COVID-19

HÉMA-QUÉBEC

2020–2021
ANNUAL
REPORT

ALL TOGETHER FOR HEALTH

To efficiently meet the needs
of the Québec population
for quality blood and other
biological products of human origin.

MISSION

VISION

To become a strategic
partner for the Québec
health system.

THE YEAR
AT A GLANCE

118,707
blood donors

19,502
plasma for fractionation donors

52,982
stem cell donors

2,917
blood cord donors

752
tissue donors

939
mother's milk donors

295,669
blood products delivered

485,547
stable products delivered

138
non-related transplants, including 29 cord blood transplants

4,834
tissues distributed to hospitals

19,249
bottles of mother's milk distributed

195,799
blood, plasma, stem cell, human tissue, and mother's milk donors

805,459
products distributed (all types of donations)

1.412
employees

$436M
annual revenues

Maintained
100%
of blood collection and distribution activities despite the COVID-19 pandemic

COVID-19 Highlights

Exceptional individuals in exceptional times

Our blood and plasma collection activities were never interrupted during the pandemic. Despite periods of lockdown and tools and systems that required improvement, the organization was always able to supply a sufficient quantity of quality biological products. We held the fort despite these difficult times.

Since the start of the pandemic, **donors** responded spontaneously, and their unwavering commitment enabled us to maintain our supply of blood, plasma products, mother's milk, stem cells and human tissues throughout the first three waves.

Endowed with natural generosity, **volunteers** also mobilized in large number to be present at our collection sites and centres to assist donors.

Our **employees** and teams on the ground at the various collection sites and in the laboratories, along with the people who acted as liaisons with the hospitals, made the gift of life possible — from donation to distribution. Their professionalism and dedication, combined with that of Héma-Québec's employees who supported them, were a constant source of inspiration and motivation.

A sincere thank-you to our donors, volunteers and employees who helped meet the demand of hospitals to ensure the life and well-being of Quebecers.

A constant supply despite three waves of pandemic

Blood collection activities are crucial and vital. There is no substitute for blood, and blood products have a limited shelf life.

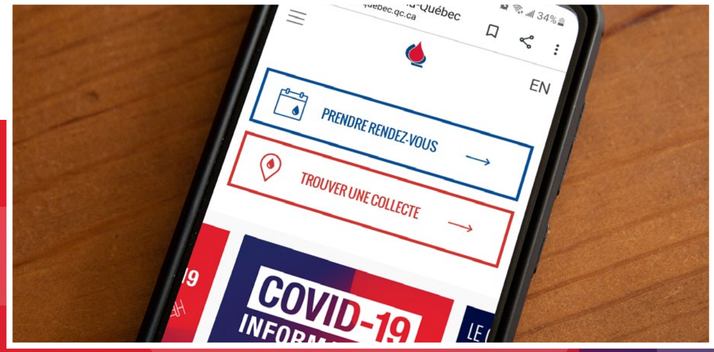
Blood must be collected on a constant basis. The organization reacted quickly. Adjustments were made to the supply strategy, especially changing certain donor eligibility criteria to promote increased donations. A broad range of measures were also implemented for the safety of donors, staff and volunteers during our various activities.

Héma-Québec's science was used in the fight against COVID-19

Héma-Québec had the following essential assets that could help better understand and evaluate the progression of the pandemic: experienced researchers and access to a large pool of donors of blood products.

These assets were enlisted in seroprevalence studies conducted in collaboration with the Institut national de santé publique du Québec (INSPQ), in partnership with the COVID-19 Immunity Task Force (CITF). These studies made it possible to estimate the progression of immunity in the population during the vaccination campaign.

A safety measure that improved the donor experience



Blood collection activities were reviewed to address the pandemic situation.

Several adjustments were made to collection operations, including the instalment of mandatory appointments before donating blood at all collection sites. This measure was initially aimed at ensuring a safe donor environment in compliance with physical distancing regulations. This practice generated some positive benefits, especially by reducing wait times, thus providing a better donor experience while improving the predictability of blood drive results..

Héma-Québec's 2020–2021 annual report covers the fiscal year from April 1, 2020, to March 31, 2021.

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Leaders' message

Time to act: the future is today

There has never been as much talk about the future than in the past year. In the wake of the unprecedented global crisis caused by the COVID-19 pandemic, in which all socioeconomic sectors were affected or suspended, the future unfolded before our eyes every day because every individual or collective action could bring about a return to normal life. In these historic times, Héma-Québec stepped up to meet the challenge—thanks not only to the outstanding donors and volunteers who rolled up their sleeves but also to the exceptional commitment of our employees and monumental efforts deployed to secure the blood supply and ensure the safety of our blood and plasma-derived products and other biological products, such as mother's milk, human tissues and stem cells.

Even during a pandemic, our collection activities were never interrupted, maintaining an unbroken record since the creation of Héma-Québec. The organization has always been able to supply quality products in sufficient quantity. Despite the lockdown and systems and tools that needed to be optimized, we "held the fort." This risk management expertise, which is at the very heart of our mission, kept operations running smoothly. If crisis situations can be the catalyst for rising above our limitations and getting closer to excellence for the common good, they also have the benefit of shedding light on what needs to be improved. We now have a duty to work toward these improvements.

As we concentrated on managing the pandemic, we also embarked on Héma-Québec's 2021–2024 strategic planning. A clear road forward has already been mapped out. Major efforts must be deployed to ensure the organization's sustainability, especially through the technological and digital upgrading of Héma-Québec. An integrated management system that includes donors and clients, among others, must be implemented for greater efficiency. The capacity to improve, process and optimize the supply of blood products and achieve Québec's self-sufficiency in plasma collected locally depends on the ability to increase collection at a competitive price. This can only be done with significant investments in the workforce and infrastructure.

To this end, we will be maximizing our approaches to the Secrétariat du Conseil exécutif, the Secrétariat du Conseil du trésor, the Ministère de la Santé et des Services sociaux, Ministère des Finances and Ministère de l'Économie et de l'Innovation to affirm Héma-Québec's unique character and special mission. We will pursue the development and application of quality standards and strict safety measures to continue to deserve the trust of the public and of those persons who receive the products distributed by Héma-Québec.

Our vision is looking toward the future. Our activities face competitive international markets that create a variety of issues and in our opinion, Québec's self-sufficiency in the supply and processing of human tissue products manufactured from plasma is a necessity. Here and now, we must prepare for tomorrow. As stated in its act of incorporation, Héma-Québec must have the means to realize its ambitions and act autonomously and independently in fulfilling its mission. These concerns call us to action and become our priorities.

Héma-Québec delivers more than 800,000 biological products of human origin annually to Québec hospitals to meet the needs of patients. Nearly 200,000 donors and thousands of volunteers at blood drive sites help our organization fulfill its mission—a mission that has the steadfast support of the members of our board of directors who are staunchly committed, in close collaboration with Héma-Québec's management team. This shared energy and firm desire to succeed in our mission each day are what fuels this boundless determination. We take this opportunity to thank them sincerely. Along with our staff, volunteers and donors, they are the pillars that support us.

Anne Bourhis
Chair of the Board of Directors

Nathalie Fagnan
President and Chief Executive Officer

Sectors of activity

BLOOD PRODUCTS

Blood is the fluid that flows through the body's veins and arteries.

It is made up of plasma, in which three types of cells are suspended: red blood cells, white blood cells and platelets.

Every 80 seconds, someone in Québec needs blood. It may be following an accident, during surgery or to treat an illness.

STABLE PRODUCTS

Stable products are medications that are manufactured primarily from plasma, the liquid part of blood that transports blood cells and nutrients in the body.

Thousands of Quebecers need plasma to treat various illnesses, including neurological disorders, immune deficiencies and other diseases such as hemophilia.

STEM CELLS

Stem cells are the "parent" cells from which all other blood cells develop.

They are found in bone marrow, the peripheral (circulating) blood and umbilical cord blood.

For some diseases, stem cell transplants are the only chance of survival. Some diseases cause the destruction or abnormal functioning of the bone marrow. The treatment of last resort consists of replacing the patient's stem cells with those of a healthy person.

HUMAN TISSUES

Human tissues–e.g., ocular tissues, heart valves, skin tissues, arterial tissues and musculoskeletal tissues–can be collected for transplantation purposes.

One tissue donation can help up to 20 people, whether to restore sight with a corneal transplant or to treat a serious burn victim with skin grafts.

MOTHER'S MILK

Human milk from a bank is particularly beneficial for infants born extremely preterm who cannot be breastfed by their mother.

It reduces the risk of developing a serious intestinal disease.

Blood products

As the exclusive supplier of blood products in Québec, Héma-Québec is responsible for recruiting donors and for collecting, testing, processing and delivering products to hospitals.

364,707
visits to collection sites (all types of donations combined)

1,182
blood drives (mobile unit blood drives included)

295,669
blood products delivered to hospitals

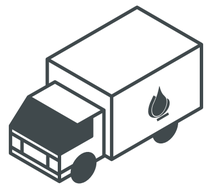
138,209
registered donors (all types of donations combined)

1.84
whole blood donations on average per donor

From donation to distribution

DONATION

The blood collection lasts about ten minutes. In addition to the blood bag, sample tubes are collected for testing.



TRANSPORTATION

The blood bags and samples are sent to one of Héma-Québec's laboratories.

DELIVERY

The products are delivered to hospitals. The components used vary depending on patients' needs.

ANALYSES

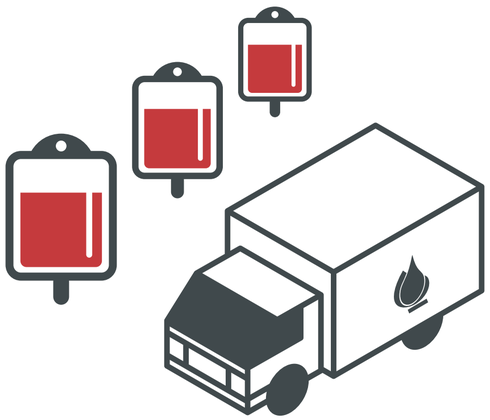
The samples are sent to a qualification lab to determine the donor's blood group and to screen for the presence of infections.

STORAGE

Compliant products are labelled and stored, ready to be sent to hospitals.

SEPARATION OF BLOOD

The blood is separated into its different components (red blood cells, platelets, plasma).



Blood product supply strategy

Héma-Québec's blood product supply strategy aims to improve the efficiency of operations while maintaining a safe and sufficient high quality supply.

The strategy is structured around the following strategic choices:

- Increasing the number of collections in donor centres.
- Increasing self sufficiency in plasma destined for the manufacture of medications (plasma for fractionation).
- Developing a culture that stresses continuous improvement, problem solving and accountability.
- Being attentive to the needs of hospital partners and clients.

Blood product supply strategy during a pandemic

Because its activities rely on the constant support of and proximity to the public, Héma-Québec was significantly affected by health restrictions related to the COVID-19 pandemic. Nevertheless, Héma-Québec was able to react quickly to achieve its donation objectives and meet the needs of the Québec population.

While the pandemic resulted in a significant reduction in the number of new donors, the donations collected remained stable through the remarkable commitment of existing donors who gave blood more often, as shown by the marked increase in the average donations per donor. This unique situation also led to an increase in visits to our permanent donor centres compared with the mobile blood drives.

To encourage an increase in the number of donations, a number of adjustments had to be made to collection operations, including the introduction of mandatory appointments and changes to some eligibility criteria for donating blood. A broad range of measures were also implemented to guarantee the safety of donors, staff and volunteers at the donation sites. The support of donors and partners made all the difference during the first pandemic waves. Worthy of note was the remarkable contribution of the Québec Premier and Minister of Health and Social Services who not only invited the population to donate blood but also donated themselves.

Results for whole blood donations*

In 2020–2021, the number of whole blood donations decreased by 7% compared with the previous year. These results reflect a decrease in the number of registered donors and new donors stemming from the safety issues related to the pandemic.

In contrast, each active donor donated more often, as shown by a major increase in the average number of donations per donor, from 1.54 in 2019–2020 to 1.84 in 2020–2021. This increase resulted in a significant reduction in the wait time between donations—i.e., the required waiting period between donations from the same person—which was established at 28 days for men and 56 days for women. In the end, the higher average of donations per donor limited the impact of the decrease in the total number of donors.

* The term “whole blood” refers to blood collected as is and separated in the laboratory into its various components: plasma, platelets and red blood cells.

SIGNIFICANT INCREASE
in the average number of donations per donor

1.54 ▶ **1.84**
2019–2020 **2020–2021**

VISITS

2016–2017	268,222
2017–2018	254,504
2018–2019	252,064
2019–2020	256,784
2020–2021	222,498

REGISTERED DONORS[1]

2016–2017	164,178
2017–2018	159,122
2018–2019	156,728
2019–2020	164,185
2020–2021	119,451

DONORS WHO DONATED

2016–2017	141,491
2017–2018	137,387
2018–2019	136,908
2019–2020	144,081
2020–2021	112,599

DONATIONS

2016–2017	226,693
2017–2018	216,642
2018–2019	216,639
2019–2020	222,470
2020–2021	206,690

DONORS WHO DID NOT DONATE[2]

2016–2017	41,529
2017–2018	37,862
2018–2019	35,425
2019–2020	34,314
2020–2021	15,808

NEW REGISTERED DONORS

2016–2017	36,775
2017–2018	35,530
2018–2019	35,007
2019–2020	37,028
2020–2021	17,153

[1] Donors who attended a blood drive at least once.

[2] The number of donors who did not donate, i.e., donors who showed up at drives but did not make a donation, has decreased. This decrease reflects the change in some criteria for selecting blood donations as well as some impacts of the COVID-19 pandemic.

Distribution of whole blood collections

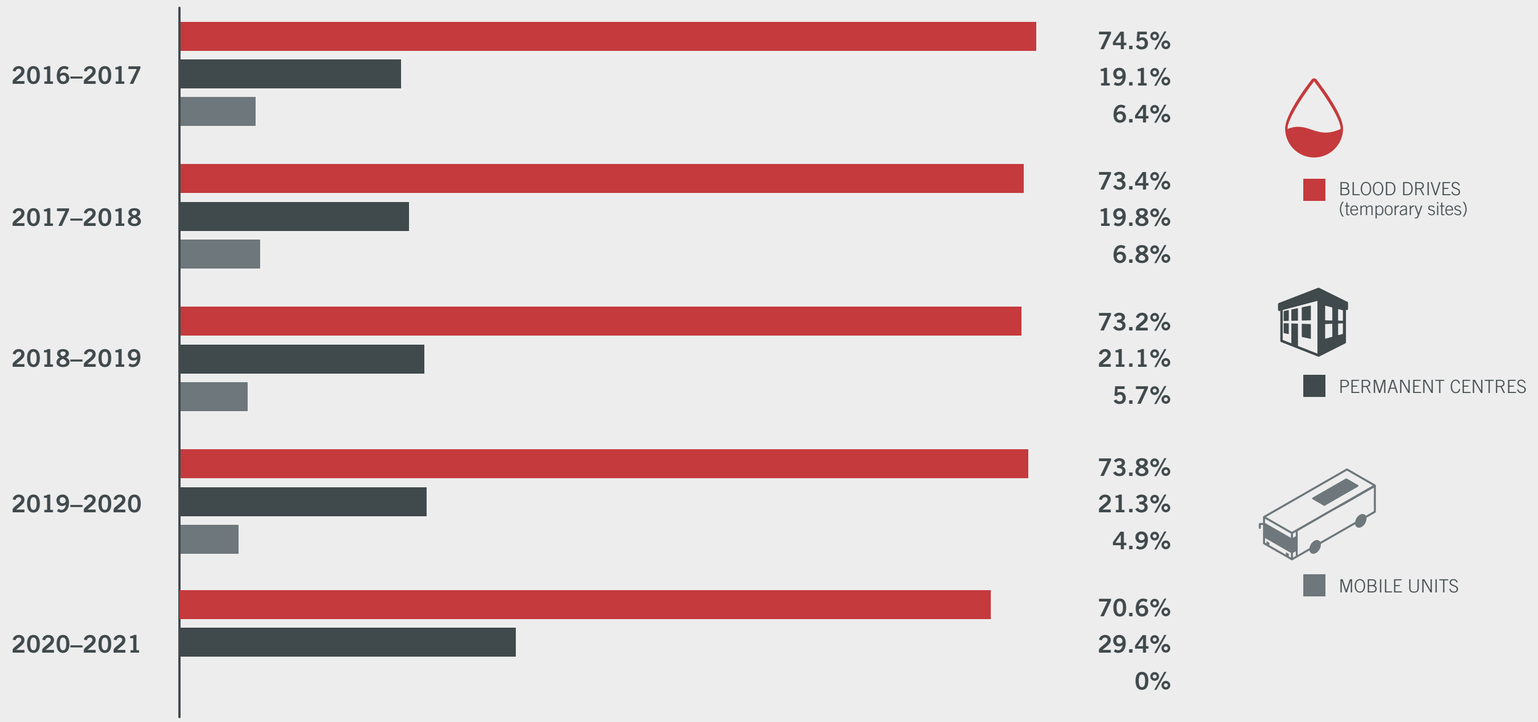
During the pandemic, Héma-Québec suspended the use of mobile (bus) blood drives. Whole blood collections were distributed between temporary collection sites and permanent sites. This situation, combined with the introduction of mandatory appointments, resulted in a significant increase in collections made in GLOBULE Blood Donor Centres.

