapy in the community, closer to the patient's home* guides practice for the home outreach program.

Focus Area	Description

	• Patient criteria for the home outreach program:
	  o The patient must be under the care of a consultant haematologist at Queen Elizabeth Hospital;
	  o Live in a designated area (South Birmingham); and
	  o Treatment/environment must be deemed suitable for home delivery
	  ▪ Any treatments need to be under an hour administration – most commonly the S/C injections are given, but have also given chemo infusions, platelets, Foscarnet, Cladrabine
	• Nurses carry an anaphylaxis kit and oxygen.

Coordination	<u>Roles and Responsibilities</u>
	• Patients are reviewed in the clinic.
	• Home outreach program nurses screen the referral to ensure that its safe and appropriate for the nurses to visit the patient in their home.
	• Hematology nurses operate the home outreach programs; responsibilities include:
	  o Delivery of simple chemotherapy (mainly subcutaneous chemotherapy such as azacytidine, bortezomib, and rituximab maintenance);
	  o Confirming blood work;
	  o Patient reviews to prevent emergency department visits; and
	  o Support patient system navigation (i.e., organize transfusions on the day unit)
	• Oncologists prescribe chemotherapy on paper rotas.
	• The home outreach program nurse collects the prescription from the pharmacist in the Centre of Hematology.
	• The home outreach program nurse collects the chemotherapy from the community pharmacy aseptic unit and brings it to the patient's home for administration.
	  o All supportive medications are collected from the pharmacy on the day that the patient is reviewed in clinic
	• The home outreach program nurse sees the patients for all treatment cycles.
	
	<u>Standardized Transition/Communication</u>
	• Electronic referrals are made by the clinic to the home outreach program.
	• Individual patient notes are held by the home outreach program nurse; the notes contain basic patient information and the rota prescribed.

Focus Area	Description
	○ The home outreach program nurse completes an assessment sheet at each visit which measures toxicities; they are also able to write in free text any additional information ○ The notes are held by the home outreach program nurses and not accessed by the referring doctor; however an email is sent to the relevant medical staff at the end of each cycle with an update of how the last cycle had gone and if there are any new toxicities.
Education	<u>Training and Education for Providers</u> • Home nurses are hematology nurses. • Standard chemotherapy training via the Trust. • Annual anaphylaxis training is required.

10. Saskatchewan, Canada

<u>Program Overview</u>:

- There is no home infusion; care is delivered closer to home via the Community Oncology Program of Saskatchewan (COPS) within local acute hospitals.

Focus Area	Description
Safety	<u>Systemic Treatment Practice Standards</u> • COPS have their own policies under the guidance of the Saskatchewan Cancer Agency. • Patient eligibility criteria include: ○ Complexity of treatment (more complex treatment is administered in the Cancer Centre); ○ Patient stability; and ○ Drug type (e.g., newer drugs are not delivered by the COPS) ▪ A Pharmacy Safety Board gives final sign-off on which drugs may be administer by the COPS
Coordination	<u>Roles and Responsibilities</u> • A major Cancer Centre conducts the initial patient assessment. • The Cancer Centre oncologist refers the patient to the COPS (if the patient is eligible to participate in the program) via the community liaison nurse. • The community liaison nurse:

Focus Area	Description
	○ Processes the referral; ○ Checks the COPS intake capacity; ○ Arranges medication delivery; and ○ Books recurrent appointments with the COPS • The COPS delivers care under the guidance of the Saskatchewan Cancer Agency. ○ COPS are not staffed with an oncologist but are staffed with nurses, pharmacists, pharmacy technicians and social workers who are specially trained in providing cancer care ▪ A nurse educator provides support to COPS staff if needed • Patient education is provided by the Cancer Centre and support by the COPS. <u>Standardized Transition/Communication</u> • COPS staff remain in close contact with the cancer care teams. • Patients who receive their cancer care at a COPS centre must follow-up with an oncologist at a major Cancer Centre, who prescribes treatment and helps manage their care. • Cancer Centres have one EMR, which the COPS have access to. ○ Information sharing is relatively seamless, with exceptions of some paper-based documentation (e.g., pre-printed prescriptions) ○ Data sharing agreements are drafted to ensure seamless flow of information between Systemic Treatment Facility s and COPS
Education	<u>Training and Education for Providers</u> • The Saskatchewan Cancer Agency provides ongoing support and education guidance to local oncology care providers. • A Community oncology program is provided to nurses, regardless of their hospital location, at the major Cancer Centres. • Oncology nurses are required to be certified via completion of a practicum at a major cancer center and a 2-week orientation. ○ Nurses must administer ≥50 treatments per year to keep certification, otherwise they must be retrained • Monthly and as needed training is provided, as well as when a new drug is introduced. • A Share-point site is available to nurses where they can access education and workplace policies.

