



# Complex Malignant Hematology Services in Ontario

June 2017 – Year in Review

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# Introduction and Summary

Cancer Care Ontario is pleased to provide a review of Complex Malignant Hematology (CMH) and Hematopoietic Cell Therapy (HCT) services in Ontario as of June 2017. This report is authored on behalf of the CMH-HCT Consultation Group and highlights:

- The efforts that took place over the last year to address the complex and growing needs of CMH patients in this province;
- The continuing plans for ensuring sustainable and timely access to CMH-HCT services in Ontario while also promoting care closer to home; and,
- The governance required to support the successful implementation of those plans.

CMH is a complex and evolving area of clinical care that requires intensive resources, specialized facilities and a high degree of specialization for healthcare providers who deliver the care. The demand for CMH services, including HCT, has increased over time and is expected to continue to do so; however, capacity has not grown sufficiently to meet the recent demand. This has resulted in pressures in physical space (e.g., specialized in-patient and day-hospital treatment areas), health human resources (e.g., physicians and other specialized healthcare providers) and supporting infrastructure (e.g., laboratory services, pharmacy). These issues apply to both the adult and pediatric systems.

The CMH-HCT Consultation Group (Consultation Group) was formed in June 2016 in response to an urgent need for changes in how and when HCT patients access treatment in Ontario. This need became critical as the number of patients eligible for transplants increased significantly. This increase was the result of a number of factors, including advances in technology, expanding indications for transplant, expanded eligibility criteria and Ontario's aging population.

The Consultation Group, with Cancer Care Ontario as the secretariat, provides advice to the Minister of Health and Long-Term Care and the Ministry of Health and Long-Term Care (MOHLTC) on the development and implementation of a provincial strategy to address the current pressures in CMH-HCT.

The focus of the Consultation Group and its partners has been:

- improving patients' experiences and access to specialized care;
- implementing consistent clinical pathways;
- improving physical capacity/space for care;
- facilitating health human resource recruitment;
- reviewing models of care for health care service delivery;
- implementing interim strategies to support care closer to home as well as access to out-of-country care; and
- fostering a culture of collaboration and knowledge sharing amongst Ontario's transplant facilities.

The collective efforts of the Consultation Group combined with multiple working groups led by Cancer Care Ontario have resulted in improved timely access to care for patients closer to home and the development of strategies to ensure coordinated, consistent high-quality CMH-HCT care across the province.

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## Part 1: What is Complex Malignant Hematology and Hematopoietic Cell Therapy?

# An overview of CMH and HCT care

**Complex Malignant Hematology** refers to a number of different cancers of the blood. People with complex hematologic malignancies require highly specialized care from the time of initial diagnosis, throughout treatment and into survivorship. Acute leukemia (including acute myeloid leukemia [AML] and acute lymphoblastic leukemia [ALL]) are complex hematologic malignancies.

**Hematopoietic Cell Therapy** (HCT, also known as stem cell transplantation [SCT]) is an essential component of treatment for some people with leukemia, lymphoma, myeloma and other hematologic (blood) disorders. It involves the administration of high-dose chemotherapy, sometimes accompanied by total body radiation, to destroy the diseased cells. These treatments also destroy the person's bone marrow. Immature stem cells, which can come from the patient (an autologous, or auto, transplant) or from a related or an unrelated donor (an allogeneic, or allo, transplant), are infused into the patient with the intent to regenerate the marrow, which will then produce healthy blood cells.

People with acute leukemia (including acute myeloid leukemia [AML] and acute lymphoblastic leukemia [ALL]) require highly specialized care from the time of initial diagnosis, throughout treatment and into survivorship. Treatment for patients with Acute Leukemia is provided at 10 facilities, with an additional

three facilities providing shared care services." However, there are capacity issues in providing timely access to these specialized leukemia services in Ontario, particularly in the Greater Toronto Area (GTA). In addition, many people with acute leukemia require HCT; approximately half of all the allogeneic transplants currently performed in Ontario are for people with acute leukemia. As resources (medical expertise, bed space, laboratory support, etc.) are shared among all CMH patients, including those with acute leukemia, the provincial HCT plan must also address the needs of patients with acute leukemia.

Six hospitals currently provide HCT services in Ontario; however, not all of the hospitals provide all three types of transplants currently offered in Ontario (see table below). University Health Network/Princess Margaret Cancer Centre (UHN), Hamilton Health Sciences and The Ottawa Hospital perform all three types of transplants (autologous, allogeneic related donor and allogeneic unrelated donor). London Health Sciences Centre performs autologous transplants and a small number of allogeneic related donor transplants. Kingston General Hospital and Health Sciences North provide autologous transplants only.

**Table 1: Ontario Transplant Centres: At a Glance**

HCT Type	Acute Leukemia Service Site	Autologous HCT	Allogeneic-related	Allogeneic-unrelated
University Health Network (Princess Margaret Cancer Centre)	X	X	X	X
Hamilton Health Sciences	X	X	X	X
The Ottawa Hospital	X	X	X	X
London Health Sciences Centre	X	X	few	
Kingston General Hospital	X	X		
Health Sciences North	X	X		
Windsor Regional Hospital	X			
Grand River Hospital	X			
Thunder Bay Regional Health Sciences Centre	X			
Sunnybrook Health Sciences Centre	X			

**Legend:**

**Acute Leukemia Service Site:** Acute leukemia (including acute myeloid leukemia [AML] and acute lymphoblastic leukemia [ALL]) are complex hematologic malignancies. Acute Leukemia Service sites provide the full scope of care to treat Acute Leukemia patients including induction chemotherapy.