Collection in GLOBULE Centres

Thanks to apheresis donations, GLOBULE Blood Donor Centres are able to collect targeted products based on needs. This type of donation involves the use of an apheresis machine, equipped with a single use sterile collection device, that receives the donor's blood, separates it into its various components, directs the targeted components into a collection bag, and returns the rest to the donor.

Despite the pandemic, the total volume collected in Globule centres increased by 18% compared with the previous year.

DISTRIBUTION OF WHOLE BLOOD COLLECTIONS



PRODUCTS COLLECTED IN GLOBULE BLOOD DONOR CENTRES

	2016–2017	2017–2018	2018–2019	2019–2020	2020–2021
Whole blood	43,319	43,045	45,581	47,463	60,724
Platelets by apheresis	37,950	36,521	38,463	39,678	39,395
Plasma by apheresis 750 ml	12,619	14,164	20,127	23,395	35,549
Red blood cells (packed) by apheresis	3,911	3,871	3,637	2,265	1,450
Plasma by apheresis 250 ml (including MC[1])	23,210	21,834	21,085	20,116	19,835
Granulocytes[2]	37	150	45	95	74
Total products collected	**121,046**	**119,585**	**128,938**	**133,012**	**157,027**

[1] Donations made by multiple collections (MC). [2] Héma-Québec is the sole distributor of these blood products Canada-wide. This explains the difference between the number of units distributed to Québec hospitals and the number of products collected.

Reduction of demand

The total number of blood products delivered to hospitals decreased by 4.2%, falling below 300,000 units for the first time in more than 10 years. This reduced demand is part of a downward trend observed for many years but also reflects a decrease in operating room activity caused by the pandemic. Demand for plasma used for transfusion was down by 13.6% for the same reasons, while deliveries of platelets remained relatively stable. Héma-Québec continued to efficiently meet all the needs of hospitals.

PRODUCTS COLLECTED IN GLOBULE BLOOD DONOR CENTRES

	2016–2017	2017–2018	2018–2019	2019–2020	2020–2021
Whole red blood cells (packed)	**212,705**	**205,888**	**207,235**	**205,330**	**196,765**
Platelet pools[1]	3,853	3,797	3,277	3,255	2,336
Platelets collected by apheresis	35,161	34,198	36,569	37,401	36,859
Total platelets[2]	**39,014**	**37,995**	**39,846**	**40,656**	**39,195**
Plasma from whole blood 250 ml	29,280	25,287	27,715	29,962	25,375
Plasma collected by apheresis 250 ml	7,940	7,488	5,073	2,300	2,474
Total plasma[3]	**37,310**	**32,775**	**32,788**	**32,262**	**27,849**
Granulocytes	**13**	**60**	**31**	**3**	**27**
Cryoprecipitates	**25,542**	**25,494**	**27,255**	**29,661**	**26,386**
Cryoprecipitate supernatants	**1,914**	**2,708**	**3,781**	**740**	**5,447**
Grand total	**316,498**	**304,920**	**310,936**	**308,652**	**295,669**

[1] Platelets from five whole blood donations pooled together (one pool is equal to five buffy coats to which one plasma is added).
[2] "Total platelets" is the sum of "platelet pools" and "platelets collected by apheresis."
[3] "Total plasma" corresponds to "plasma from whole blood," "plasma collected by apheresis 250 ml" and "equivalent plasma (collected by apheresis 500 ml x 2)."

Stable products

Héma-Québec is the exclusive distributor of medications made of plasma (also known as stable products). It is responsible for supply strategies, the purchase of medications manufactured primarily from plasma, the management of the inventory and distribution to hospitals. It also looks after donor recruitment, collection and testing, and sending a part of the plasma it collects for fractionation.

19,502
registered plasma donors

27.9%
immunoglobulin self-sufficiency rate

140,269
litres of plasma destined for the manufacture of medications

485,547
stable products delivered

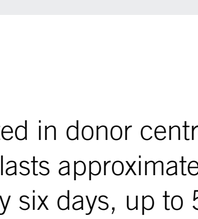
From donation to distribution

DONATION

Plasma donations are collected in donor centres by appointment. The collection lasts approximately 45 minutes. Plasma can be donated every six days, up to 50 times a year.

FREEZING

Plasma is quickly frozen after collection. The faster it is frozen, the more protein can be extracted from it.



ANALYSES

Collections are sent to the qualification laboratory. All donations are tested.

DELIVERY

The products are delivered to hospitals.

FRACTIONATION

Plasma is sent to fractionation plants. These high-tech plants extract the proteins and use them to manufacture medications.

RETURN OF PRODUCTS TO HÉMA-QUÉBEC AND STORAGE

The finished products are then returned to Héma-Québec and stored, ready for shipment to hospitals.

Plasma supply strategy

Plasma-derived proteins are mainly used in the manufacture of some medications. Thousands of Quebecers need these products to treat immune deficiencies and other disorders, such as hemophilia. The collection of plasma destined for the manufacture of these products is a major issue.

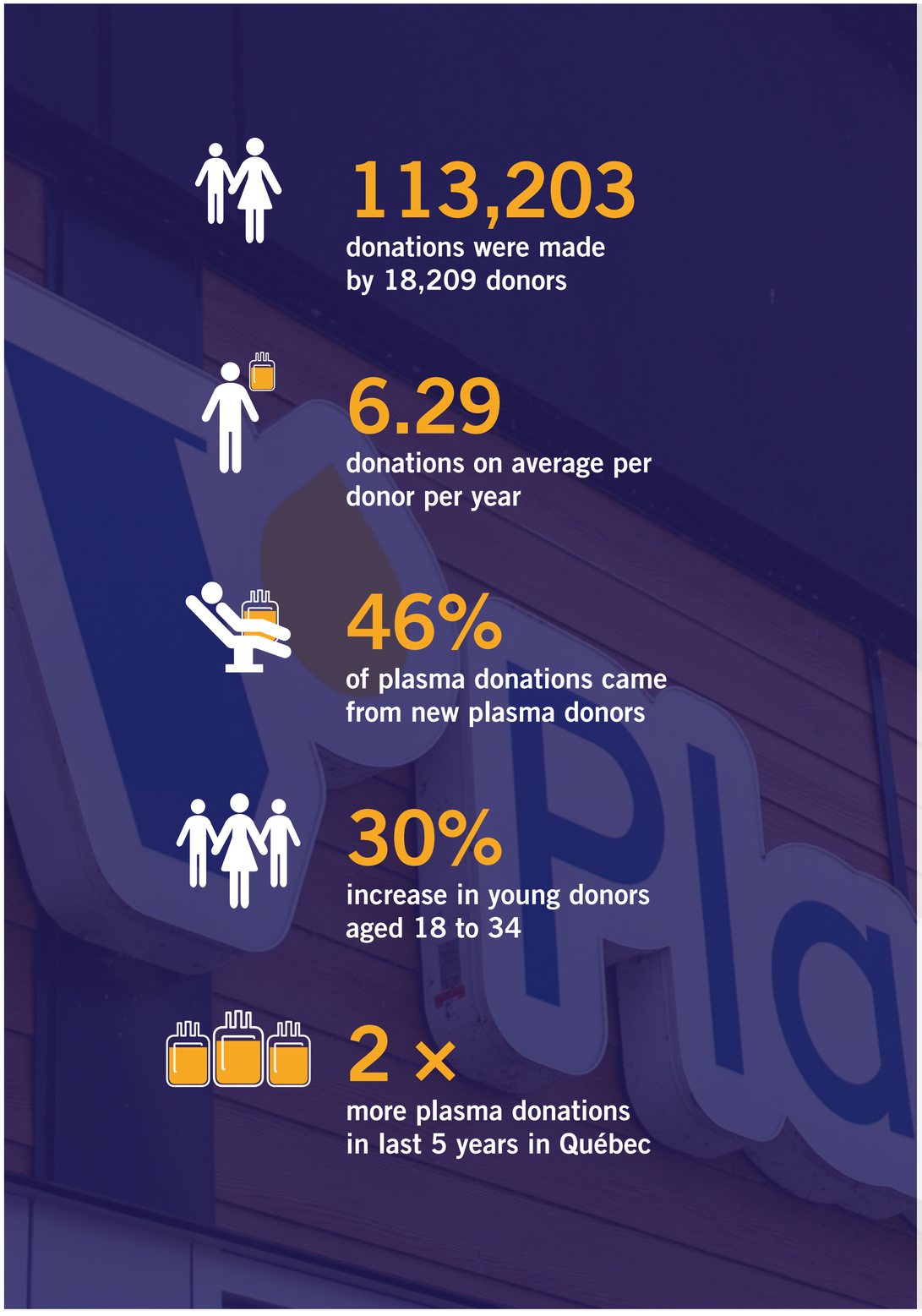
Immunoglobulins are one of the most used plasma-derived products in Québec, which today has the highest consumption per resident in the world. Excluding 2020–2021, this consumption has grown steadily in the past several years.

Québec currently collects 27.9% of the plasma needed to manufacture immunoglobulins, with the remainder coming from American donors. This situation is not unique to Québec. The United States supplies nearly three-quarters of the plasma needed to manufacture these medications worldwide.

Prior to the advent of the COVID-19 pandemic, various early signs had pointed to an imbalance between the IVIg offer and demand, primarily because of the continued growth in world demand for these products and their record level of use in Québec. This situation led Héma-Québec to evaluate certain risk mitigation strategies. In addition to reviewing its donor recruitment strategies, the organization began an evaluation process to optimize the plasma self-sufficiency target.

This situation called for action to be taken to provide better guidance for the use of some plasma-based medications. Let us note, to this effect, the deployment of the Optimal Use Guide for Immunoglobulins released in spring 2020 by the Institut national d'excellence en santé et en services sociaux (INESSS).

During the pandemic, some perceived risks materialized. For example, the volume of plasma collected from American donors decreased by 20%, causing a tightening of the global supply of immunoglobulins.



Plasma collection

Plasma donations increased markedly during the fiscal year ending on March 31, 2021 (see Plasma donations destined for the manufacture of medications table hereafter). Plasma donations were up 35.2%, for a total of 113,203 donations in 2020–2021.

Collection centres were added for plasma donations

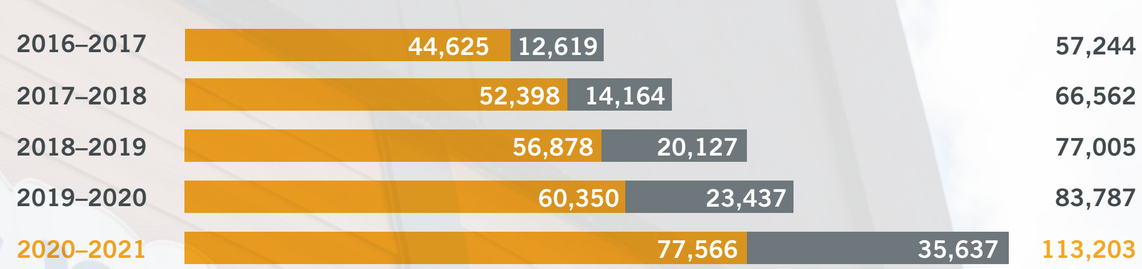
Héma-Québec ensures its supply of plasma by mainly counting on its network of PLASMAVIE Plasma Donor Lounges and GLOBULE Blood Donor Centres.

The addition of plasma collection activities in the four GLOBULE Blood Donor Centres in the Montréal region was one of the factors that contributed to the 25.8% increase in the number of plasma donors registered in 2020–2021.

Also worthy of mention were the donor recruitment efforts of the Association of Blood Donation Volunteers (ABDV). Through its Plasma Project, the youth wing, created in April 2020, was especially successful in recruiting new donors from the strategic pool of 18- to 30-year-olds.

PLASMA DONATIONS DESTINED FOR THE MANUFACTURE OF MEDICATIONS

Number of donations by type of donor centre



Improving the self-sufficiency of plasma destined for the manufacture of medications

Mitigating risks during the pandemic

On many levels, the COVID-19 pandemic was a catalyst for the management and use of stable products. Héma-Québec seized the opportunities presented by these exceptional times to intervene with speed and flexibility, taking sustained actions to maintain a sufficient supply of its products.

IVIg allocation program

As part of a proactive approach, the Ministère de la Santé et des Services sociaux intervened directly with immunoglobulin users in the health network. This strategy resulted, for the first time, in a decrease in the distribution of IVIg in Québec, which is consistent with the January 2020 recommendation of the INSPQ [TRANSLATION] “to raise awareness among prescribing doctors and all blood bank staff and mobilize them […] to improve documentation of the indications for which immunoglobulins were administered in Québec”[1].

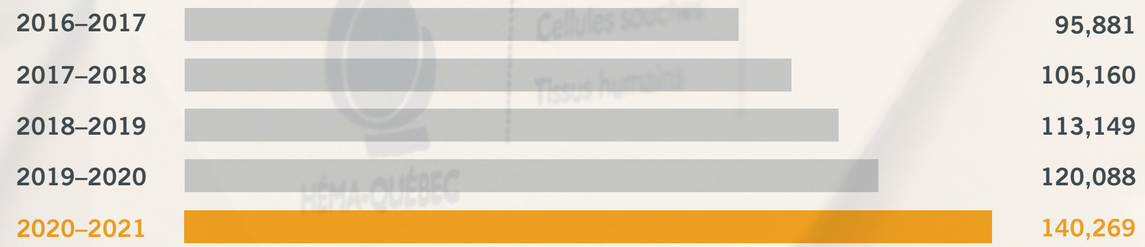
Improving the immunoglobulin self-sufficiency rate

Thanks to more collection sites and the active promotion of plasma donation to the public, Héma-Québec succeeded in generating a significant increase in the amount of plasma sent for fractionation. The total volume of collected plasma destined for fractionation was 140,269 litres in 2020–2021, compared with 120,088 litres in 2019–2020.

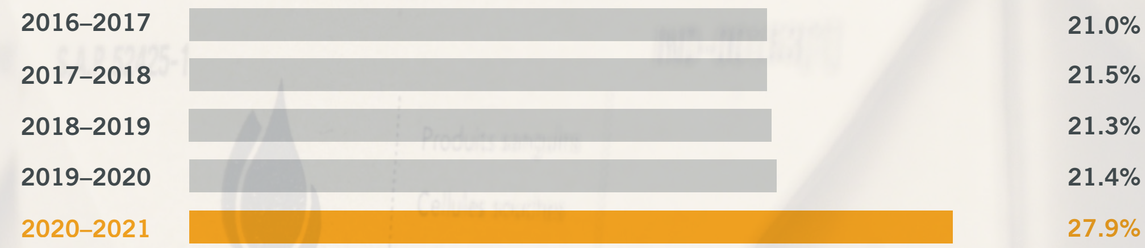
In 2020–2021, the combined effect of the higher volume of plasma sent for fractionation and measures aimed at improving the use of IVIg resulted in an increase in the self-sufficiency rate to 27.9%. This represents a marked improvement of this indicator in three years.

AMOUNT OF PLASMA SENT FOR FRACTIONATION

Litres



SELF-SUFFICIENCY RATE IN IMMUNOGLOBULINS*



*Based on the amount of plasma sent for fractionation vs. the distribution of immunoglobulins during the year.

[1] www.inspq.qc.ca/publications/2644

Distribution of stable products

Héma-Québec distributes some 50 different stable products. This activity represents a major portion of the budget, i.e., 65.6% of total expenditures.

Non-specific intravenous (IVIg) and subcutaneous (SCIg) immunoglobulins

Immunoglobulins contain essential antibodies that act on the immune system. They can be used to treat a number of health problems, especially in patients with immune deficiency or some neurological disorders.

Following deployment of the IVIg allocation process by the Ministère de la Santé et des Services sociaux during the pandemic, the use of immunoglobulins decreased by 12.4% compared with 2019–2020, ending the upward trend recorded during previous fiscal years.

Recombinant factor VIII

Recombinant factor VIII, destined for hemophiliacs, is a stable product in high demand. After steady growth in previous years, the distribution of recombinant factor VIII decreased by 6.9% in 2020–2021.

NON-SPECIFIC INTRAVENOUS (IVIG) AND SUBCUTANEOUS (SCIG) IMMUNOGLOBULINS

Grams

RECOMBINANT FACTOR VIII

International units

Stem cells

STEM CELL DONOR REGISTRY

Héma-Québec is responsible for donor recruitment, qualification and management of the Stem Cell Donor Registry for Québec. This computerized bank includes the files of nearly 53,000 individuals who could eventually be called upon to donate their stem cells to a patient. Héma-Québec's registry is certified as complying with the highest international standards and is linked to the international network of the World Marrow Donor Association (WMDA), which provides access to nearly 38 million potential stem cell donors.