Focus Area	Description
	Education for Patients and Caregivers • A general patient guide is available online. • Specific treatment education is provided by the Cancer Centres and supported by COPS.

11. Cleveland, Ohio, United States of America

Program Overview:

- Home infusion program focusing on disconnects, line flushing, and some chemotherapy infusions at home (e.g., long chemo infusion such as 5-Fluorouracil (5-FU)).
- The Cleveland Clinic houses the *Infusion at Home program* (as it's not specific to chemotherapy), and is serviced by internal & external home care providers.

Focus Area	Description

Standards	• External agencies are asked to provide their provider qualifications to the Cleveland Clinic.
	  o This is done by checking the agency's accreditation status from regulatory agencies/bodies, such as the Joint Commission, Ohio Department of Health
	  ▪ Of note, accreditation is not necessarily specific to chemotherapy home infusion
	• There are policies, procedures and protocols in place for the administration of oncology medications.
	• Pharmacies have their own policies, procedures and protocols in place for the dispensing/supplying of oncology medication.

Safety	Systemic Treatment Practice Standards • Several policies prescribe and facilitate the services associated with home care and patient choice.
Coordination	Roles and Responsibilities • The oncologist determines a patient's eligibility to receive home chemotherapy infusion and refers the patient to the hospital case manager. • The hospital case manager: o Connects with the patient;

Focus Area	Description
	- Works with the community liaison from the nursing and pharmacy agencies; - Ensures lab results are ready, the patient's IV is in place, the medication bolus is administered (if required), and final sign-off is completed by all care providers; and - Ensures that the drug is ready for patient pick-up at the Clinic or ready for delivery to the patient's home - Hospital case manager plays an important role in ensuring smooth coordination, initially. - Community liaisons take on majority of the responsibilities in ensuring home care. - If the infusion pump is not connected in the Cancer Centre, then the nurse will connect it at the home, and return for the disconnect once the infusion is completed. - For follow up cycles, it is the responsibility of the community liaison to monitor lab values and communicate with the oncologist to ensure orders are placed and patient is aware of treatment. - Pharmacies call the oncology centre to verify that the patient's lab parameters are appropriate to receive chemotherapy. - The clinic pharmacy and competitor pharmacies may be dispensing and supplying drugs/equipment, including personal protective equipment for nurses and patients. - The hospital case manager and clinic community liaison provide patient education. <u>Standardized Transition/Communication</u> - The extent of data sharing depends on whether the home care provider is internal or external to the Cleveland Clinic. - Cleveland's own home care nursing uses the same hospital EMR and communication is seamless - Some external agencies may have read-only access to the hospital EMR (e.g., to see appointments, orders) - There are limited requirements in place for home care to report back to the referring oncologist. (e.g., incidents, follow-ups, complex treatments)

Focus Area	Description
Education	<u>Training and Education for Providers</u> • Cleveland's home care nurses undergo training led by the general nursing department; training includes: o The use of the infusion pump; o Dressing an IV site; o Handling of hazardous drugs; o Managing spills in the home; o Discarding of the IV bag and tubing; o Side effects from chemotherapy; o Central line infections; and o Personal Protective Equipment • Provider qualifications are also assessed via accreditation status. <u>Education for Patients and Caregivers</u> • Patient education is provided by the hospital case manager and clinic community liaison.

12. Michigan, United States of America

<u>Program Overview</u>:

- Home infusion provider.
  - Home infusion program with limited scope in chemotherapy infusions
  - HomeMed is the home infusion pharmacy for the University of Michigan Health System (UMHS)

Focus Area	Description
Standards	• Nurse and pharmacist on-call 24 hours/day. • First dose is always completed in the Cancer Centre • Nursing policies include: o Standard infusion, vascular access device, and dressing protocols; o Midline and peripherally inserted central catheter (PICC) dressing change; o Removal of PICC and Midline;