**Autologous HCT:** Stem cells *from the patient* are infused into the patient with the intent to regenerate healthy bone marrow, which will then produce healthy blood cells.

**Allogeneic HCT:** Stem cells *from a related or unrelated donor* are infused into the patient with the intent to generate healthy bone marrow, which will the produce healthy blood cells.

## Part 2: Current State of CMH-HCT Services in Ontario

# More Ontario patients are being treated than ever before

In order to increase timely access and care closer to home for patients requiring transplants, a number of strategies have been implemented. These include:

- Efforts to increase the number of transplants performed within Ontario transplant centres;
- Increased coordination (through the HCT Review Committee) to allow patients to get care at other transplant centres within Ontario when appropriate; and
- Access to allogeneic transplants out-of- country.

These strategies have enabled more patients to receive more autologous and allogeneic transplants than ever before, while also shortening the time from when the patient is clinically ready to when they receive the transplant (see Table 2).

- In 2016/17, 913 patients received HCT within Ontario, and an additional 45 patients received out-of-country transplants.
- This represents an 12 percent increase from 2015/16, and a 70 percent increase from 2009/10 of Ontario patients receiving HCT.

**Table 2: Transplants Performed within Ontario and Out of Country, Year-Over-Year Volumes**

HCT Type	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17
<b>Transplants Performed within Ontario</b>								
Autologous (including Day 1 transfers)*	405	383	394	478	505	538	590	632
Allogeneic-related	80	81	79	65	78	91	116	137
Allogeneic-unrelated	79	77	104	104	120	115	138	144
<b>Total Ontario</b>	<b>564</b>	<b>541</b>	<b>577</b>	<b>647</b>	<b>703</b>	<b>744</b>	<b>844</b>	<b>913</b>
Transplants Performed Out-of-Country	0	0	0	0	0	0	15	45
<b>Total Ontario &amp; Out-of-Country Volumes</b>	<b>564</b>	<b>541</b>	<b>577</b>	<b>647</b>	<b>703</b>	<b>744</b>	<b>859</b>	<b>958</b>

\*\*Day 1 transfers refers to a model of shared care where the transplant takes place at the transplant centre, and post- transplant care takes place at a partner hospital closer to the patient's home.

# Patients are accessing care faster

The treatment pathways for patients needing HCT are complex and dependent on the disease type and availability of the donor. In general, if an allogeneic HCT is indicated, the transplant should be performed within six weeks after the patient is ready and the donor has been identified, (per the HCT Review Committee). Since February 2016, Cancer Care Ontario has monitored activity for allogeneic HCT through a monthly review of two measures: average time to transplant from clinically ready to transplant; and number of patients that are clinically ready and waiting for transplants. Additionally, Cancer Care Ontario monitors wait times for both allogeneic and autologous transplants on a quarterly basis.

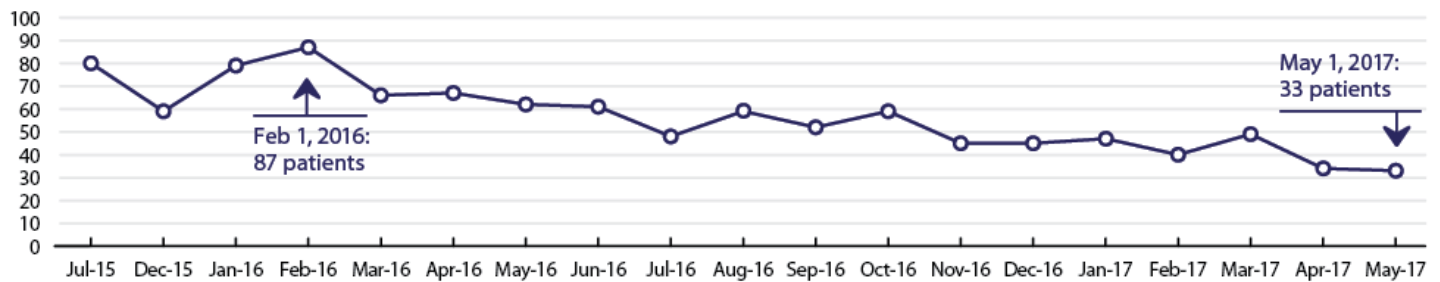
## While these measures can fluctuate from day to day, there has been steady improvement since peak wait times in February 2016:

- 62 percent decrease in the number of patients ready and waiting for allogeneic HCT (33 patients as of May 2017, compared to 87 patients as of February 2016).
- 51 percent decrease in the average wait time across all transplant centres to the next available transplant appointment (5.9 weeks average in May 2017, compared to 12 weeks average in February 2016).