52,982
registered donors

3,364
donors added during the year

138
patients in Québec received an unrelated transplant (including 29 from cord blood)

4
donors in Québec donated stem cells (2 of these donations were destined for a patient in a Québec hospital)

598
autologous peripheral stem cells distributed to hospitals

Stem cell donation: step by step

REGISTRATION

Any person who qualifies can enrol in the Registry and receive a buccal swab collection kit in the mail.

DETERMINATION OF GENETIC PROFILE AND ADDITION TO THE REGISTRY

Samples returned to Héma-Québec are used to determine the genetic profile of the potential donor, who is then added to the international registry.

CONFIRMATION OF COMPATIBILITY

If a person is potentially compatible with a patient, Héma-Québec conducts advanced tests to confirm their genetic compatibility with that of the patient.

PATIENT REQUIRING A STEM CELL TRANSPLANT

For some diseases, a stem cell transplant is the only chance of survival.

PREPARATION OF THE DONATION

The potential donor undergoes a general physical examination to confirm if they are healthy enough to make the donation.

STEM CELL DONATION

If all conditions are met, the donation can take place. Two types of donations are possible: bone marrow or peripheral stem cells.

THE PATIENT RECEIVES THE TRANSPLANT

The transplant occurs between 24 and 48 hours after the donation.

POST-DONATION FOLLOW-UP

The donor is followed up until full recovery.

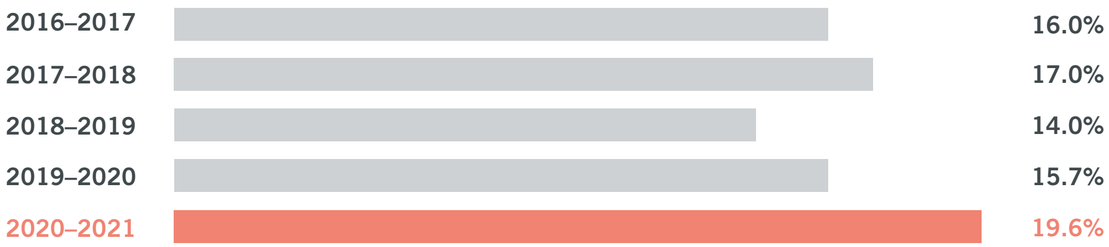
Search for compatible donors

When a patient requires a transplant, medical teams begin by verifying whether an immediate family member is compatible. If no family member is found to be compatible, a search of the international registry of the World Marrow Donor Association must be launched to find an unrelated donor. This year, the team at Héma-Québec's registry handled 331 such requests.

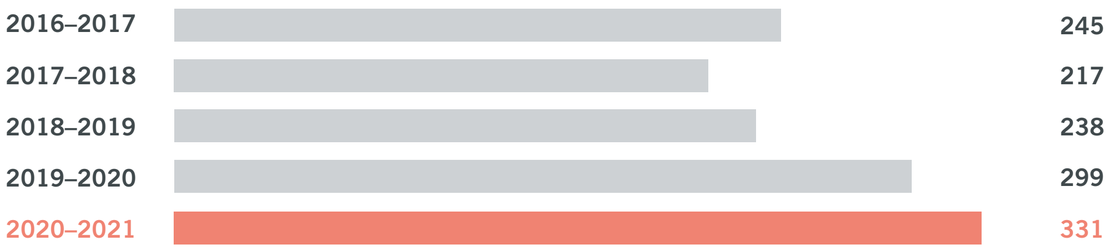
Searches for compatible donors have generally increased over the past five years. During this fiscal year, the growth in the number of searches for compatible donors is attributed to an increase in cord blood transplants performed in Québec.

From year to year, the Québec population is becoming more diverse. This translates into a greater number of donor searches for non-Caucasian patients. In 2020–2021, approximately one out of five searches fell into this category. Since the start of the pandemic, the transplant process for non-Caucasian recipients has become riskier because of the difficulty of obtaining a supply of products from countries beyond Europe and North America. This situation highlights the need to raise awareness among non-Caucasian Quebecers to ensure better representation of diversity in the Québec registry.

SEARCHES FOR PATIENTS OTHER THAN CAUCASIAN



TOTAL SEARCHES



Pre-transplant coordination service

During 2020–2021, the registry team distributed 138 products destined for Québec patients. The team facilitated communication between hospital transplant teams and international registries.

PRE-TRANSPLANT COORDINATION

Except for a dip observed in 2018–2019, the number of products distributed by Héma-Québec has remained relatively stable over the past five years, with a marked preponderance of donations from donors enrolled in local or international stem cell donor registries.

UNRELATED PRODUCTS TRANSPLANTED

Peripheral stem cells	98
Bone marrow	5
Cord blood	29
Leukocytes	6

Issues related to the pandemic

Lack of accessibility of products from some countries resulted in a higher number of donors required for each Québec patient. Héma-Québec had to call on nearly 200 donors worldwide to meet the transplant needs of 138 local recipients.

A great deal of effort was made to overcome limitations on international travel. Because of longer transportation delays, products had to be cryopreserved in their country of origin to ensure that the cold chain was maintained. Many waivers to quarantine restrictions were also negotiated with authorities to facilitate travel by delivery persons.

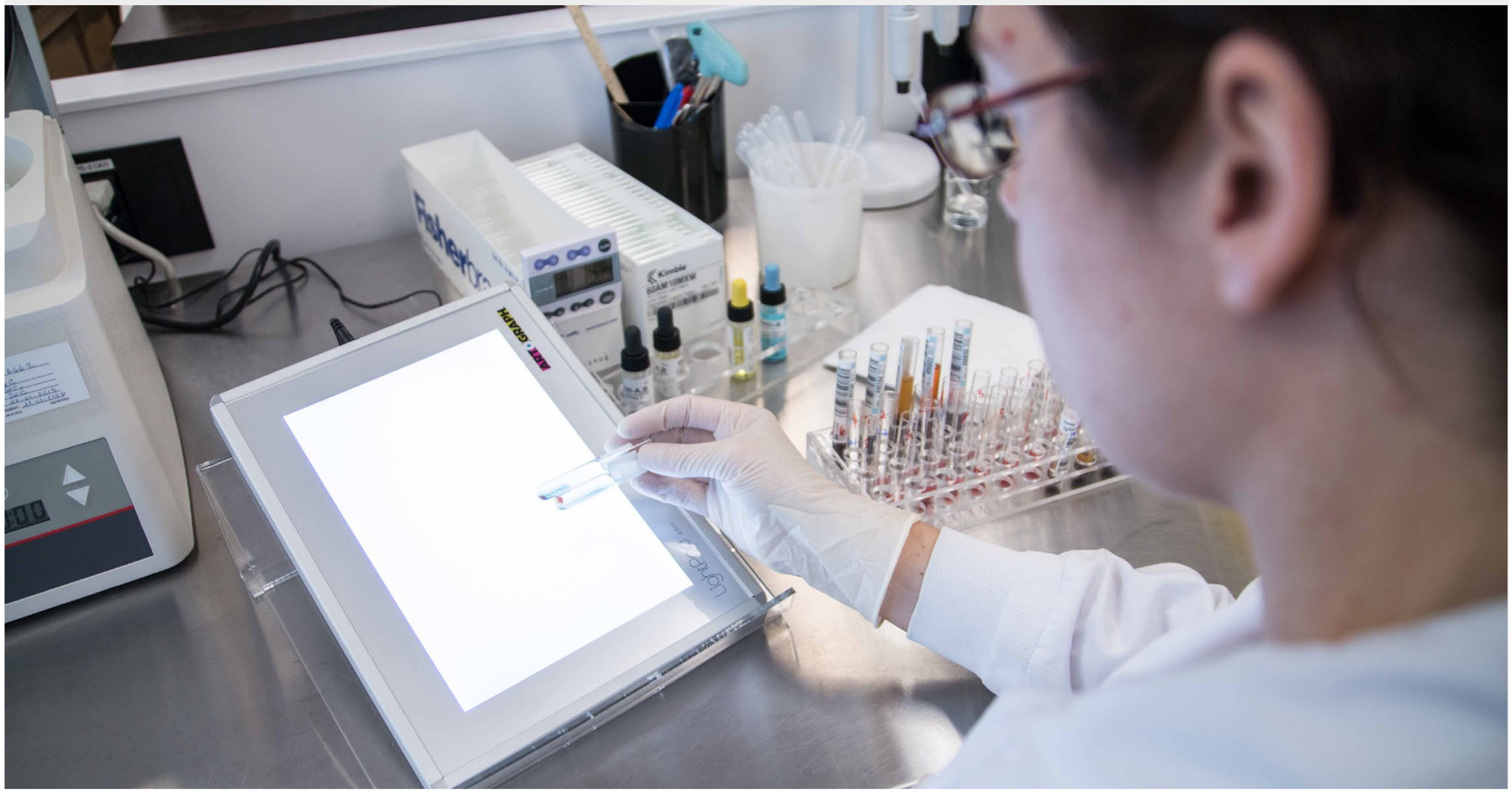
Stem cell laboratory

Cryopreservation service for autologous peripheral stem cells

Héma-Québec offers a cryopreservation service for autologous peripheral stem cells in four Québec hospitals. This service consists of receiving, testing, processing, freezing and temporarily storing patients' the stem cells until they are ready to receive their own cells. At the present time, the cryopreserved product(s) is (are) sent to the hospital for transplantation. The steady growth in the number of requests received by Héma-Québec reflects a vital need for partner hospitals and patients.

AUTOLOGOUS PERIPHERAL STEM CELLS

	2016–2017	2017–2018	2018–2019	2019–2020	2020–2021
Requests (patients)	103	125	135	155	208
Collection	225	287	308	331	469
Frozen units	399	399	550	548	979
Peripheral stem cell units distributed to hospitals	179	298	301	350	598



Stem cells

PUBLIC CORD BLOOD BANK

Umbilical cord blood is very rich in stem cells. The Public Cord Blood Bank (PCBB) provides access to a complementary source of stem cells, other than those from bone marrow or peripheral blood. Like Héma-Québec's registry of adult donors, the PCBB is an integral part of the international registry of the World Marrow Donor Association.

While Héma-Québec is responsible for donor registration and qualification, the collection itself is done in nine partner hospitals. Upon receipt of the collected cord blood, Héma-Québec processes, analyzes and cryopreserves, or banks the cord blood units. It is the first operational public cord blood bank in Canada.

2,917
mothers registered

11,699
units available for transplant

22
units distributed worldwide in 2020–2021 (including 6 in Québec)

181
units distributed worldwide since 2008[2]

9
partner hospitals[1]

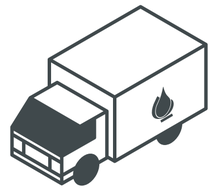
[1] Because of the pandemic, collections were halted in the nine partner hospitals at the end of March 2020. The Cité de la santé de Laval and the CHU Sainte-Justine resumed collections in August with additional COVID-19 criteria. A new procedure was also implemented for blood collections from mothers at home to comply with the CNESST health requirements.

[2] Includes distributions from the cord blood bank, exceptional distributions, directed distributions and exceptional directed distributions.

From donation to transplantation

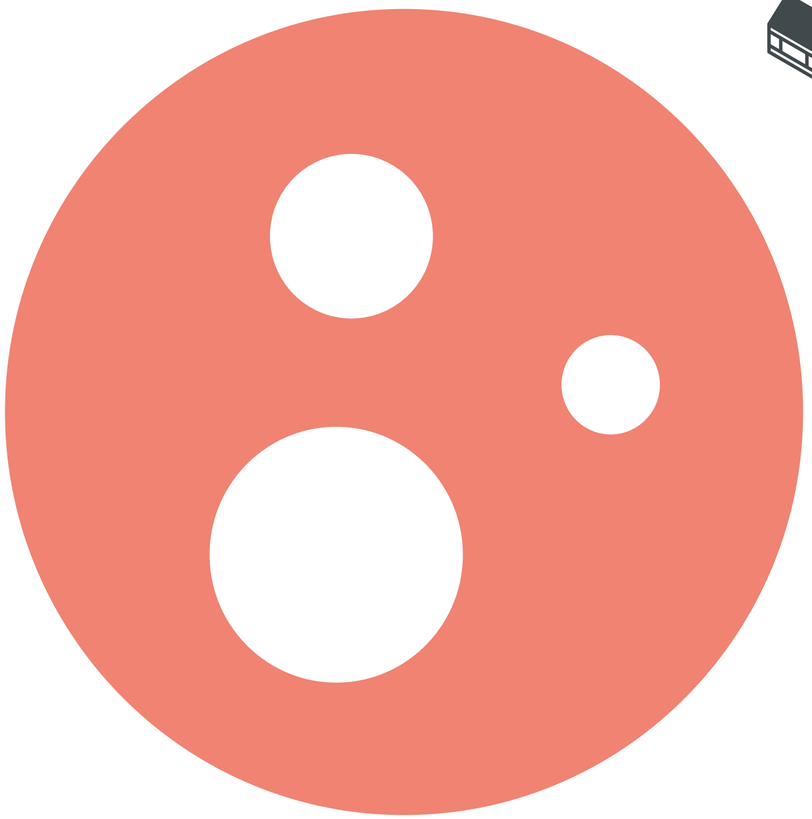
DONATION

Cord blood is collected during childbirth in partner hospitals.



TRANSPORTATION

Cord blood is transported to Héma-Québec.



TRANSPLANTATION

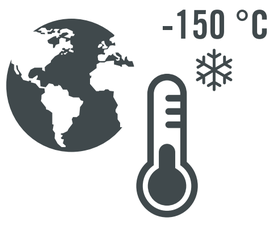
The patient is transplanted.

SEARCH FOR COMPATIBLE UNITS

When a call is received from Québec or international clients, Héma-Québec conducts a search for a unit that is compatible with a patient awaiting a stem cell transplant.

QUALIFICATION

Cord blood is qualified based on strict criteria.



PROCESSING AND STORAGE

Cord blood is processed, frozen at -150°C and stored for 15 years. The units of cord blood are made available to an international registry.

Distribution of cord blood units

Following a first significant increase in 2019–2020, cord blood unit distribution has continued to grow. Because of pandemic-related border closures and restrictions on air travel, the risk of losing fresh (not frozen) collected stem cells increased significantly. Transplant centres turned to less risky solutions such as cord blood, a frozen product that is usually transported by secured cargo, without being accompanied by a person.

Although donor recruitment was interrupted in the early months of the pandemic, the slowdown in donations had no perceived effect on distribution.

UNITS OF CORD BLOOD DISTRIBUTED

The challenge of diversity

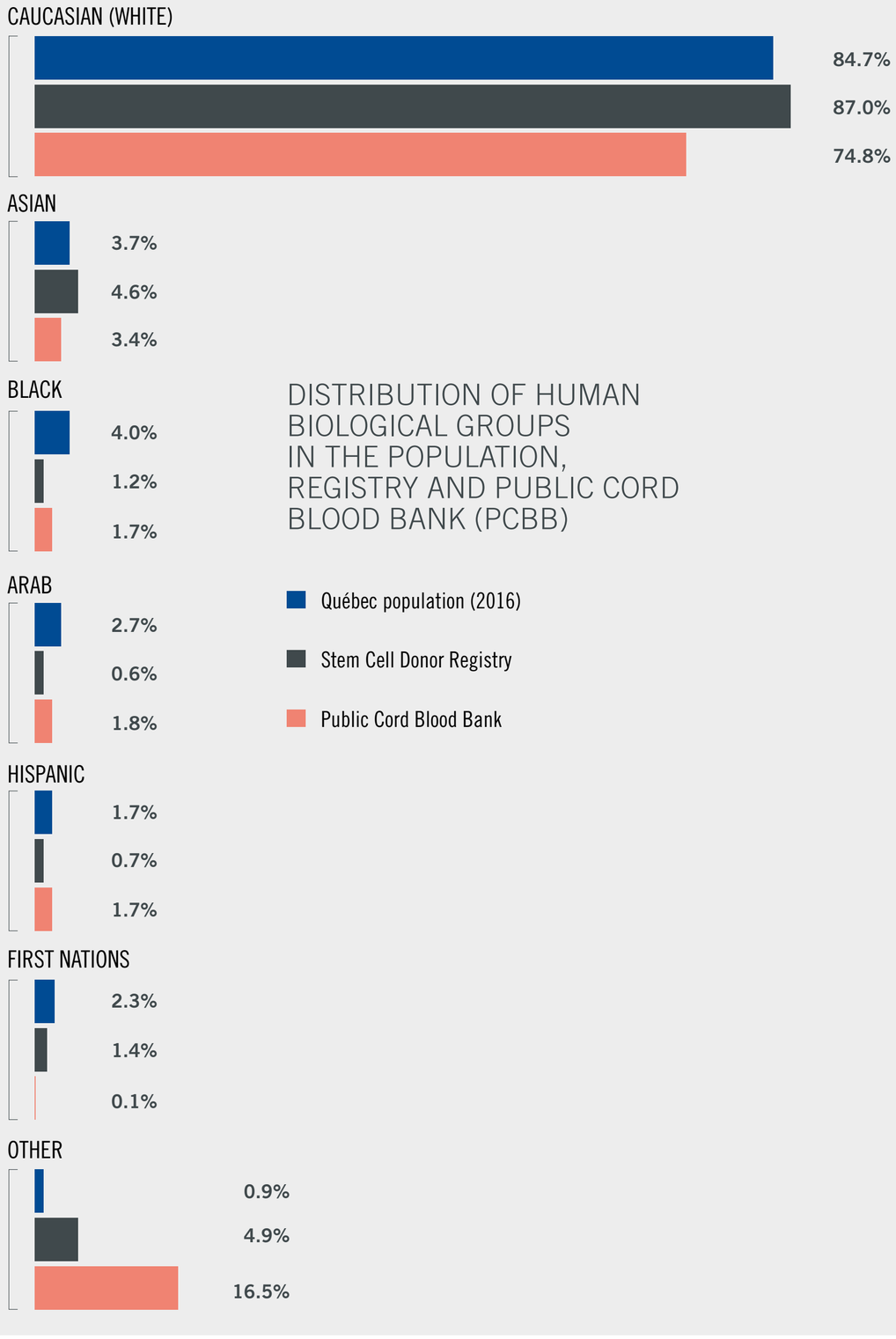
The Stem Cell Donor Registry is made up primarily of Caucasian individuals, as is the case with international registries. The situation is similar with the Public Cord Blood Bank. This represents a major issue since the characteristics of transplanted stem cells must match those of the patient as closely as possible. This is why a search is done for a donor whose genetic makeup corresponds to that of the patient.