Focus Area	Description
	○ Inserting of non-coring needs into implanted vascular access device (IVAD); ○ Management of anaphylaxis; ○ Vesicant chemotherapy administration and blood checks; ○ Safe handling of chemotherapy agents in the home; ○ Management of chemotherapy extravasation; and ○ Disconnecting chemotherapy in the patient's home
Coordination	<u>Roles and Responsibilities</u> • First dose is always completed in the Systemic Treatment Facility. • UMHS determines patient eligibility. • Initial patient counselling and education is conducted in UMHS. • Nurse coordinator assists with referrals to HomeMed program. • Pharmacist provides clinical monitoring for IV antibiotics. • Clinical staff works with physician and visiting nurse to coordinate blood draws/ evaluate results. • Pharmacy delivers medications and all supplies. • Prior to delivery, HomeMed contacts patient to review health status, drug and supply usage and the delivery schedule. • HomeMed nurse may then go into the Cancer Centre for infusion connection using an electronic pump. • The hospital coordinator organizes the disconnect by either the HomeMed nurse or a nursing agency nurse. • Hospital nursing coordinator manages the patient's care and nursing requirements for patients on electronic pump. <u>Standardized Transition/Communication</u> • Care across settings is relatively seamless as it is integrated via hospital EMR. ○ Subcontracted nurses are required to submit nursing notes via fax within 3 days of care delivery • Referrals outside of the UMHS must be faxed to HomeMed.
Education	<u>Training and Education for Providers</u> • Nurses must receive certification to provide chemotherapy and demonstrate they are competent to handle hazardous drugs. ○ Certification is required by the hospital ○ HomeMed Nursing Certification is provided by the Cancer Centre

Focus Area	Description
	• Pharmacists do not have any specific requirements in terms of chemotherapy certification. <u>Education for Patients and Caregivers</u> • Patient resources are available online.

Appendix D: Systemic Treatment Resources

The table below includes a list of Ontario Health (Cancer Care Ontario) resources that have been published related to Systemic Treatment.

#	Name	Description
1	CCO Drug Formulary Website	Provides information for healthcare providers and patients on over 100 specific cancer drugs approved for use in Ontario as well as cancer drug regimen, including medication and regimen information sheets.
2	2019 Regional Models for Systemic Treatment: Standards for the Organization and Delivery of Systemic Treatment	A practical framework and standards to guide the delivery of systemic treatment Ontario-wide, that is, within cancer-centres, and in facilities beyond the confines of regional cancer centres.
3	2012 Safe Administration of Systemic Cancer Therapy Part 1: Safety During Chemotherapy, Ordering, Transcribing, Dispensing, and Patient Identification	To provide guidance on processes, technologies, and devices for the prevention of errors during systemic cancer treatment administration in adult patients in areas that cut across the entire process and, in the planning, and preparation stages.
4	2018 Safe Administration of Systemic Cancer Therapy Part 2: Administration of Systemic Treatment and Management of Preventable Adverse Events	To provide guidance on processes, technologies and devices for the prevention and control of adverse effects that can happen during or following the administration of systemic treatment to adult cancer patients.
5	2019 Enhancing the Delivery of Take-Home Cancer Drugs in Ontario	To present consensus-based recommendations and alternate models of Take-Home Cancer Drugs (THCD) delivery that optimize quality & safety.
6	2017 Recommendations for the Safe Use and Handling of Oral Anti-Cancer Drugs (OACDs) in Community Pharmacy: A Pan-Canadian Consensus Guideline	To provide recommendation that address the safe handling of oral anti-cancer drugs (OACDs) in community pharmacies across the medication lifecycle, from manufacturer packaging to waste management and incident reporting.

#	Name	Description
7	2018 Safe Handling of Cytotoxins	To provide recommendations regarding the safe handling of parenteral and oral cytotoxics by healthcare workers, selection and use of PPE, and treatment in diverse settings including the home setting.
8	2019 Management of Cancer Medication-Related Infusion Reactions	To facilitate a standardized approach to cancer medication-related infusion reactions in Ontario.
9	2018 Immune Checkpoint Inhibitor Guideline and Side Effect Toolkit	To help support individuals taking immune checkpoint inhibitor medications.

Appendix E: Consultation Process

Consultation/Feedback Requested	Response Received
Ontario Health (Cancer Care Ontario) Clinical Programs Executive Team	X
Home and Community Care Support Services Provincial Professional Practice Advisory Council	X
Home and Community Care Support Services Vice-President Council	X

Cancer Care Ontario is now part of Ontario Health, an agency created by the Government of Ontario with a mandate to connect and coordinate our province's health care system to help ensure that Ontarians receive the best possible care.

Our programs and services remain unchanged.

Ontario Health (Cancer Care Ontario)
525 University Avenue
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