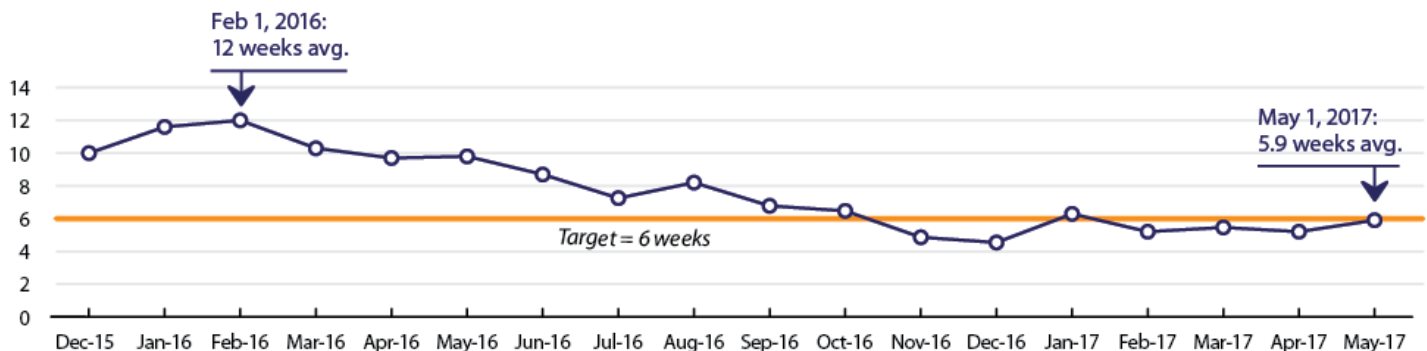
## Overall, transplant centres across Ontario now have comparable wait times to the next available allogeneic transplant appointment. On May 1, 2017, the time to the next available transplant date at each centre was:

- University Health Network – 8 weeks
- Hamilton Health Sciences – 6 weeks
- The Ottawa Hospital – 3 weeks
- London Health Sciences Centre – 6 weeks

**FIGURE 1: ALLO HCT Patients # of Patients Ready and Waiting**



**FIGURE 2: ALLO HCT Patients - Average Time from Clinically Ready to Transplant to Available Transplant Date (Weeks)**



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# Out-of-Country Access

In addition to improving timely access to HCT services at transplant centres in Ontario, improvements have also been realized through the MOHLTC's Out-of-Country Program, which provides funding for patients to receive medical services outside of Ontario (usually within the United States). While providing timely access to out-of-country care is an important component of the interim access strategy for care, some patients have declined out-of-country care when offered, with the most common reason being that their support system resides in Ontario and/or they are unable to find an appropriate caregiver(s) to accompany them to the U.S. A number of patients have also been unable to go out-of-country for their care for clinical reasons, such as no longer being eligible for transplant. Ontario transplant facilities continue to recommend and discuss out-of-country care with their patients and to help them find solutions to any barriers they may face in accepting this option.

## **As of May 31, 2017 (since the establishment of the HCT Review Committee in August 2015):**

- **355 patients** have been approved to have their transplant at another Ontario facility or out of country.
- **86 patients** have agreed to receive care out of country.
- **66 patients** have completed their transplants out of country or are in the process of completing their transplants out of country.

**"I have been thoroughly impressed with the care I have received in the U.S. The staff have all been excellent. I have found them to be rarely rushed, well informed, to have good clinical knowledge, and to be very supportive. They truly have the patient's best care at heart."**

– Catherine S.



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### Part 3: The Work Underway

# Clinical guidance: Defining and communicating best practice care

Clinical guidance materials have been developed in order to define and communicate best practices for the delivery of HCT services. These materials include clinical care pathways, and guidelines for pathology and laboratory tests needed for diagnosis, treatment and follow-up of these patients. In addition, there is work underway to develop detailed patient education materials to support patients' understanding of their care and treatment options.

As well, at the recommendation of the Consultation Group, the Patient and Family Advisor Sub-Committee was formed. This sub-committee ensures that patients are represented in all aspects of planning, including the development of out-of-country patient information materials and the AML patient pathway. In 2017, the sub-committee will assist with the development and implementation of CMH-specific patient-reported experience measures.

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#### Completed:

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Clinical care pathways for ALL and AML have been developed. The pathways have multiple uses: to explain the complexities of care for this patient population, to guide the measurement strategy, and to identify areas for process improvement.

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An AML pathway for patients was developed in both English and French and has been shared with transplant facilities. This tool supports individual conversations with patients and their care team around the care patients will receive. Feedback on the tool has been very positive.

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CritiCall Ontario for Acute Leukemia Services was launched in July 2016. CritiCall Ontario facilitates access to expert clinicians and services for acute leukemia patients in a timely and efficient manner. As of May 13, 2017, CritiCall Ontario has received 93 calls for consultation from referring hospitals across the province.

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Pathology and laboratory medicine recommendations have been developed for AML, ALL, myelodysplastic syndrome (MDS), along with aplastic anemia and high-grade lymphoma.

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To enable collaboration across clinical teams, a medical education webinar series about acute leukemia was created. Additionally, clinicians involved in acute leukemia care across the province have been connected to each other via a shared email list.

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Transplant programs are reviewing materials related to after-treatment care to identify common tools and guidelines that can support patients in survivorship.

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# Continuous improvement to out-of-country care

Ongoing efforts are underway to streamline the process to accessing timely HCT services in alternative transplant centres or through the Out-of-Country Program.