HLA (human leukocyte antigen) markers determine the compatibility of stem cells. This process requires searches to be very specific since there are more than 30,522 markers, and this number is growing every year. Finding a compatible donor or cord blood unit for a patient awaiting a stem cell transplant is a real challenge.

Héma-Québec continues its efforts to raise awareness among donors of all ethnic backgrounds about the importance of enrolling in the Stem Cell Donor Registry and the Public Cord Blood Bank to improve the representation of all communities and increase the chances of finding these invaluable donors who save lives.

In addition to promoting the recruitment of a diversity of stem cell and cord blood donors, Héma-Québec maintains close links with partner hospitals that have a greater representation of mothers from other communities and where cord blood units are collected.

DISTRIBUTION OF HUMAN BIOLOGICAL GROUPS IN THE POPULATION, REGISTRY AND PUBLIC CORD BLOOD BANK (PCBB)



Representation of First Nations in the Stem Cell Donor Registry

First Nations are poorly represented in Canadian registries and absent from international registries because of a genetic profile that is unique in the world. Little existing data on HLA typing make searches even more complex since it is difficult to evaluate the various compatible combinations.

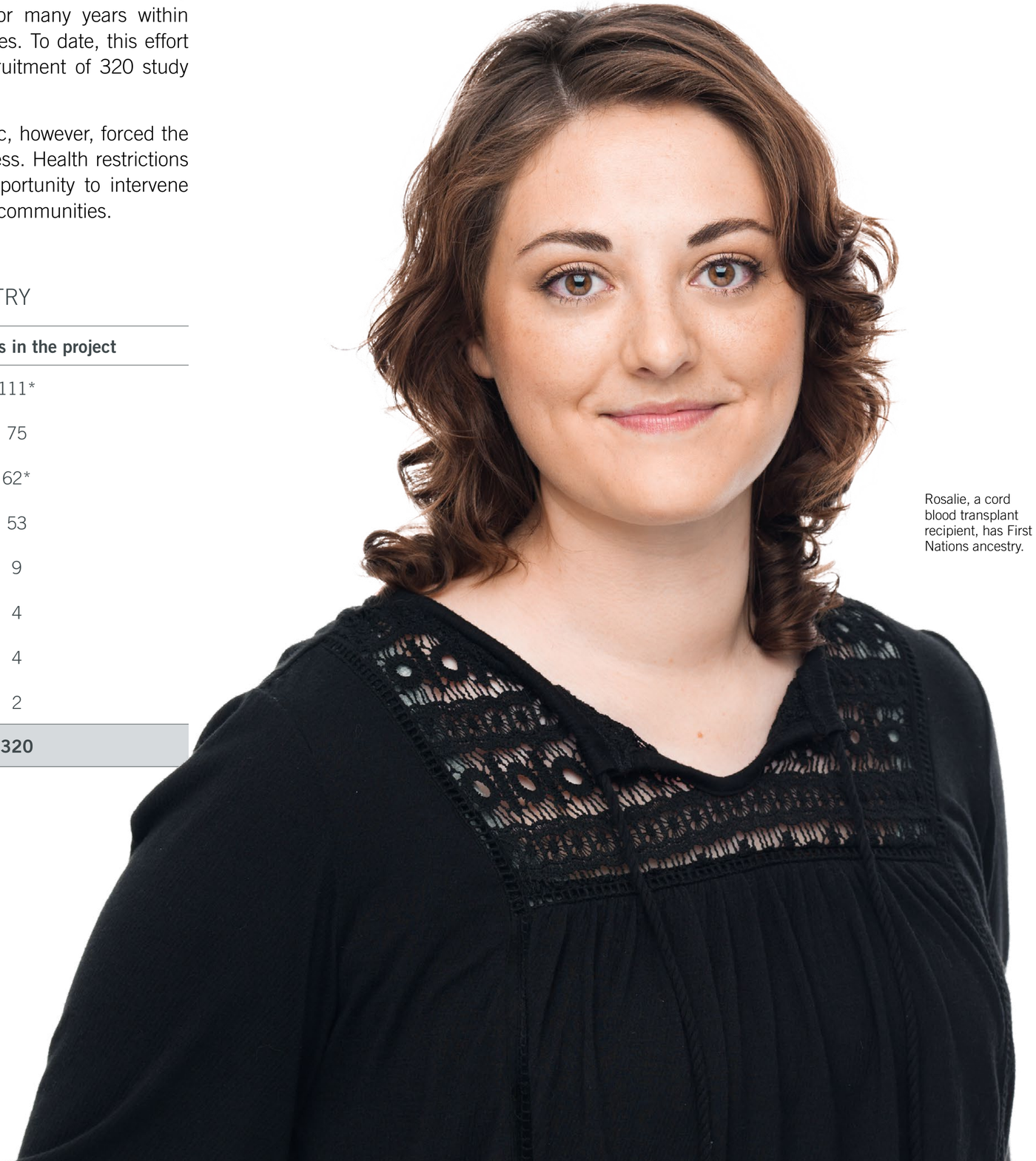
To remedy this situation, a research study has been under way for many years within First Nations communities. To date, this effort has resulted in the recruitment of 320 study participants.

The COVID-19 pandemic, however, forced the curtailment of this process. Health restrictions sharply reduced the opportunity to intervene directly with the various communities.

ENROLMENTS IN THE PROJECT AND THE REGISTRY

Nation	Enrolments in the project
Mohawks	111*
Innus	75
Hurons-Wendat	62*
Algonquins	53
Atikamekw	9
Abenaki	4
Mi’kmaq	4
Other	2
Total	**320**

* Recruitment completed.

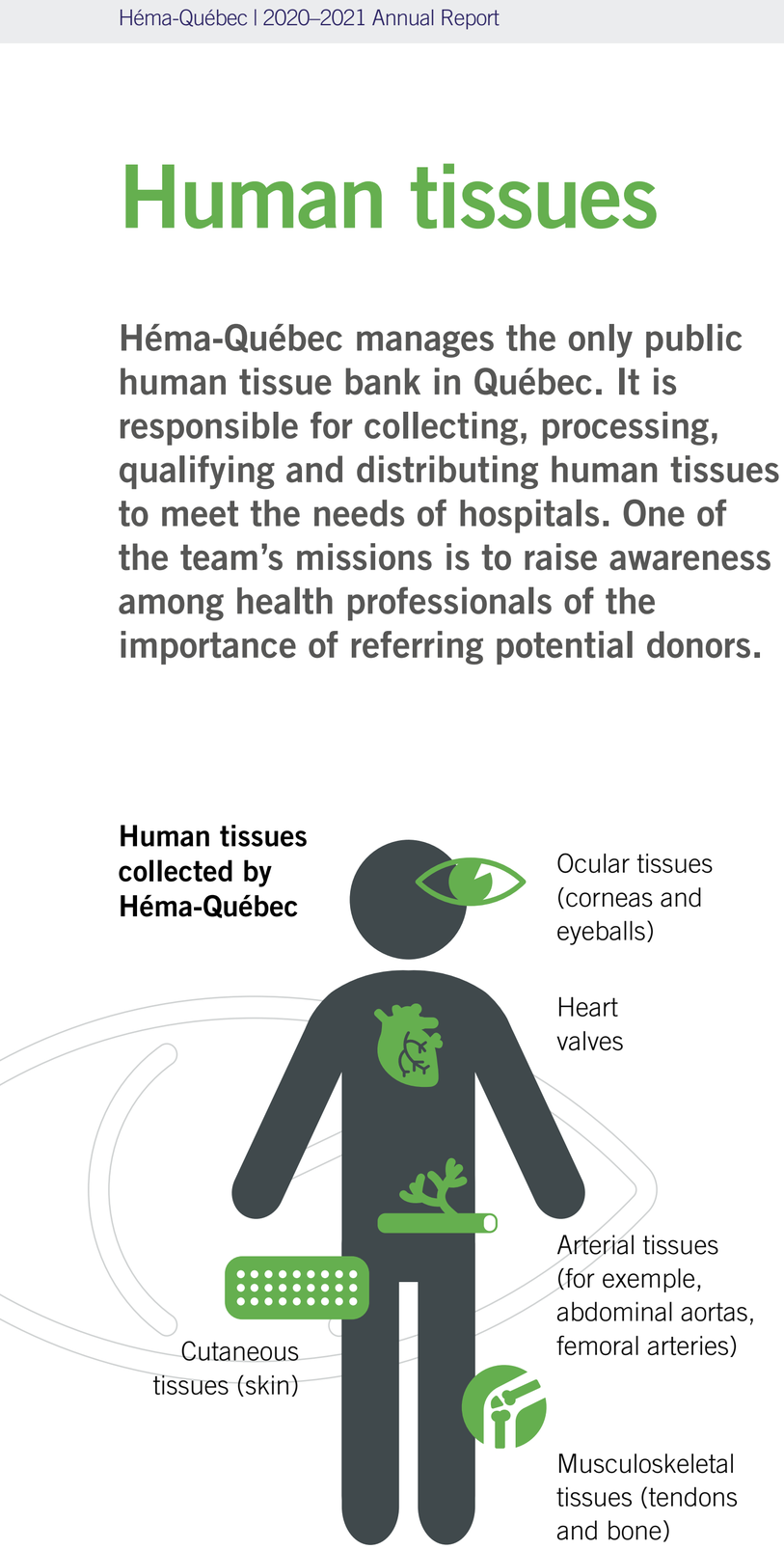


Rosalie, a cord blood transplant recipient, has First Nations ancestry.

Human tissues

Héma-Québec manages the only public human tissue bank in Québec. It is responsible for collecting, processing, qualifying and distributing human tissues to meet the needs of hospitals. One of the team's missions is to raise awareness among health professionals of the importance of referring potential donors.

Human tissues collected by Héma-Québec



5,390
donor referrals received

752
tissue donors

4,834
tissues ditributed to hospitals

From donor referrals to transplantation

DONOR REFERRALS

Health professionals refer donors to Héma-Québec.

CONSENT

Consent registries are checked. Whether the consent is entered in the registry or not, it is important to share the donor's decision to consent to donating tissue with family members, since they are the ones who speak on behalf of the donor after death.

QUALIFICATION

Héma-Québec conducts a thorough evaluation to verify the donor's eligibility.

COLLECTION

Héma-Québec collects the tissues.

PROCESSING AND STORAGE

The tissues are processed and stored until they are transplanted. Most tissues can be preserved for up to five years, with the exception of corneas, which cannot be preserved beyond 14 days.

TRANSPLANTATION

The surgeon transplants the tissues. One donation of human tissues can help up to 20 people.

Referrals of human tissue donors

As part of its human tissue activities, Héma-Québec must raise awareness among health professionals of the importance of referring potential donors. These referrals are vital to ensuring greater self-sufficiency.

The pandemic had a major impact on the number of referrals, which fell to 26% in 2020–2021 compared with the previous year. While criteria were tightened because of possible contamination by SARS-CoV-2 (the COVID-19 virus), the decrease in referrals was, above all, a direct consequence of the pandemic on hospital teams that usually referred potential tissue donors to Héma-Québec.

DONOR REFERRALS

2016–2017	3,779
2017–2018	5,464
2018–2019	6,614
2019–2020	7,280
2020–2021	5,390

Implementation of secure monitoring

The pandemic required substantial effort to enable the collection teams to intervene without risk to their safety from transmission of the virus. A plan, which included constant monitoring of the status of each Québec hospital, was implemented from the start of the pandemic.

An agreement reached with Collège de Rosemont, providing for the use of the thanatology teaching facilities, helped ensure that ocular tissues continued to be collected in a safe environment during the first pandemic wave.

Cornea self-sufficiency affected by the pandemic

In recent years, Héma-Québec succeeded in increasing self-sufficiency in local corneas, achieving a level of 90% in 2019–2020. Pandemic-related restrictions, however, hindered this progress in 2020–2021. The percentage of corneas collected in Québec decreased significantly this year, temporarily dropping to the level observed five years earlier.

PERCENTAGE OF LOCAL CORNEAS

2016–2017	80%
2017–2018	85%
2018–2019	91%
2019–2020	90%
2020–2021	80%

TOTAL DISTRIBUTION

2016–2017	865
2017–2018	922
2018–2019	897
2019–2020	900
2020–2021	839

Human tissue distribution

Despite the decrease in the number of referrals, the distribution of human tissues was only slightly affected. A sufficient quantity of banked products and the continuation of activities enabled Héma-Québec to fully meet needs.

HUMAN TISSUE DISTRIBUTION

	2016–2017	2017–2018	2018–2019	2019–2020	2020–2021
Heart valves and vascular products	59[1]	54	66	71	58
Cutaneous products	1,036	1,060	655	1,079	1,039
Musculoskeletal products (tendons and bone)	2,214	2,678	2,648	2,506	1,849
Corneas	689	783	819	809	634
Sclera	468	511	457	600	547
IMPORTS					
Human tissues	32	53	66	21	319
Corneas	176	139	78	91	170
Amniotic membranes	108	173	226	207	183
Total	**4,782**	**5,451**	**5,015**	**5,384**	**4,799**

[1] The distribution of vascular products collected and manufactured by Héma-Québec began in 2016–2017.

Mother’s milk

Héma-Québec operates Québec’s only Public Mothers’ Milk Bank. Its mandate is to provide pasteurized human milk to infants born preterm at 32 weeks’ gestation or earlier who require medical care and whose mother cannot breastfeed. The organization is responsible for donor recruitment and qualification, the processing and analysis of milk, as well as its distribution to hospitals.

379
active donors during the year

939
registered donors

19,249
bottles distributed

From donation to distribution

DONATION

Héma-Québec supplies bottles; mothers collect their milk at home and freeze it.

PICK-UP OR DROP-OFF

Depending on the region, the bottles of milk are collected at the donor's home or brought by the donor to a drop-off point.

POOLING OF DONATIONS

Héma-Québec mixes the donations of several donors by lot.

PASTEURIZATION

The milk is pasteurized to eliminate viruses and bacteria.

MICROBIOLOGICAL ANALYSES AND STORAGE

Héma-Québec tests the milk to ensure that it is safe for recipients. If the results are compliant, the milk is frozen and stored for one year from the date of the first donation.

DELIVERY

The milk is distributed to hospitals and destined for extremely preterm babies who cannot be breastfed by their mother.

Self-sufficiency maintained during the pandemic

Although the pandemic interrupted donor recruitment between March and August 2020, the mothers' milk bank maintained its ability to fully meet the needs of hospitals for infants born preterm at 32 weeks' gestation or earlier. The number of donors did not increase, but existing donors compensated for the gap by donating greater quantities of milk.

Against the backdrop of the pandemic, the supply strategy had to be adjusted by adding certain criteria and implementing a new procedure for collecting blood from candidates and donors at home, while complying with the health measures required by the CNESST.

DISTRIBUTION OF MOTHER'S MILK

2016–2017	9,865
2017–2018	11,767
2018–2019	16,471
2019–2020	18,175
2020–2021	19,249

Specialized laboratory services

In addition to meeting the needs of the Québec population as a supplier of biological products of human origin, Héma-Québec provides specialized laboratory services to its Québec healthcare system partners. In this role, it is recognized as a referral centre in the field of transfusion medicine.

4,948
patient requests referred to the reference laboratory

23,920
phenotyped packed red blood cells delivered to Québec hospitals

From request to products and specialized services

REQUESTS AND SAMPLES

Health professionals send requests for testing and samples to the reference laboratories.

ANALYSES

Based on the type of request received, various tests may be performed, including identifying irregular antibodies, phenotyping, genotyping, and HLA typing.

REPORT

Once the tests are completed, an analysis report of the results is sent to the health professional who initiated the request.

SPECIALIZED PRODUCTS AND SERVICES

Based on the results, the health professional contacts Héma-Québec to find an adult donor or cord blood units for stem cell transplantation, or to provide specialized products, such as phenotyped packed red blood cells, washed blood, rare blood or typed platelets.