In August 2015, the HCT Review Committee was established to:

- Review requests from transplant centres for care in an alternate centre on behalf of patients who need a transplant in a timeframe that is not feasible for the local centre to provide.
- Facilitate the transfer of eligible patients to transplant facilities elsewhere in Ontario, another province or in the United States (Roswell Park in Buffalo, Cleveland Clinic in Cleveland, or Karmanos Cancer Center in Detroit).

The HCT Review Committee includes medical directors from programs at the University Health Network, The Ottawa Hospital, Hamilton Health Sciences and London Health Sciences Centre, as well as leukemia experts from Toronto and Windsor. This committee meets weekly and works closely with the transplant facilities and the MOHLTC's Out-of-Country Program to enable successful patient navigation and access to out-of-country care when appropriate.

The HCT Review Committee has recommended 355 patients to receive their transplant out-of-country or at another Ontario facility as of May 31, 2017. Almost all patients who have been referred to this committee met the standard indications (reasons) for transplant, enabling the committee to agree to the referral.

In February 2017, a thorough review of the referral process was undertaken and these recommendations are in the process of being implemented to allow earlier referral and faster access to out-of-country care.

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## Completed:

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In the fall of 2016, the Consultation Group identified patients with leukemia in the Greater Toronto Area but outside of the University Health Network service area as needing improved access to assessment for transplant. In response, the transplant program at The Ottawa Hospital agreed to provide consultation services for these patients and direct referrals for out-of-centre care as appropriate. As capacity has improved, these patients are now accessing care within the GTA.

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The HCT Review Committee's mandate now includes identifying an in-province facility that can accommodate cases where out-of-country timelines are not expected to meet the clinical needs of a particular patient.

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The Out-of-Country Frequently Asked Questions (FAQ) document for patients was revised (incorporating input from patients and experts) and distributed to transplant programs along with information sheets about out-of-country facilities. The updated FAQ document includes information for patients, donors and caregivers who are considering which facility will best meet the patient's needs.

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A monthly report was developed to assist hospitals in monitoring the length of stay for out-of-country patients and to plan for their anticipated return date.

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An Ethics Working Group was established and developed a framework to ensure that HCT Review Committee referrals to another centre (in Ontario or out of country) continue to be conducted in an ethical manner.

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The development of a more organized repatriation package was supported as part of the transfer of care process for patients from out-of-country transplant facilities coming back to Ontario.

# System planning: Anticipating future needs

System planning relies on a strong understanding of the expected numbers of patients who will require care in the future so that services, health human resources and capital planning can be organized to meet this need.

As approximately half of all the allogeneic transplants currently performed in Ontario are to treat patients with leukemia, the province's HCT system plan needs to address the requirements of this patient population. The goal is to develop and implement a service delivery plan that describes a network of service providers for patients with acute leukemia in Ontario

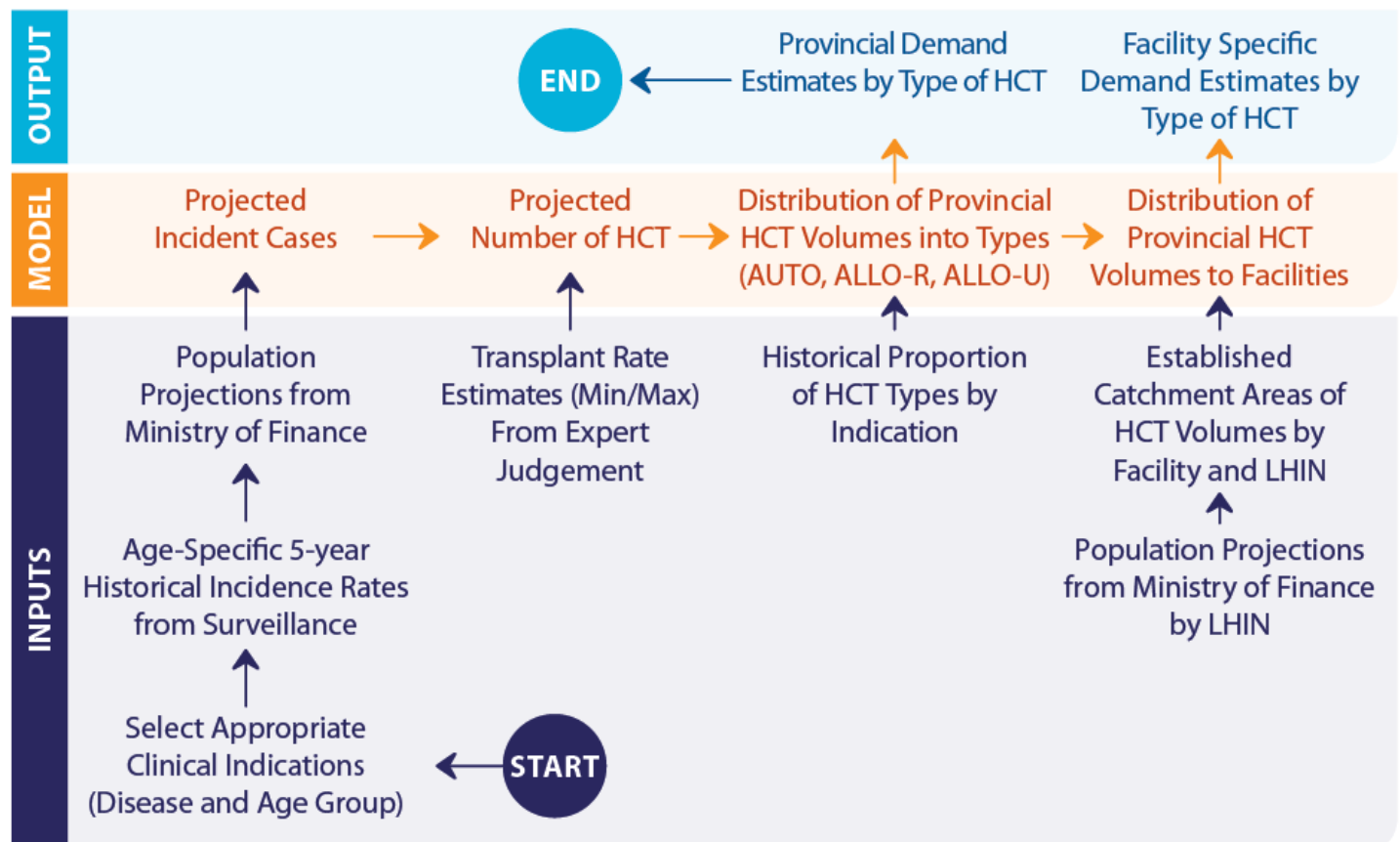
anchored by the facilities providing HCT services. This plan focuses on improving the patient experience and providing timely access to high-quality, coordinated CMH services as close to home as possible.