SCREENING OF STEM CELL AND BLOOD PRODUCT DONORS

To ensure the supply of specialized products, the reference laboratories constantly perform screening tests of Stem Cell Registry donors, cord blood units and blood product donors to find a compatible person willing to donate.

Specialized laboratory services during the pandemic

The COVID-19 pandemic resulted in few repercussions for some of the activities of the specialized laboratories, but there was a significant decline in the quantity of requests for HLA typing and the screening of virological markers.

Testing services for hospitals

In 2020–2021, Héma-Québec's laboratories received 4,948 requests from hospitals for specialized testing, including for case studies in erythrocytic and leukoplatelet immunology, erythrocytic genotyping and HLA typing. The organization also responded to requests for screening tests (for example, HIV, hepatitis B and C, syphilis) for blood, stem cells or organ donors collected in hospitals.

Genotyping of blood donors ensures better compatibility for patients with specific transfusion needs. This approach reflects the evolution of medical treatments to meet today's increasingly personalized needs.

HLA typing of cord blood units, donors enrolled in the Stem Cell Donor Registry, and patients awaiting a transplant are also performed in Héma-Québec's laboratories.

SPECIALIZED TESTING

	2016–2017	2017–2018	2018–2019	2019–2020	2020–2021
Erythrocytic immunology (patient cases)	1,558	1,470	1,368	1,627	1,644
Platelet immunology (patient cases)	472	482	470	465	495
Erythrocytic genotyping (patient cases)	862[1]	1,090	1,010	1,025	970
Erythrocytic genotyping (donors)	1,128[2]	2,693	4,837	3,854	3,907
HLA-A, B, C, DR, DQ typing	5,333	4,483	5,490	5,423	3,563[2,3]
Screening for virological markers by serology and nucleic acid test (donors in hospitals)	1,741	1,715	1,735	1,900	933[3]

[1] Year during which donor genotyping began.
[2] The decrease in HLA typing can be attributed to the halting of donor enrolment in the Stem Cell Registry and the slowdown of banking of cord blood units because of COVID-19.
[3] Lower demand probably resulting from reduced activities in hospitals during the pandemic.

Phenotyped packed red blood cells

While the quantity of phenotyped packed red blood cells delivered to hospitals has remained stable, their proportion of the packed red blood cells delivered has steadily grown. In the past five years, the percentage of phenotyped packed red blood cells has increased from 8.9% to 13.8%. This trend observed in recent years can be largely attributed to the growth of the cohort of patients with sickle cell anemia.

One of the treatments for the disease involves exchanges of blood (erythrocytapheresis) to remove the red blood cells of the person affected and replace them with those of a healthy donor. This procedure generally takes place every four weeks and requires blood cells from 10 different donors. On average each year, one person with sickle cell anemia needs blood from 130 different donors.

PHENOTYPED PACKED RED BLOOD CELLS DELIVERED TO QUÉBEC HOSPITALS

In the wake of the new standard issued by the Canadian Standards Association (CSA), Héma-Québec added the K (Kell) phenotype to its automated testing for storage of phenotyped packed red blood cells in inventory destined for women of child-bearing age. The K antigen can cause an immune response, and the antibodies that develop can trigger problematic reactions during transfusions or pregnancy. An antibody against the Kell antigen can develop following a pregnancy (exposure to the paternal antigen present in the fetus) or transfusion and cause hemolytic disease of the newborn (HDN), characterized by jaundice and anemia in the newborn infant.

This change to the range of automated tests also provided the opportunity to add other phenotypes (i.e., C, c, E, e) to strengthen the ability to meet the need for phenotyped packed red blood cells destined for patients with sickle cell anemia, among other conditions.

Innovation and continuous improvement

Héma-Québec is contributing to several initiatives that foster innovation to benefit Québec's healthcare system. Whether by improving operations at various levels or by creating partnerships, the organization promotes innovation and continuous improvement through its various activities.

An improved experience at the collection site

Appointments extended to all donations

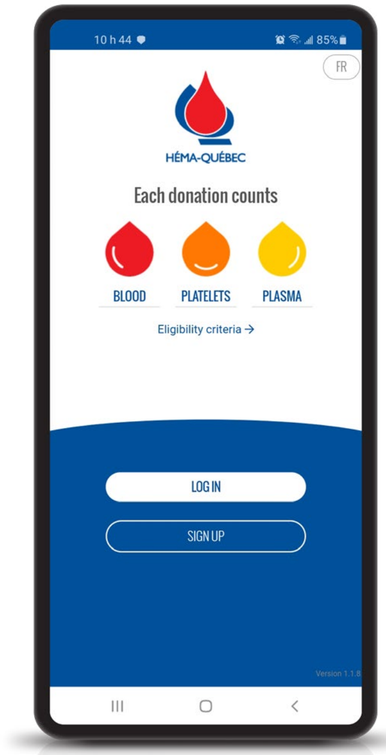
Following the arrival of the pandemic in March 2020, Héma-Québec quickly implemented a health risk mitigation plan for its blood drives. One of the key elements of this strategy was the establishment of mandatory appointments for all persons wishing to donate. The aim of this measure involved several objectives, including ensuring a safe donation environment in compliance with physical distancing rules. Booking an appointment also helped reduce wait times for a better donor experience while improving the predictability of blood drive results to stabilize supply fluctuations.

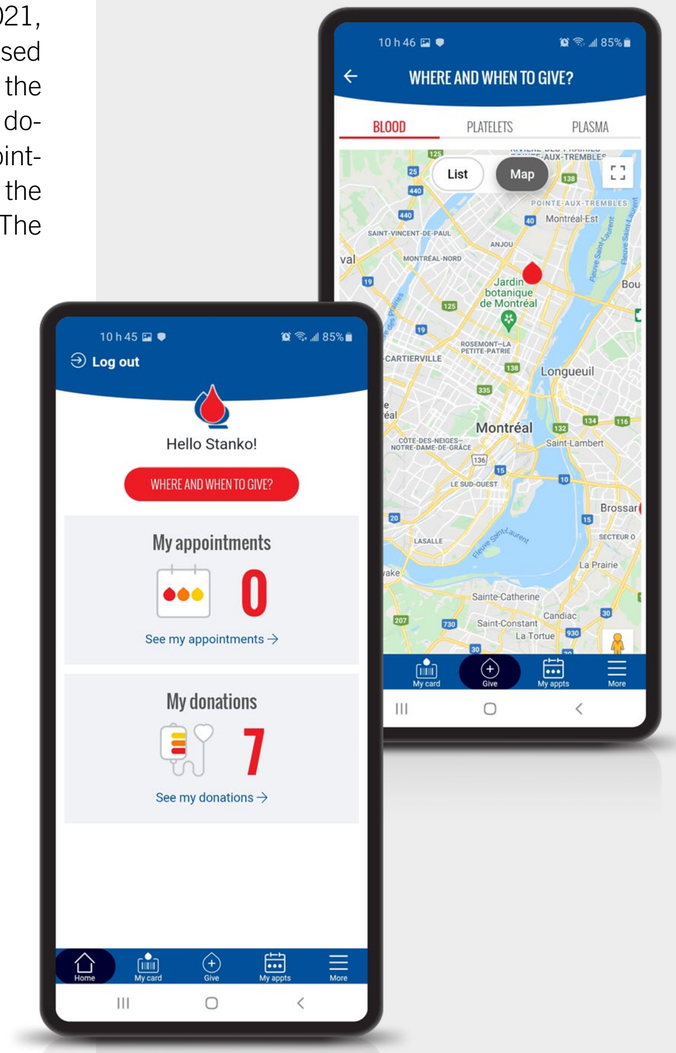
The deployment of this initiative, completed in mid-April, was supported by several communication and marketing offensives, including a targeted ad campaign on social media and improvements to Héma-Québec's website to simplify access to appointments.

Implementation of the JeDonne app continues

Following last year's successful implementation phase for plasma donations only, use of the JeDonne app was extended to all types of donations that can be made in one of Héma-Québec's 10 permanent donor centres. Thanks to this user-friendly tool, donors can now easily manage their donor card, appointments, donation history and profile on the Web for all types of donations. A new geolocation function also enables users to find the collection centre nearest them.

This improved version of the JeDonne app has been an unqualified success. During the period from March 31, 2020, to April 1, 2021, the number of registered donors increased from 5,463 to more than 36,000. Since the start of phase 2 (extension to all types of donations) in July 2020, 84,000 new appointments were made using the app, bringing the total to 138,000 since implementation. The development of this Web tool is an important element of the strategy deployed by Héma-Québec to improve the donation experience and retain donors.





Discover JeDonne!

Implementation of the management strategy for new donors

In the wake of the finding that more than 40% of people who make a first donation do not repeat the experience in the following 12 months, a management strategy was implemented in donor centres this year to retain new donors. The objective was to standardize reception and follow-up of new donors using a clearly defined approach that was simple to execute.

Managers and collection teams were trained to ensure the effective implementation of the strategy, which is based on a series of contacts before, during and after the donation. The aim of the strategy was to be more welcoming to donors, to explain the donation process, to recognize their selfless gesture, and to encourage them to become donation ambassadors among their circle of friends.

The content of each message also evolved based on the donations made by new donors. The objective was always to strengthen their feeling of belonging to the donor community, instill a feeling of pride and encourage them to repeat the experience.

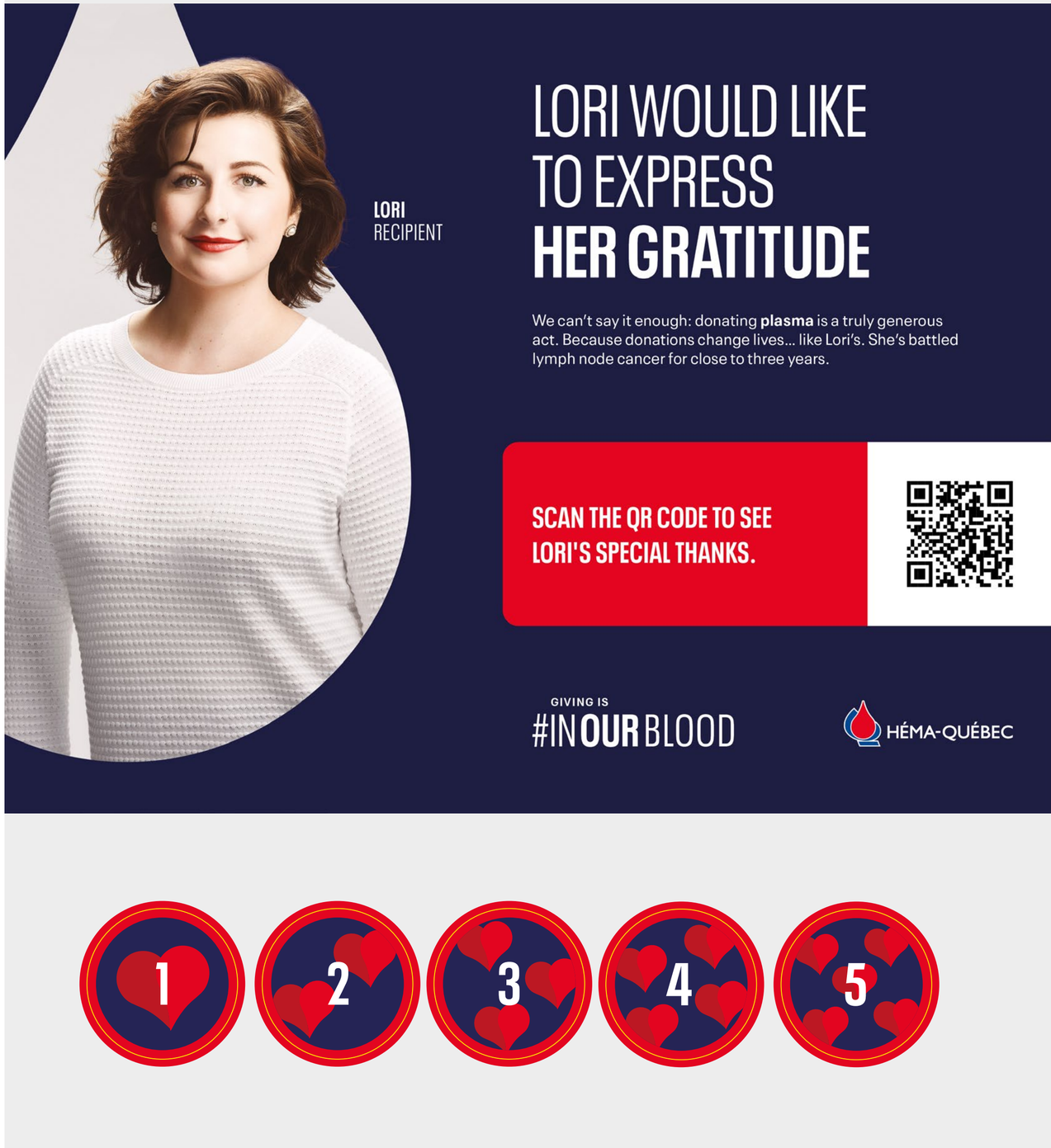
Promising results

Initial results of the management program for new donors have been promising, based on partial data collected since November 2020. According to the statistics compiled, 21.4% of donors integrated into the program will be returning for their next donation this year. This percentage is considerably higher than the 11.8% observed during the same period the previous year.

RATE OF RETURN OF DONORS WHO MADE ONE TO FIVE DONATIONS SINCE THE START OF THE PROGRAM

	2018–2019	2019–2020	2020–2021
Rate of return for the same four-month period	14.7%	11.8%	21.4%

Definition: Donors who made between one and five donations and returned to book a new donation, regardless of the labile blood product, in the 12-month period following their most recent donation. These results are for the period of November 1, 2020, to March 31, 2021, and not for the entire fiscal year 2020–2021.



Continuous improvement

Repatriation of nucleic acid tests

Since December 2020, thanks to the addition of new specialized equipment and Health Canada's approval of the B19/HAV reagents test, Héma-Québec has been able to conduct parvovirus B19 and Hepatitis A (HAV) tests internally. The B19 test is a mandatory analysis of all plasma sent for fractionation. In the past, the test was performed by a European subcontractor who did the fractionation for Héma-Québec because our organization lacked the necessary equipment and reagents.

The ability to perform the test in our facilities eliminated the collection of a sample tube and significantly reduced the steps involved in handling the tubes after the collection stage.

In addition, because the B19 test is a duplex test that offers the ability to detect the presence of two viruses at the same time, testing for the Hepatitis A virus (HAV) was added. To optimize the scope of the B19/HAV test, the decision was made not to limit the application to plasma but to extend it to all types of donations collected by Héma-Québec.

Revamped inventory planning process

A major paradigm change occurred this year involving the inventory management of products collected by Héma-Québec. The new approach focuses on forecasting needs affecting the entire yearly cycle. This integrated inventory management system makes it possible to predict growth in demand many months in advance, thus ensuring greater stability in supply fluctuations. This process consisted of three major steps :

- Improvement to the forecasting of demand from hospitals.
- Review of targeted inventory levels.
- Linkage with all product management operations to optimize response to the needs of the Québec population.

The new planning process achieved excellent results. Héma-Québec is now able to forecast needs with greater accuracy almost 12 months in advance. These forecasts have many benefits, including greater consistency in the number of days that inventory is on hand, more precise planning of blood drives and staff schedules, and better synchronization of timely marketing efforts aimed at recruiting donors. Overall, the implementation of this initiative helped further strengthen the safety of the supply every moment of the year.

Redefinition and alignment of the service offering of each vice presidency

As part of the vast process of organizational change begun by Héma-Québec in 2017, each vice president's office was asked to give serious thought to better defining the content of its service offering and optimizing its daily output for the benefit of its clients. This long-term project, which was conducted over an 18-month period, was an opportunity for genuine analysis by each sector, involving all managers and many employees within the organization. The aim was for each vice president's office to draw up a list of the needs of its internal and external clients, as well as best practices, to build a value-added service offering. The nature of this service promise also became the engine for a transformation focused on all Héma-Québec's client groups and on the efficiency of its operations and services. The second phase of the project consisted of redefining optimal organizational structures to deliver on this commitment. The addition of specialized positions, the clarification of roles and responsibilities, and the selection of many talents completed this work aimed at a promising future for Héma-Québec.

This analysis and thought process was also an opportunity to improve partnerships between Héma-Québec's various departments and to better coordinate their actions as part of a concerted approach. To this end, the project was implemented internally under the name "Symphonie," which perfectly reflected this search for alignment and collaboration. Change management, co-development initiatives and a communication plan were implemented to support this major project. The entire staff followed the communications regarding the transformation under way with interest, while the teams took ownership of the changes in an orchestrated fashion. Implementation of a "Quinzaine Symphonie" and a "Défi Symphonie" in the fall were part of this strategy, which was executed in many ways in Héma-Québec's internal communication networks.

The results of the Symphonie Project were presented to the board of directors in November 2020 and received strong support from board members. Since then, they have been progressively implemented in each of Héma-Québec's various vice presidencies.