The Consultation Group has shown strong support for the expansion of the provincial program at Sunnybrook Health Sciences Centre, which will be ready to provide services to increasing numbers of acute leukemia patients in 2018. This program will grow as health human resources and facility investments are completed.

## Completed:

An HCT demand model was developed to provide an improved understanding of current and future needs.

**Figure 3: Demand Model**



The demand model helped to show that the number of patients seeking access to transplants had and will continue to increase significantly due to two main reasons:

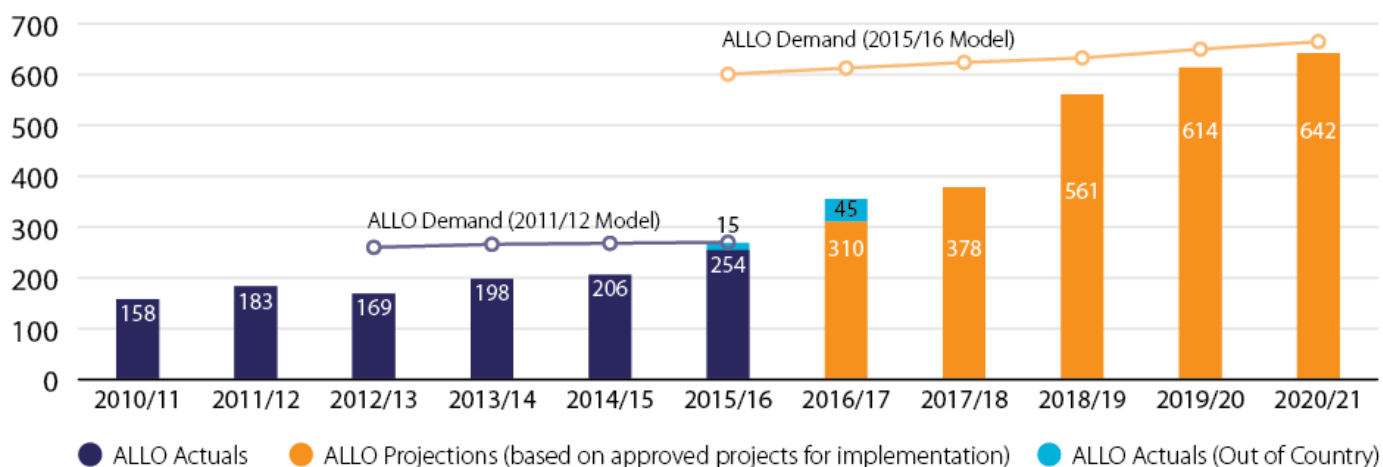
- **Increased age groups added to the model.**

Previous models excluded patients over the age of 70. Due to advancements in drugs that make treatment safer and more tolerable for older patients, patients up to age 75 are now eligible for HCT (for many but not all hematology disease sites). This additional cohort is proportionately very large and contributes to the considerable increase in demand.

- **Rates of transplants for each disease/ age group increased.**

To estimate the upper limit on demand, transplant rates were re-evaluated and compared with estimates from the National Marrow Donor Program in the United States. This is reflected in the higher estimated future demand for allogeneic transplant.

**Figure 4: ALLO HCT: Demand vs Actuals as of June 12, 2017**



The planning work has also identified demand projections for acute leukemia based on models that provide care closer to home.

Three additional facilities started providing shared-care services as Day 1 transfer centres for patients requiring autologous HCT: Windsor Regional Hospital, Grand River Hospital and Lakeridge Health. In addition, Lakeridge Health started to provide shared-care services for patients with acute leukemia. Discussions for additional Day 1 transfer centres (Niagara Health System) are ongoing. With the addition of these new Day 1 sites, more patients are receiving timely care closer to home.

A draft provincial plan, which calls for a phased approach to increasing acute leukemia services, was tabled in November 2016. Representatives from all areas of the province and all types of leukemia service providers met in February 2017 to discuss implementing the plan’s initiatives around Models of Care, Regional Leukemia Networks and a Community of Practice for Leukemia. The provincial plan will be released in July 2017.

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# Data management and reporting: Driving future improvements

Data management and reporting focuses on the development of an overarching measurement and data collection strategy. The measurement strategy will initially focus on acute leukemia care and transplant for all indications, and will include measures at the system, hospital and patient levels. The Consultation Group reviewed and endorsed this measurement strategy. The group also highlighted the importance of including outcome measures that allow for international benchmarking.

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## Completed:

The measurement strategy framework and supporting data collection plan were tabled and endorsed by the Consultation Group. System, hospital and patient-level measures have been identified. These measures will allow for an improved understanding of the system, and an ability to measure performance and enable national and international benchmarking.

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A validated patient-reported experience measurement survey has been developed and will be implemented to measure patient experiences across the CMH care continuum.





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# Ensuring future capacity through health human resources

Health human resources planning ensures that Ontario transplant centres have the clinical staff in place to deliver high-quality care to CMH patients within acceptable wait times. Work in this area informs MOHLTC on required physician resources and their allocation across the province. This work also involves developing new person-centred and sustainable models of care that optimize the role of hematologists and the interdisciplinary team in the most appropriate settings.

The Consultation Group has reviewed and provided input into health human resources planning approaches and new models of care. Discussion has taken place to understand the challenges and strategies to assist in the recruitment of specialist physicians.

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## Completed:

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10 new medical oncology Alternate Funding Plan (AFP) positions for CMH physicians across the centres were allocated in late 2016/17. Seven out of the 10 positions were filled as of May 2017.

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A CMH health human resources business case was submitted to MOHLTC, which included a current state assessment and HHR recommendations. The number of CMH physician full-time equivalents (FTE) in Ontario was estimated using census data. Physician workload benchmarks were identified using published literature and supported by expert consultation informed by data evaluation. As a result of this work an additional 19 FTE CMH positions will be added to the system over the next 3 years.

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Current models of care (including team composition, role and setting of care) were identified and described.

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Recommendations for the preferred models of care (i.e., most appropriate provider and setting of care for CMH services) were developed. A phased implementation approach was defined and a baseline assessment of the status of implementation of these recommendations was completed.

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# Ensuring future capacity through capital expansion

The purpose of the capital expansion work is to ensure optimal physical space at existing transplant centres and to develop one new program in Ontario (recommended at Sunnybrook Health Sciences Centre). This work is accomplished in partnership with MOHLTC, LHINs, Cancer Care Ontario and the capital teams at the transplant centres. Capital expansion projects will be completed in multiple phases.

The Consultation Group reviews the status of capital plans at every second meeting. Additionally, feedback from the Consultation Group has endorsed a consistent provincial approach and patient engagement in the planning process.

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## Completed:

Patient and Family Advisors provided input into key considerations for physical space planning.

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A capital working group was formed to ensure clarity and consistency around key elements of capital planning, such as infection control requirements, use of day hospital facilities, and laboratory services.

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**Projects approved:** The Government of Ontario announced investments in capital funding for three hospitals to expand HCT treatment capacity:

University Health Network, The Ottawa Hospital and Hamilton Health Sciences. When completed these projects will provide the infrastructure to deliver approximately 216 additional allogeneic transplants annually.

Additionally Sunnybrook Health Sciences Centre has received approval for capital expansion, which will create additional space to perform transplants.