Scientific research

The Medical Affairs and Innovation Department integrates all research and development activities, while supporting and playing an advisory role to Héma-Québec's operations. Its aim is to be an international model of innovation for all activities related to the medical field.

During the pandemic, the organization was invited to participate in many studies in partnership with public health authorities in Québec and Canada, for the benefit of the entire population.

As part of its usual mission, the Medical Affairs and Innovation Department is responsible for validating donor restriction criteria, following up reactions in donors and recipients, preparing statistics on donors and transmissible markers, and conducting studies and surveys on donors.

Héma-Québec's Scientific Activities Report, published for the first time this year, summarizes all the activities carried out in this field during the year ending December 31, 2020. Consult the 2019–2020 Scientific Activities Report to learn more about our achievements.

Research and innovation during the pandemic

In the 2020–2021 fiscal year, the Medical Affairs and Innovation Department devoted a major portion of its activities to the COVID-19 pandemic. It actively participated in many studies and partnerships related to this health crisis. These aspects are dealt with in greater detail in the "Strategic partnerships for the healthcare system" section on page 42.

Training the next generation

Since the founding of the organization, Héma-Québec has pursued the mission of training future researchers and specialized physicians in its fields of activity. Many researchers from the Medical Affairs and Innovation Department supervise the research work of students enrolled in the master's and doctoral programs at Université Laval and Université de Sherbrooke.

During 2020–2021, five master's students, one doctoral student and four postdoctoral researchers were trained under the direction of Héma-Québec's scientific staff.

We also welcomed two undergraduate interns during the past year. These internships enable students to apply knowledge gained during their studies to the workplace.

Two physicians specializing in hematology also completed an internship at our organization as part of postdoctoral training in transfusion medicine.

Strategic partnerships within the health system

The COVID-19 pandemic was an opportunity to gauge the importance of Héma-Québec's role within its many strategic partnerships with the health and scientific community. While enabling the organization to remain at the cutting edge of advances in its field of activity, these productive collaborations put the knowledge and expertise of its teams to work for the benefit all Quebecers.

Partnerships during the pandemic

Seroprevalence studies

At the request of the Ministère de la Santé et des Services sociaux, Héma-Québec conducted a major donor study in collaboration with the INSPQ (Institut national de santé publique du Québec) and in partnership with the COVID-19 Immunity Task Force (CITF). The objective of this study was to estimate the proportion of the Québec population that had contracted SARS-CoV2, which causes COVID-19.

Blood donors constitute a representative group of the general population for all regions in Québec. As part of its normal activities, Héma-Québec tests a sample of each blood donation. The organization is in an ideal position, therefore, to carry out these types of studies.

The first phase unfolded from May to July 2020, and a second phase was conducted from January to March 2021. The results obtained made it possible to follow the evolution of the prevalence through successive pandemic waves and became one of the major sources of information for public health authorities.

Héma-Québec also collaborated on a study sponsored by the COVID-19 Immunity Task Force (CITF) and funded by the Public Health Agency of Canada (PHAC). In the study, the samples used in the first stage of the provincial study of seroprevalence in donors were analyzed on other serological test platforms.

Convalescent plasma study

Héma-Québec participated in the CONCOR-1 national clinical trial aimed at developing a passive immunization program through the transfusion of plasma from donors who had recovered from COVID-19 (convalescent plasma). This approach fell within the scope of research into effective treatments for persons with the virus. The project was conducted in partnership with some 50 centres in Canada, including 15 in Québec along with scientists from the CHU Sainte-Justine, the CRCHUM (Centre hospitalier de l'Université de Montréal) research centre, the Jewish General Hospital, and many other Québec hospitals.

Héma-Québec's primary role was to recruit potential convalescent plasma donors, collect the plasma, and perform regulatory testing of the donations collected. In addition, Héma-Québec was tasked with measuring the antibodies directed against the virus in all the plasma used in the clinical trial. No conclusive results were produced, and the plasma convalescent study was aborted in January 2021.

Antibody persistence study

With the support of their teams, Professor Renée Bazin of Héma-Québec and Professor Andrés Finzi of the CRCHUM research centre conducted a study on the persistence of antibodies in persons who had recovered from COVID-19. This study analyzed the evolution of the level of anti-COVID-19 antibodies in 15 individuals. The study revealed that the level of antibodies in the blood of persons who had recovered from COVID-19 remains relatively stable for many weeks after the start of the infection but begins to decrease between three and four months after the infection.

Seroreversion (evolution of seroprevalence)

In collaboration with the Direction de la santé publique, a new component was added to the main seroprevalence study in early 2021. Its aim was to evaluate the rate of seroreversion among donors who tested positive.

Seroreversion is the passage from a positive result to a negative result during tests for the presence of antibodies performed many months apart. A certain proportion of people found to be positive during the first phase of the seroprevalence study might be negative during the second phase of the study. The phenomenon of seroreversion is thus likely to falsify the data related to the number of persons who contracted the infection at the start of the pandemic. Calculating the rate of seroreversion during the study was essential to obtaining a more accurate estimate of cumulative seroprevalence.

Beginning in February 2021, all blood donors who had a positive result during the first phase of the study (173 individuals) were invited to participate in the seroreversion study. The knowledge obtained will help better estimate the prevalence of the COVID-19 infection in the population and could also provide information about the relevance of researching for antibodies against the virus as a method of detecting a past infection.

Partnerships for the supply of human tissues

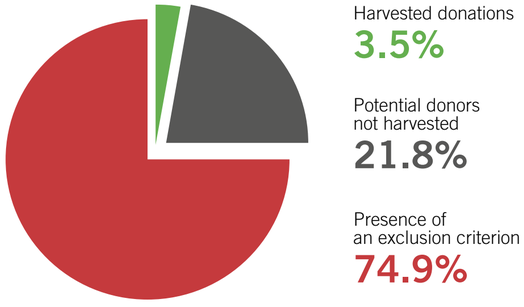
Partnership with the Bureau du coroner

To obtain an optimum number of human tissue referrals, Héma-Québec reached many collaborative agreements with strategic partners in the healthcare network.

In place for approximately one year, the new partnership with the Bureau du coroner had an excellent start and continues to bear fruit. Out of a total of 4,601 files examined this year, there were 155 tissue donors reported to the coroner, including 62 ocular tissue donors and 93 multiple tissue donors.

A second liaison officer is now on staff during the night to react quickly and establish a link with the family of recently deceased persons in the case of events requiring coroner intervention. This close collaboration ensures access to human tissues within the timeframe needed to maximize their transplant potential.

FILES CONSULTED AT THE CORONER'S OFFICE



Partnership with Urgences-santé

Collaboration continued with Urgence-santé to notify and recommend potential human tissues donors and maximize the number of recommendations. COVID-19 had an impact on the number of referrals, which fell by 19%. Steps are currently being taken to ensure the systematization of referrals.

Partnership with the Unité de coordination clinique des services préhospitaliers d'urgence (UCCSPU)

Discussions are under way with the UCCSPU to have a nurse communicate with the grieving family and suggest the option of tissue donation in the absence of registries for organ and tissue donation consent. This delicate intervention could have significant implications for the number of possible donations.

Partnership with the Centre hospitalier de l'Université de Montréal (CHUM)

The partnership with the CHUM to identify and recommend potential human tissues donors continued, but the pandemic had a major impact when staff in the admissions and hospital archives department moved to virtual work. The established procedure was for this department to systematically report a death to Héma-Québec, using a form filled out by hand. In recent years, there had been a net growth in the number of referrals. But the fact that staff were no longer physically on site led to a major drop in the number.

Testing services for Transplant Québec

Héma-Québec's specialized laboratories support Transplant Québec by conducting qualification tests to determine whether a potential organ donor is a carrier of a blood-borne infection. These tests must be done quickly, before the organs are collected for transplantation. The tests are done using specialized equipment and reagents that are not found in hospitals.

Héma-Québec commits to providing results within eight hours of receipt, thanks to an on-call service to handle requests received from a lab outside of regular business hours.

The "urgent" and "non-urgent" qualifiers were introduced by Transplant Québec during the last fiscal year. Results of urgent samples must only now be provided by Héma-Québec within eight hours. This change has resulted in a sharp reduction (from 74% to 21%) in the tests done outside of regular business hours. This new donor qualification system has reduced costs for Transplant Québec and improved working conditions for on-call laboratory technicians.

SAMPLES TESTED FOR TRANSPLANT QUÉBEC

2016–2017	2017–2018	2018–2019	2019–2020	2020–2021
125	133	135	152	113

113
samples tested in 2020–2021

21%
tests done outside of regular business hours

Stem cell partnerships

Partnership with ExCellThera (UM171)

Various aspects of the partnership between ExCellThera and Héma-Québec were the subject of in-depth discussions to make cord blood accessible to a greater number of recipients. One of the limitations of using cord blood is its small quantity of stem cells, compared with that collected from an adult donor. To compensate for this, researchers at the Institute for Research in Immunology and Cancer (IRIC) at Université de Montréal developed a technology to treat cord blood with the UM171 molecule, which helps stem cells multiply. The Québec company ExCellThera was then created to market this treatment and distribute it internationally. This developing partnership will enable Héma-Québec to improve the performance of products managed by the Public Cord Blood Bank.

FACT accreditation with the Centre hospitalier de l'Université de Montréal (CHUM)

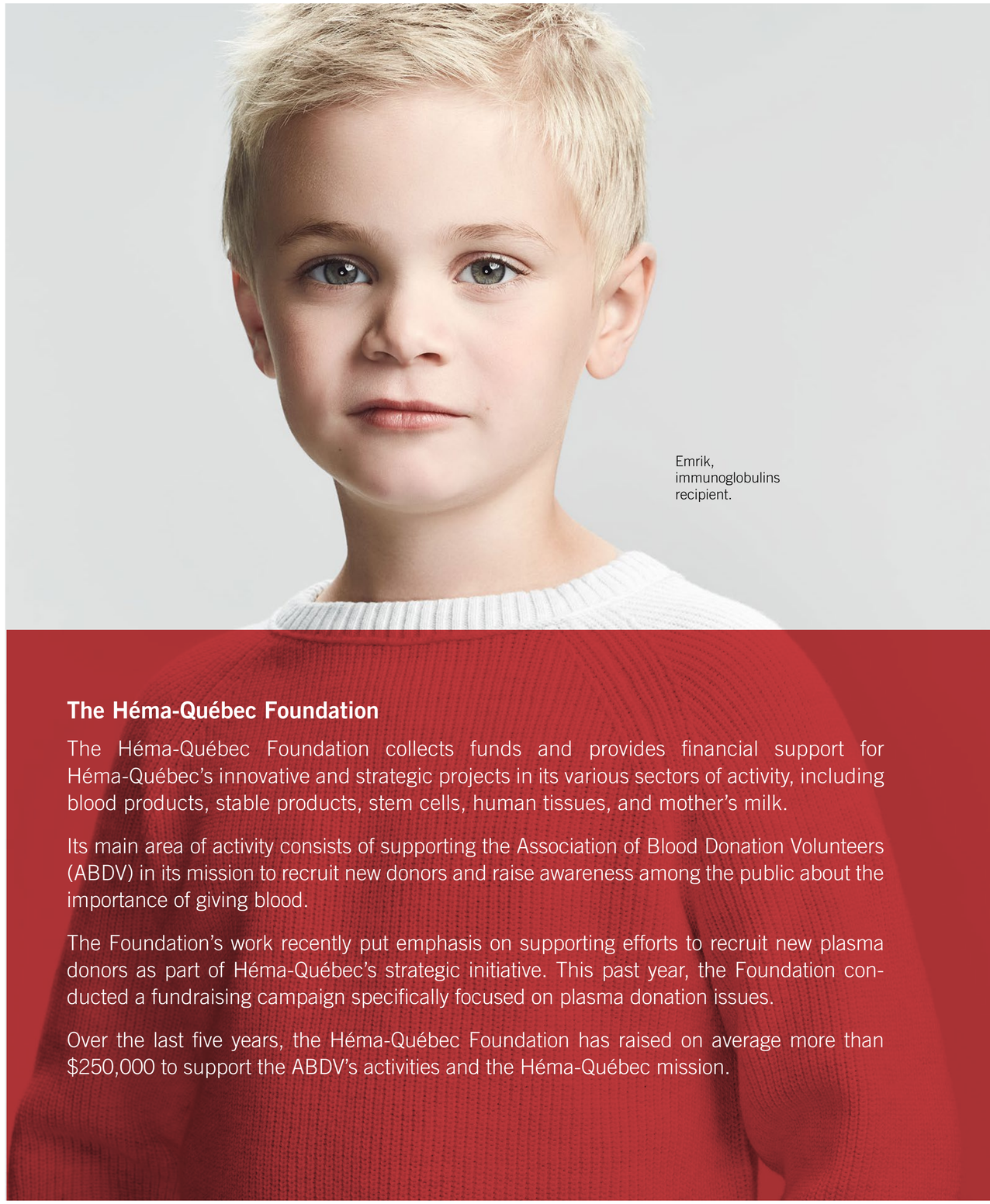
Close collaboration continues between Héma-Québec and the CHUM, which is one of the clients of our autologous peripheral stem cell cryopreservation service. The CHUM is currently working to have its stem cell activities accredited by the Foundation for the Accreditation of Cellular Therapy (FACT). Héma-Québec has joined this effort to obtain the same accreditation for its stem cell laboratory. This accreditation, which is necessary to maintain its service to patients at CHUM, will provide a framework for the manufacturing and cryopreservation processes of products from apheresis donations. A project team is currently working together with the project managers at CHUM on the regulatory upgrade of its laboratory operations with the intent of filing an accreditation request to FACT in early 2022.

Management mandate of the Système d'information intégré sur les activités transfusionnelles et d'hémovigilance (SIIATH)

Since May 2018, the Vice-President of Information Technology and Digital Strategy office has been responsible for the operational management of the SIIATH for the entire healthcare network. This software solution is key to managing inventories of blood products, from their receipt by hospitals to their transfusion. The traceability of all the transfusion activities of the blood banks in Québec depends on this software solution.

In 2020–2021, as part of its mandate with the Ministère de la Santé et des Services sociaux, Héma-Québec continued updating and migrating the SIIATH toward a new private cloud-based platform. The migration was achieved in 53 of the 93 hospitals operating blood banks in the Québec network. This migration project will be completed during the current fiscal year, and a new phase in the evolution of the system will follow.

In addition, expanded data sharing, begun the previous year, and the development of dashboards reflecting the direct consumption of hospitals have contributed to improvements in anticipating growth in demand, optimizing management of the blood supply in Québec, and better targeting donors based on demand.



Emrik, immunoglobulins recipient.

The Héma-Québec Foundation

The Héma-Québec Foundation collects funds and provides financial support for Héma-Québec's innovative and strategic projects in its various sectors of activity, including blood products, stable products, stem cells, human tissues, and mother's milk.

Its main area of activity consists of supporting the Association of Blood Donation Volunteers (ABDV) in its mission to recruit new donors and raise awareness among the public about the importance of giving blood.

The Foundation's work recently put emphasis on supporting efforts to recruit new plasma donors as part of Héma-Québec's strategic initiative. This past year, the Foundation conducted a fundraising campaign specifically focused on plasma donation issues.

Over the last five years, the Héma-Québec Foundation has raised on average more than $250,000 to support the ABDV's activities and the Héma-Québec mission.

Thank you to our partners!

As part of its mission, Héma-Québec is mandated to develop and maintain partnerships that encourage the sharing of information and the advancement of related knowledge and techniques. The importance of these partnerships is enshrined in the *Act respecting Héma-Québec and the biovigilance committee*, which states that the organization must "maintain links to ensure collaboration and the exchange of information with counterpart organizations in Canada and elsewhere, in order to be informed of and share expertise."

Héma-Québec wishes to recognize the many partners with whom it has had the opportunity to collaborate during 2020–2021:

- America's Blood Centers
- Americas' SAP Users' Group
- AABB
- American Association of Tissue Banks
- American Red Cross
- American Society for Apheresis
- American Society of Histocompatibility and Immunogenetics
- AOH Québec
- Association d'anémie falciforme du Québec
- Association des bénévoles du don de sang (ABDS)
- Association of Donor Recruitment Professionals (ADRP)
- Association des patients immunodéficients du Québec (APIQ)
- Association de thérapie génique du Québec
- Association professionnelle des Chargés de sécurité transfusionnelle (CST) du Québec (APCSTQ)
- Banque de cerveaux Douglas – Bell Canada
- Banque d'yeux du Centre universitaire en ophtalmologie
- Banque d'yeux du Québec
- Biomedical Excellence for Safer Transfusion
- Bureau du coroner
- Canadian Association for Porphyria
- Canadian Association of Eyes and Tissue Banks
- Canadian Blood Services
- Canadian Society for Transfusion Medicine (CSTM)
- Canadian Standards Association
- Chambre des notaires du Québec
- Centre de recherche évaluative en santé (CRES)
- Centre de traitement des inhibiteurs
- Centre hospitalier universitaire de Montréal (CHUM)
- CIUSSS du Saguenay–Lac-Saint-Jean
- Consortium for Blood Group Genes
- Comité consultatif national de médecine transfusionnelle
- Commission de la santé et des services sociaux des Premières Nations du Québec et du Labrador (CSSSPNQL)
- Cord Blood Association
- Corporation des thanatologues du Québec
- Établissement français du sang
- Fondation Héma-Québec
- Fonds de recherche du Québec – Nature et technologies
- Fonds de recherche du Québec – Santé
- Foundation for the Accreditation of Cellular Therapy (FACT)
- Groupe de travail sur l'immunité face à la COVID-19 (GTIC)
- Institut national de la recherche scientifique
- Institut national de santé publique du Québec (INSPQ)
- International MakSystem User Group (IMUG)
- International Plasma Fractionator Association (IPFA)
- International Society of Blood Transfusion (ISBT)
- International Society of Hematology
- McMaster University
- Ministry of Health of Ontario
- Natural Sciences and Engineering Research Council of Canada (NSERC)
- Network of Rare Blood Disorder Organizations (NRBDO)
- Ordre professionnel des technologistes médicaux du Québec : Formaline
- Plasma Protein Therapeutics Association (PPTA)
- Platelet Immunology Working Party (PIWP)
- Regroupement des Directeurs des Cliniques des traitements de l'hémophilie du Québec
- Réseau de thérapie cellulaire, tissulaire et génique du Québec (ThéCell)
- Safe Blood for Africa Foundation
- Société canadienne de l'hémophilie
- Table de concertation en médecine transfusionnelle (TCMT)
- The Canadian Donation and Transplantation Research Program
- Réseau canadien d'angioédème héréditaire (CHAEN)
- Toyota Canada
- Transplant Québec
- Transplantation and Cellular Therapy (TCT) Program
- Unité de coordination clinique des services préhospitaliers d'urgence (UCCSPU) de l'Hôtel-Dieu de Lévis
- University of Alberta Hospital
- Urgences-santé
- World Marrow Donor Association (WMDA)

Risk management

The safety and quality of distributed products and services provided are paramount. Héma-Québec manages the risks in an integrated manner at all levels of the organization, based on best practices.

Managing risks in pandemic times

Maintaining activities

In mid-March 2020, just before the start of 2020–2021 fiscal year, the Québec government triggered a health emergency to deal with the COVID-19 pandemic. As the sole supplier of blood products and partner of Québec's heath system, managing this crisis was a priority of Héma-Québec's activities that year.

Activation of the crisis management program resulted in the implementation of various strategies that enabled Héma-Québec to continue successfully ensuring a sufficient and safe supply of blood products to the Québec population. The organization was able to pursue its collection and distribution activities with ongoing efficiency during the pandemic's three successive waves. Some activities, such as the recruitment and qualification of donors of mother's milk, donor recruitment for the Stem Cell Registry, and the collection of certain human tissues had to be temporarily slowed down or suspended. To date, these interruptions or slowdowns have not significantly compromised Héma-Québec's ability to maintain an adequate level of service in these areas.

Many efficiency gains obtained during the pandemic have become assets whose positive benefits will surely continue when things return to normal.

Changes in criteria

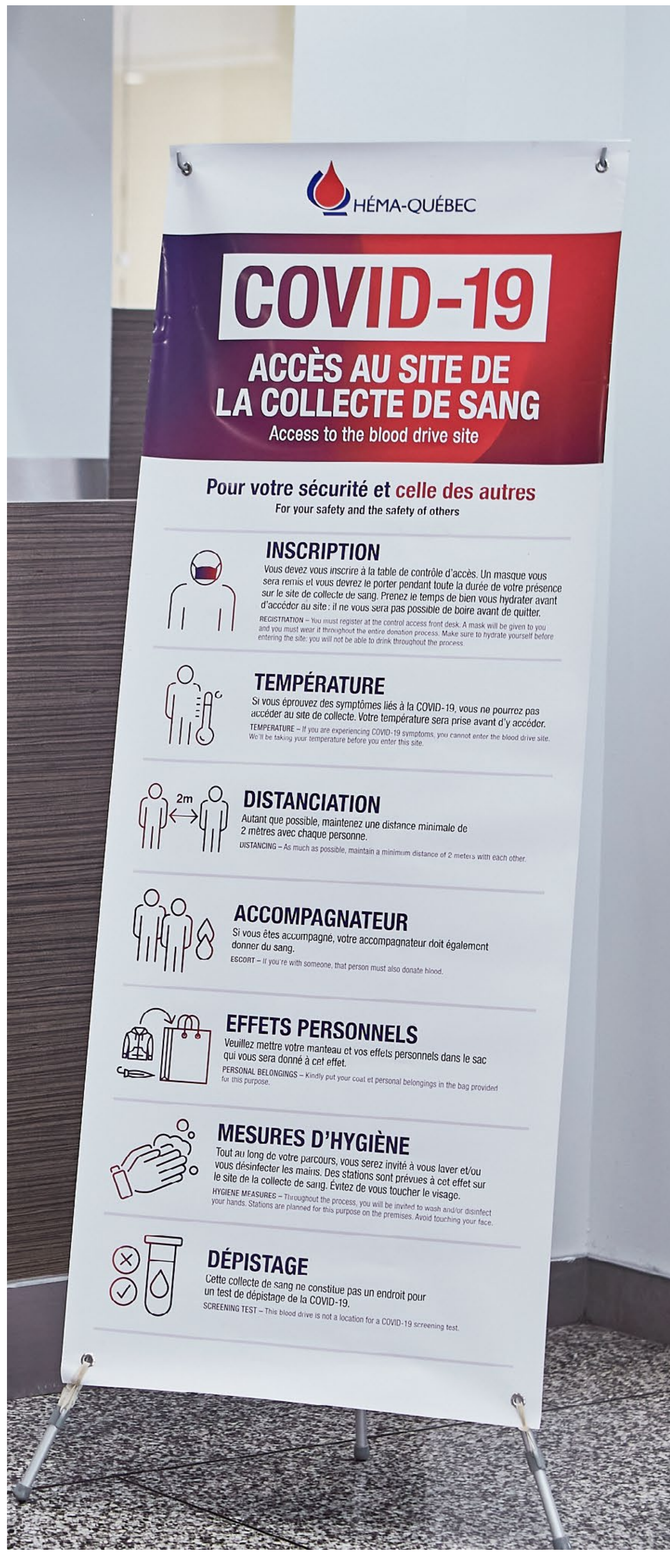
To offset the impact of the restrictions on donors caused by the pandemic, some criteria limiting access to donating were relaxed wherever these temporary changes did not present any safety issues. The required wait time between donations by the same person was reduced to 28 days for men and 56 days for women. As well, the exclusion period for persons who travelled to countries where malaria is prevalent was reduced from 12 to six months for those who had spent less than six months in the country.

Additional security measures

Since March 2020, the activities at mobile blood drives and in permanent centres have been adapted to integrate a wide range of preventative measures against COVID-19. Based on the evolution of the recommendations by public health authorities, the implementation and application of these measures had to be regularly reviewed to continue our blood collection operations without interruption.

Below are some of the main measures put in place for mobile blood drives and permanent collection centres:

- 100% of donations now by appointment only.
- Two-metre distancing (when the activity allows).
- Disinfection of hands and surfaces at the collection sites.
- Mandatory wearing of a medical mask at all times for everyone.
- Questionnaire and temperature check at the entrance.
- Setup of plexiglass dividers at the point of entry and collection stations.
- Addition of COVID-19-specific questions on the donor questionnaire.
- Use of plastic bags to store personal belongings.



Allocation of blood products and stable products (IVIg)

Prior to the advent of COVID-19, the market for immunoglobulins was sufficient to meet global demand. Ever-increasing world demand, combined with the severe effects of the pandemic, however, had an impact on the market's ability to adequately meet demand. Measures were applied in April 2020 as part of a mitigation and risk management approach. Héma-Québec deployed efforts to remedy the situation, and many steps were taken with all immunoglobulin suppliers in Canada to obtain additional quantities.

Faced with the possible tightening of the immunoglobulin supply worldwide caused by the COVID-19 pandemic, Héma-Québec and the Comité consultatif national en médecine transfusionnelle (CCNMT) recommended that the Ministère de la Santé et des Services sociaux (MSSS) ask hospitals to reduce their immunoglobulin consumption starting in April 2020. Following this announcement, many initiatives were put in place in Québec hospitals to better control the use of immunoglobulins. These included the use of a dose calculator, practice audits by the Association des neurologues du Québec, the establishment of standardized prescription forms, and the review of prescriptions by transfusion medicine teams. The objective sought and achieved through these measures was to preserve sufficient quantities of immunoglobulins to treat patients whose life depended on them, including immunocompromised users undergoing replacement therapy.

Distribution of intravenous immunoglobulins at home for immunocompromised patients

To comply with the required physical distancing measures during the pandemic, a home delivery service was initiated to provide the most vulnerable users with stable products. Eligible recipients of this service were mainly immunocompromised patients, hemophiliacs, those 70 years of age and older with hereditary angioedema, and patients with underlying conditions. This emergency service was offered solely to patients who had no available representative to pick up their products directly from the blood bank.

Système intégré de gestion des risques (SIGR)

Set up as part of the previous fiscal year, Héma-Québec's integrated risk management system (SIGR) is aimed at identifying, assessing and defining strategic operational risks to enable the organization to react quickly and effectively should such risks occur. It also serves as a link between 12 autonomous risk management subsystems, under the responsibility of each vice-president's office.

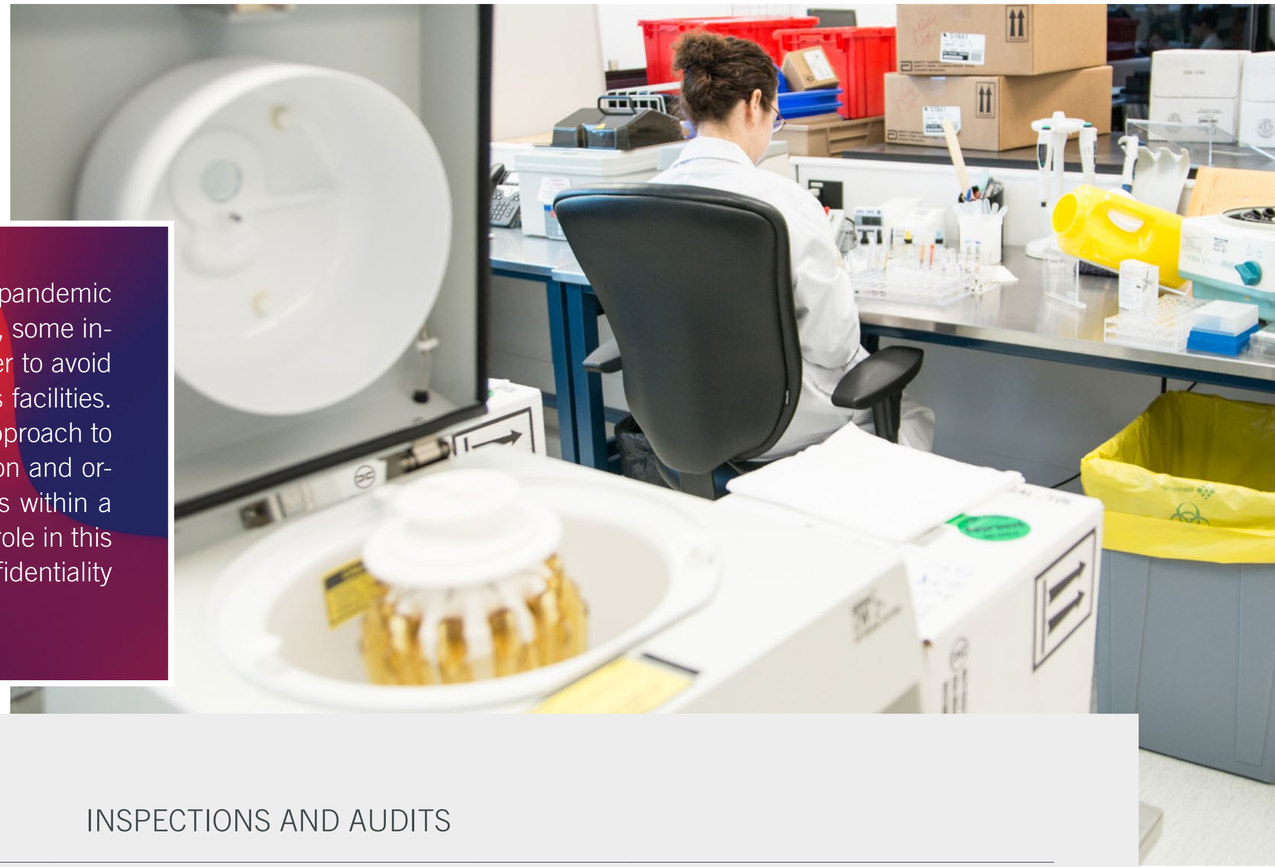
Faced with the impact of the pandemic, it goes without saying that risk management featured prominently in 2020–2021. The SIGR demonstrated its relevance by successfully helping the organization adapt quickly to the various issues raised by this health crisis. A new crisis management and mass communication system, implemented in December 2019 to enable the various departments to document events and actions to be taken in an emergency, proved to be an effective tool in coping with this unforeseen situation.

Inspections and audits

Periodic inspections and audits of Héma-Québec's operational processes by regulatory agencies reflect the degree of quality control over its operations. Following various inspections conducted in 2020–2021, Héma-Québec maintained its compliance status.

Health Canada is working on updating its inspection strategy for licensed blood establishments to allow for a reduction in the frequency of inspections of highly compliant establishments, based on the risk associated with their activities. This approach would favour establishments with a high degree of compliance, such as Héma-Québec, while providing for a high level of surveillance of deficient establishments.

The situation brought about by the COVID-19 pandemic led to exceptional measures. For the first time, some inspections were conducted virtually or on paper to avoid the presence of inspectors in Héma-Québec's facilities. Our teams had to adapt quickly to this new approach to inspections, which required greater preparation and organization to obtain the requested documents within a tight timeframe. Computer tools played a key role in this unusual process, while guaranteeing the confidentiality of the data exchanged.



INSPECTIONS AND AUDITS

Activity sector	Agency	Scope	Date	Conclusion
Blood products	Health Canada	GLOBULE in Québec (Sainte-Foy)	January 2021	Establishment licences renewed in accordance with the *Blood Regulations*
		PLASMAVIE in Gatineau	January 2021	
		GLOBULE in Laval	January 2021	
Reference laboratories	American Society for Histocompatibility and Immunogenetics (ASHI)	Leukoplatelet immunology laboratory (HLA)	July 2020	Renewal of ASHI certification

Hemovigilance of donors

Héma-Québec documents all reactions following a blood donation, regardless of their degree of severity. Adverse reactions occur rarely and, for the most part, are benign. Analyzing the data obtained makes it possible to adopt preventive measures to minimize reactions that may arise and foster a positive blood donation experience.

In 2020–2021, there was a major reduction in reactions found compared with the historical data. The percentage of reactions observed decreased by 55% compared with the previous fiscal year. In many cases, minor adverse reactions were observed in 2.9% of 343,637 donations collected.

OVERVIEW OF ADVERSE REACTIONS

A decrease of

55%

in reactions compared with the previous year[1]

Reactions observed in

2.9%

of donations

RATE AND TYPE OF COMPLICATION POSSIBLE PER 100 DONATIONS

2.1

vasovagal reactions, 1.8 of which were mild

0

moderate or severe reaction during donation by apheresis (for example, citrate reaction)

0.7

arm reaction (for example, hematoma, bruising, allergy)

[1] This decrease can be explained by stopping the systematic entry of mild vasovagal reactions and mild citrate reactions.

Update on the MSM criterion

After receiving the go-ahead from Health Canada in 2019, Héma-Québec reduced the temporary exclusion period from donating blood for men who have sex with other men (MSM) from 12 to 3 months. This relaxation, which poses no risk to the extremely high level of safety of blood products, was made possible by stringent testing techniques and improvements in the scientific data available.

EVOLUTION OF THE EXCLUSION PERIOD FOR DONATING BLOOD

up to 2013	2013 to 2016	2016 to 2019	since 2019
Permanent	5 years	12 months	3 months

To further relax the eligibility criterion for MSM, new data will be needed to show that the proposed changes will have no negative effect on the safety of the blood reserves and on supply capacity. Fifteen research projects, funded by Health Canada and conducted under the auspices of the Canadian Blood Services in collaboration with Héma-Québec, are under way, but progress has been slow due to the pandemic. The conclusions of these studies will enable Canadian suppliers of blood, including Héma-Québec, to continue working toward obtaining supporting data that will lead to the submission of a request to Health Canada to further relax this criterion.

Donations confirmed positive by communicable disease marker

Héma-Québec tests all donations that it collects to detect blood-borne diseases. If a positive result is obtained, the donation is destroyed, and the donor is notified. As the following table shows, the number of infections found in donors has not varied significantly in recent years.