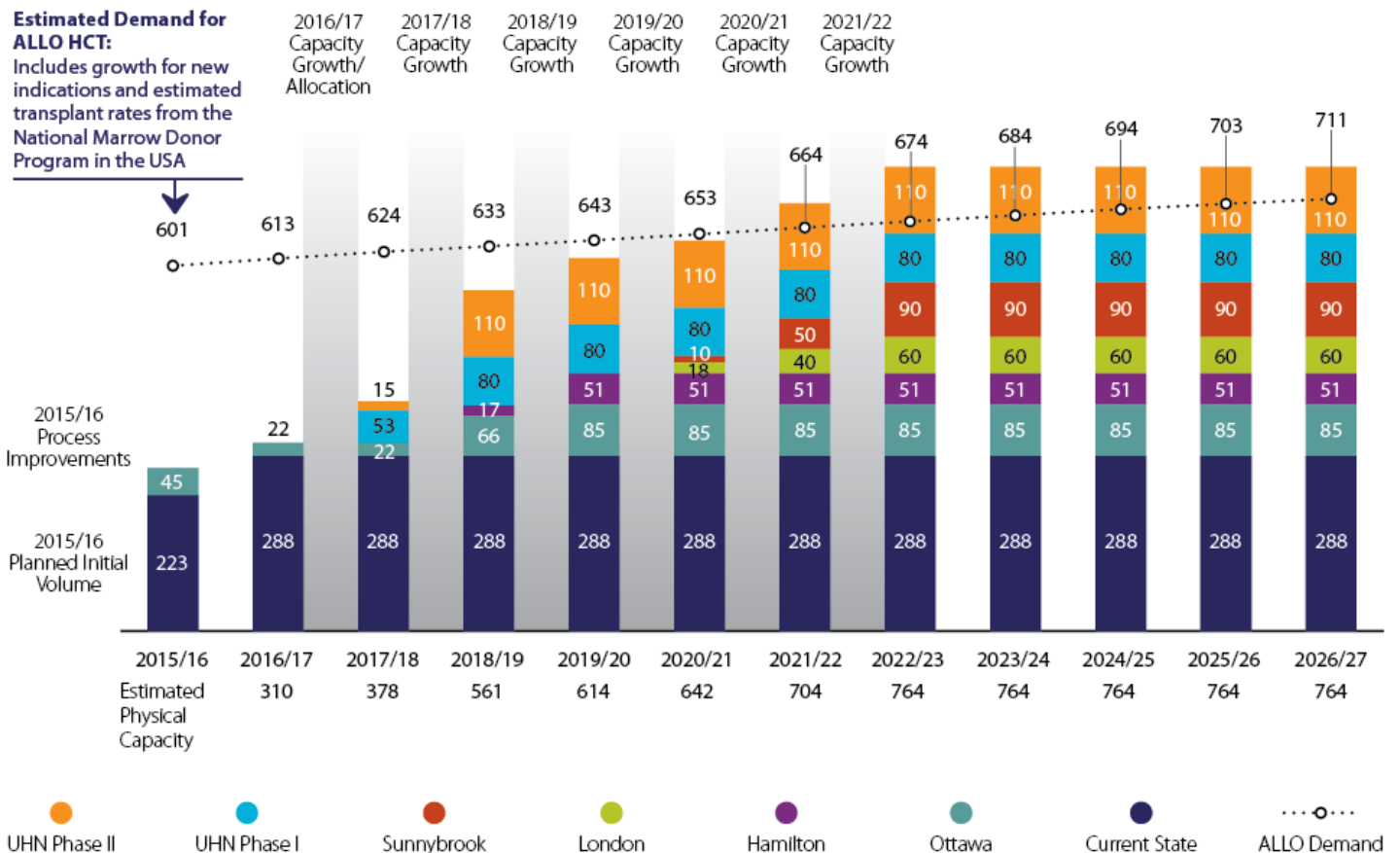
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**Recently:** Capital projects at London Health Sciences Centre, and the second phase at University Health Network have been approved. These projects will provide the capacity to perform approximately 170 additional allogeneic HCT transplants annually once all projects are fully operational. Cancer Care Ontario continues to work with MOHLTC and our partners to advance these projects to completion. Please see Table 3 below for further information regarding the estimated demand and infrastructure capacity growth for allogeneic HCT in Ontario resulting from currently approved projects.

**Table 3: Capital Expansion Projects:**

	Stage 1	Stage 2	Stage 3	Stage 4			
Pre-Capital Submission Form	Proposal	Functional Program	Block Schematic/ Sketch Plan	Working Drawings & Final Estimate of Cost (FEC)	Approval to Tender, Tender and Award Period	Construction/ Renovation	Occupancy
Sunnybrook Health Sciences Centre Phase 2			Sunnybrook Health Sciences Centre Phase 1 for Acute Leukemia			University Health Network Phase 1	
London Health Sciences Centre			The Ottawa Hospital				
University Health Network Phase 2			Hamilton Health Sciences				

**Figure 5: Estimated Demand and Infrastructure Capacity Growth for ALLO HCT in Ontario as of June 12, 2017 - Approved Projects for Implementation**



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# Supporting CMH-HCT care through clinically appropriate funding models

Funding models are essential to ensure consistency in care processes at all of the hospitals. Clinically appropriate funding models, which accurately reflect the costs of care, help address the need to provide clinical and psychosocial support for CMH patients, who have complex needs and require lengthy follow-up.

## Completed:

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A new funding model has been implemented for transplant care in Ontario. The model ensures hospitals are funded for pre- and post-transplant care, the transplant procedures, high-cost procurement of stem cells, and high-cost drugs. This new model improves alignment between funding and the costs of care delivery.

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A new funding model has also been developed for acute leukemia care; implementation is planned for 2017/18.

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## Part 4: Looking Forward

# Continuing to advance access to care for CMH patients in Ontario

In the past year, significant progress has been made in improving timely access to care closer to home for CMH patients; however, there continue to be opportunities to improve. Capital construction, health human resources, implementation of the Acute Leukemia Provincial Plan, a new funding model, measurement strategy and survivorship plans are all areas that require ongoing focus in 2017/18. Another priority is the implementation of a number of recommendations that were developed over the last year, including the models of care and pathology recommendations. Finally, there is a need to consider strategies for other areas of CMH care.

In order to support the next phase of work with a particular focus on implementation, a revised governance strategy will be put into place. The governance structure will ensure that clear and coordinated accountabilities and guidance are in place for the identified priority areas. This will be accomplished through a newly developed CMH Steering Committee, which includes clinical and administrative leadership from across the province. In addition, working groups will address priority focus areas, report to the Steering Committee and inform the Consultation Group. The Consultation Group will continue to meet regularly, and everyone involved in the work will receive regular progress updates.

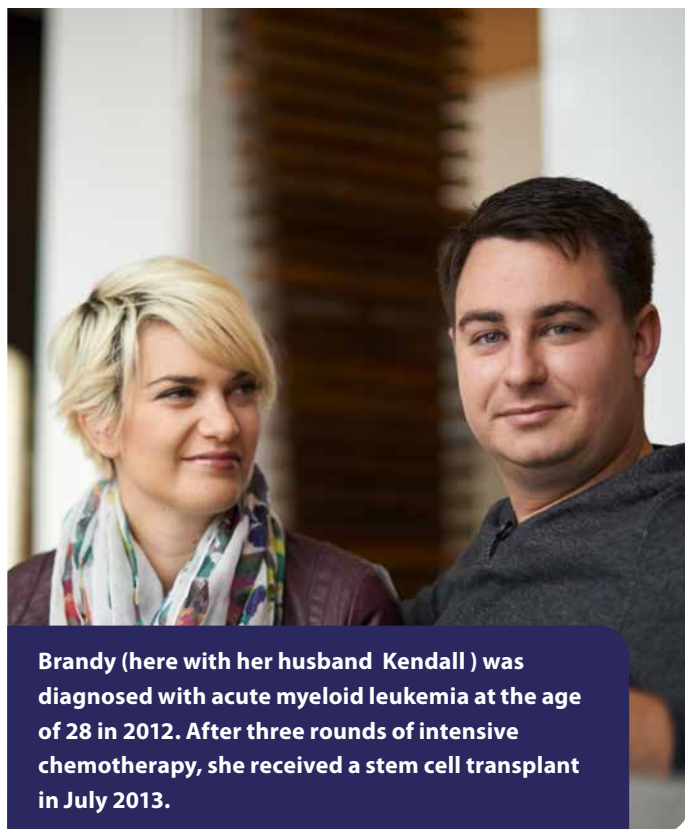
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## Conclusion

The CMH-HCT Consultation Group, Cancer Care Ontario, MOHLTC, transplant centres, healthcare providers and other provincial stakeholders are working together to drive improvements that will ensure CMH patients receive timely access to high-quality care closer to home.

Through the valuable input and guidance provided by the Consultation Group, significant progress has been made since June 2016.

We look forward to continuing to work together as part of the overall CMH-HCT governance in order to continue to improve access to care for all Ontarians.



**Brandy (here with her husband Kendall ) was diagnosed with acute myeloid leukemia at the age of 28 in 2012. After three rounds of intensive chemotherapy, she received a stem cell transplant in July 2013.**



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# Acknowledgements:

## Participant List:

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# Glossary of Terms

- **Complex Malignant Hematology** refers to a number of different cancers of the blood. People with complex hematologic malignancies require highly specialized care from the time of initial diagnosis, throughout treatment and into survivorship. Acute leukemia (including acute myeloid leukemia [AML] and acute lymphoblastic leukemia [ALL]) are complex hematologic malignancies. Patients who may benefit from HCT are also considered in this group.
- **Hematopoietic Cell Therapy (HCT, also known as stem cell transplantation [SCT])** is an essential component of treatment for some people with leukemia, lymphoma, myeloma and other hematologic (blood) disorders. It involves the administration of high-dose chemotherapy or total body radiation, to destroy the diseased cells. These treatments also destroy the person's bone marrow. Immature stem cells, which can come from the patient (an autologous, or auto, transplant) or from a related or an unrelated donor (an allogeneic, or allo, transplant), are infused into the patient with the intent to regenerate the marrow, which will then produce healthy blood cells.
- **Autologous HCT** is a transplant using the *patient's own stem cells*. They are infused back into the patient and populate the marrow to create new healthy blood cells. This is also known as Auto-HCT.
- **Allogeneic HCT** is a *transplant of stem cells* from a related or unrelated donor. They are infused into the patient with the intent to generate healthy bone marrow, which will produce healthy blood cells. This is also known as Allo-HCT.
- **Day 1 transfers** refers to a model of shared care where the transplant takes place at the transplant centre, and post-transplant care takes place at a partner hospital closer to the patient's home. This model may be suitable for some autologous HCT patients.
- **CritiCall Ontario** is funded by the Ministry of Health and Long-Term Care and provides 24/7 access to urgent and emergent consultation and referral services to hospital-based physicians in Ontario through its Call Centre at 1-800-668-4357 (HELP).
- **The HCT Review Committee** is chaired by Dr. Huebsch (The Ottawa Hospital) and includes medical directors from programs at the University Health Network, The Ottawa Hospital, Hamilton Health Sciences and London Health Sciences Centre, as well as leukemia experts from Toronto and Windsor. This committee meets weekly and works closely with the transplant facilities and the MOHLTC's Out-of-Country Program to enable successful patient navigation and access to Out-of-Country Care when appropriate.
- **Demand Models** use historical data, projected incidence and advances with clinical practice to develop an understanding of the expected numbers of patients who will require care in the future so that service delivery, health human resources and capital planning can be organized to meet this need.
- **Health human resources (HHR)** planning ensures that Ontario transplant centres have the clinical staff in place to deliver high-quality care to CMH patients (physicians, nurses, and allied health personnel).
- **Alternate Funding Plan (AFP)** is a compensation structure to physicians based on a bundle of services (rather than a fee per procedure).
- **Capital expansion** refers to the planning for and development of optimal physical space to meet demand for services. This includes space for in-patient and out-patient care as well as associated lab and other supports.





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