CONFIRMED POSITIVE DONATIONS BY MARKER

	2016–2017	2017–2018	2018–2019	2019–2020	2020–2021
Human Immunodeficiency Virus (HIV)	0	0	0	2	0
Hepatitis C virus (HCV)	13	14	10	9	6
Hepatitis B virus (HBV)*	10	20	12	16	11
Human T-lymphotropic virus (HTLV)	1	2	1	2	1
Syphilis	17	11	14	19	8
Total donations	**305,201**	**301,900**	**312,176**	**323,229**	**337,105**

* Results linked to a recent vaccination in a donor are excluded since they represent false positives.

PREVALENCE OF HIV AND HCV IN HÉMA-QUÉBEC DONORS VERSUS THE GENERAL POPULATION

	POPULATION	HÉMA-QUÉBEC
HIV	0.2% (1/500)	0.000%
HCV (Hepatitis C virus)	0.8% (1/125)	0.005% (1/21,806)

Managing volunteer succession

Members of the Association of Blood Donation Volunteers (ABDV) play a vital role in Héma-Québec's mission to ensure a stable and sufficient supply of blood products for the Québec population. Their participation in donor requirement and management proved even more invaluable during the pandemic.

The ABDV managed 270 booths at blood drives and 19 pre-collection booths, handling more than 16,000 donor appointments. Among these, 61% were appointments for an additional donation later in the year. This statistic is especially important at a time when increasing the number of donations by the same donor is a key element of the strategy for managing new donors.

Because of age restrictions imposed on persons aged 70 and older during the first wave of the pandemic, this group was no longer able to contribute. The association was faced with a recruitment challenge. This situation required the rapid training of new volunteers for mobile blood drives and donor centres. More than 140 volunteers were trained between September 2020 and March 2021. Seven virtual training sessions were also held in nine of the 13 regional chapters.

Managing talent and succession

Following the launch of the implementation stage in 2018, Héma-Québec's integrated and open-ended talent and succession management program embarked on its second major stage to enhance the assets developed in recent years. The objectives included:

- Managing the risks inherent in eventual vacancies of key posts in the face of a labour shortage.
- Establishing a bank of talent able to mitigate these risks.
- Being in a position to entrust key positions to highly productive employees to enable the organization to benefit fully from their contribution.
- Bringing together the best talent and encouraging their retention within the organization.

Begun in January 2021, phase 2 of the talent and succession management program consisted initially of identifying the succession of critical and key posts, including emergency options to fill vice-presidential posts in the event of an unforeseen departure. This was an update to the step completed at the start of phase 1. The identified succession must then be validated by the executive committee, and the individuals retained will then be integrated into a development plan aimed at strengthening their leadership skills for management posts.

Results relative to the 2017–2021 Strategic Plan*

The strategic plan revolves around six strategic orientations that represent as many challenges to be met in positioning the organization as a strategic partner serving Québec's healthcare system.

1. **Compare practices with those of the leaders in the field and take the necessary steps to achieve objectives for the benefit of partners and assume responsibility for the results.**
2. **Keep up with the latest developments in human biological products and be proactive so that the healthcare network can benefit from this expertise.**
3. **Manage risks in an integrated manner at all levels of the organization in accordance with best practices.**
4. **Modernize and streamline processes in order to be more effective.**
5. **Take advantage of digital technology to improve communications with partners.**
6. **Develop employee skills and mobilize employees by implementing a talent and succession management program.**

* Following the annual review of the strategic plan by the Executive Committee and the Board of Directors, it was agreed to add new objectives and an additional year to complete the 2017–2020 strategic plan, thus allowing additional time to ensure its deliverable.

2017–2021: March 2021 report

STRATEGIC ORIENTATION 1

Compare practices with those of the leaders in the field, and take the necessary steps to achieve objectives for the benefit of partners and assume responsibility for the results

AREAS OF INTERVENTION AND OBJECTIVES

1.1 Benchmarking and accountability of areas of activity

- 1.1.1 Keep a scorecard to evaluate the performance of activity sectors
- N 1.1.1 Put in place indicators by activity sector
- 1.1.2 Perform benchmarking activities
- 1.1.3 Incorporate a systematic review of activity sectors

1.2 High-performing areas of activity

- 1.2.0 Attain efficacy objectives

LABILE PRODUCTS

- 1.2.1 Reduce the number of collection hours worked by product collected
- N 1.2.1 Define strategies for maintaining inventories

PLASMA FOR FRACTIONATION

- 1.2.2 Increase the number of litres collected and reduce the cost per litre

HUMAN TISSUES

- 1.2.3 Maintain critical mass to better serve the Québec market
- N 1.2.3 Establish a sole distributor mandate

MOTHER'S MILK

- 1.2.4 Meet the need of premature infants born at 32 weeks or earlier

CORD BLOOD

- 1.2.5 Offer products most sought after by transplant physicians

STEM CELL DONOR REGISTRY

- 1.2.6 Have better representation (diversity) of the Québec population in the registry
- Encourage better First Nations representation

STRATEGIC ORIENTATION 2

Keep up with the latest developments in human biological products and be proactive so that the healthcare network can benefit from this expertise

AREAS OF INTERVENTION AND OBJECTIVES

2.1 Value-added products and services for the healthcare network

- 2.1.1 Evaluate the possibility of creating a provincial transfusion medicine research group
- 2.1.2 Establish a governance framework to analyze requests for new products and services
- 2.1.3 Recover by-products and production waste

2.2 Knowledge of the environment

- 2.2.1 Institutionalize active monitoring practices by activity sector
- Actively monitor AMI and regulatory affairs

STRATEGIC ORIENTATION 3

Manage risks in an integrated manner at all levels of the organization in accordance with best practices

AREAS OF INTERVENTION AND OBJECTIVES

3.1 Overall risk management culture

- 3.1.1 Conduct monitoring of best practices

3.2 Program that reflects the latest best practices

- 3.2.1 Optimize governance and the risk management program
- 3.2.2 Implement succession plans (ERP, BCP and others)
- 3.2.3 Manage priority risks

STRATEGIC ORIENTATION 4

Modernize and streamline processes in order to be more effective

AREAS OF INTERVENTION AND OBJECTIVES

4.1 An effective management model that focuses on accountability and a comprehensive view of processes

- 4.1.1 Choose a common streamlining methodology
- 4.1.2 Streamline and optimize four complex processes:
  - 4.1.2.1 Procurement of goods and services
  - 4.1.2.2 Coordination of management cycles and reporting
  - 4.1.2.3 Talent acquisition including management of staff (workforce)
  - 4.1.2.4 IT Service Request Management
- 4.1.3 Optimize priority sub-processes among the seven mapped production processes
- 4.1.4 Finalize the review of non-compliances
- 4.1.5 Finalize the redesign of controlled documents

4.2 Culture of accountability and synergetic partnership

- 4.2.1 Gain maturity in project management
- N 4.2.1 Continue to implement the new Symphonie structure

STRATEGIC ORIENTATION 5

Take advantage of digital technology to improve communications with partners

AREAS OF INTERVENTION AND OBJECTIVES

5.1 Foundations for digital transformations

- 5.1.1 Develop the IT strategy
- 5.1.2 Develop digital content expertise
- 5.1.3 Build technological fundamentals

5.2 Digital technology for the benefit of partners

- 5.2.1 Deploy a digital business capacity tailored to the needs of donors and volunteers for all activity sectors
- ⊕ 5.2.3 Information system on the traceability of blood products (SIIATH)

5.3 Digital technology for the benefit of employees

- 5.3.1 Optimize the quality management software package
- 5.3.2 Optimize the workforce planning process

⊕ Added, in reference to this mandate entrusted to Héma-Québec by the Ministère de la Santé et des Services sociaux in May 2018

STRATEGIC ORIENTATION 6

Develop the skills of employees and mobilize them by implementing a talent and succession management program

AREAS OF INTERVENTION AND OBJECTIVES

6.1 Integrated and open-ended talent and succession management program

- 6.1.1 Implement a succession management process for critical and key positions
- 6.1.2 Develop a strategy for assigning and developing individuals bound for critical and key positions
- 6.1.3 Create an integrated talent and succession management program that fosters the development of skills related to business needs
- 6.1.4 Manage and provide development and career opportunities
- 6.1.5 Implement a computerized, integrated system to manage performance, talent and succession
- 6.1.6 Empower and support managers in their role as talent developers to foster the emergence of a culture of learning

6.2 Motivational and inspiring leaders

- 6.2.2 Create leadership development path 2.0 for the demonstration of new skills and behaviour related to business needs
- 6.2.4 Create a (non-regulatory) training program for unionized staff

LEGEND

Strategic orientation | Area of intervention | Objective

Objective attained | Significant progress | Little or no progress | New objective (N)

Governance

Héma-Québec's activities are governed by a board of directors made up of members representing a balance of experience and expertise aligned with the organization's activities, as well as various stakeholders in the transfusion chain.

To fulfill its role, the board is supported by committees made up of board members and by advisory committees made up of external members. Day-to-day management is delegated to the president and CEO and the executive committee, who collaborate closely to ensure the good governance of the organization and to implement its strategic orientations.

Main areas of interest in 2020–2021:

- Report on the 2017–2020 Strategic Plan
- Update on the 2020–2021 organizational objectives
- 2021–2024 strategic planning process
- Service offering of vice-presidencies ("Symphonie" project)

BOARD MEMBRES

12 + 1

members named by the government
–
The chair is elected from among the members

president and CEO
–
Chosen and named by the members

Composition of the board of directors

Members from the following categories:

- Blood donors and volunteers
- Recipients
- Presidents and CEOs and chief executives of public institutions (health)
- Physicians
- Public health community
- Scientific research community
- Business community
- Ordre des comptables professionnels agréés du Québec
- Héma-Québec (president and CEO)

Nomination process

Members are named by the government (except for the president and CEO) after consultation with the persons or communities in the categories mentioned below:

- Applications are sought from persons and communities in these categories.
- Applications are analyzed by the Governance and Ethics Committee based on certain criteria:
  - > source of nominations according to the categories listed above;
  - > professional skills profile, in particular finance and accounting, governance and ethics, transfusion medicine (or other relevant specialty), information technology, human resources, public and government relations, legal and judicial affairs, production and operations.
- The Governance and Ethics Committee reports its recommendations to the board. The applicants' files are submitted to the government, which makes a selection from among the applications submitted.

Mandates of the members

- 4-year term renewable twice, consecutively or not
- 5-year term for the president and CEO

Parity

The composition of the board complies with gender parity.

- 7 women
- 6 men

Breakdown by age group

- 40 to 49 : 3
- 50 à 60: 5
- 60 and over: 5
- Average age: 57

Independence and remuneration of members

All board members are independent from Héma-Québec, with the exception of the president and CEO.

Members of the board are not remunerated. They may be compensated for actual loss of salary or income (based on the provisions of a government decree) resulting from their attendance at meetings or other gatherings.

The table below shows the amounts claimed for the period of April 1, 2020, to March 31, 2021.

Membres	Amounts claimed in 2020–2021
Jean-Marie Leclerc	–
Patricia Pelletier	$3,150
Daniel Tremblay	–
Pierre Thivierge	–
Réal Couture	–
Jacques Gédéon	–
Jean-Frédéric Lafontaine	–
Anne Bourhis	–
Stéphanie Austin	–
Patricia Hudson	–
Caroline Barbir	–
Caroline Banville	$1,225
Total	**$4,375**

Meetings in 2020–2021

During the initial months of the first wave of the COVID-19 pandemic, the board of directors and its committees did not hold any meetings. The board of directors and its committees were kept abreast of decisions made by the management team by way of a weekly newsletter. Meetings resumed gradually as of April 2020. The lower number of meetings than in previous years can be explained mainly by this exceptional situation.

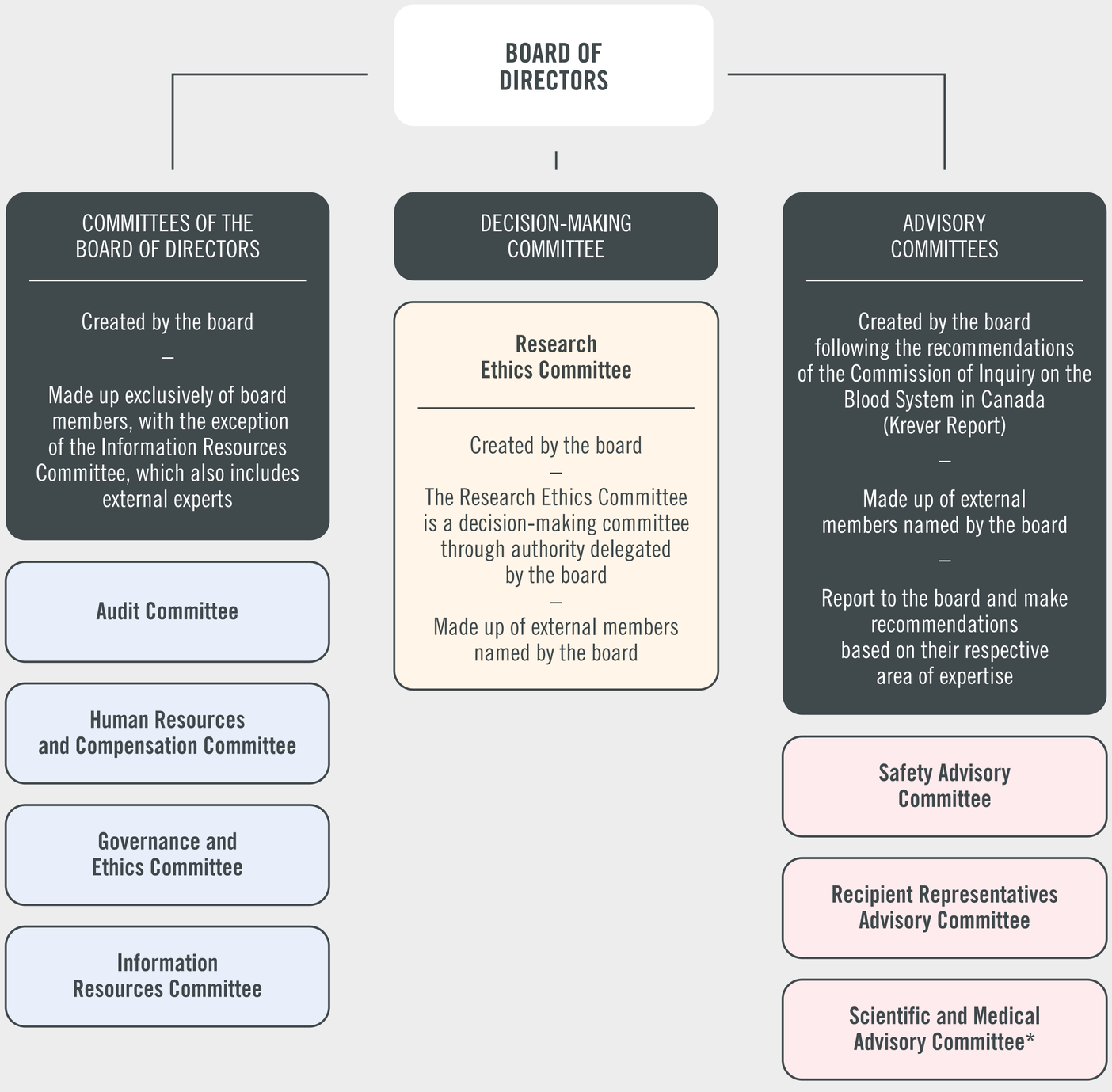
- 8 board meetings: 6 regular, 1 extraordinary and 1 joint meeting with the executive committee (management)
- 29 meetings of the board's committees: 25 regular and 4 extraordinary
- Attendance rate* at board and committee meetings: 90%

All meetings of the board and its committees include a closed-door discussion period, without the presence of management. However, part of the closed-door period is attended by the president and chief executive officer.

Directors	Number of meetings	Attendance
Anne Bourhis	8	8
Jean-Frédéric Lafontaine	8	5
Nathalie Fagnan	8	8
Daniel Tremblay	8	8
Patricia Hudson	8	5
Caroline Barbir	8	5
Jacques Gédéon	8	8
Jean-Marie Leclerc	8	5
Patricia Pelletier	8	8
Stéphanie Austin	8	8
Caroline Banville	8	8
Pierre Thivierge	8	7
Réal Couture	8	8

* Section 3.18 of the general regulations provides that directors may dismiss a director who, during a period of 12 consecutive months, is absent from more than three meetings.

ORGANIZATIONAL CHART OF THE BOARD OF DIRECTORS AND ITS COMMITTEES



* The Scientific and Medical Advisory Committee (SMAC) was officially re-activated by the board at its meeting of February 22, 2021.

Members of the Board of Directors

SCIENTIFIC RESEARCH COMMUNITY

Anne Bourhis
Chair
Full Professor
Human Resources Management Department
HEC Montréal

BUSINESS COMMUNITY

Jean-Frédéric Lafontaine Atty
Vice Chair
General Manager
TACT Conseils

HÉMA-QUÉBEC

Nathalie Fagnan, CPA, CA, IAS.A
Secretary
President and Chief Executive Officer
Héma-Québec

PUBLIC HEALTH

Dr. Patricia Hudson
Scientific Director
Direction des risques biologiques
et de la santé au travail
Institut national de santé publique du Québec

PRESIDENTS AND CEOS AND EXECUTIVE DIRECTORS OF PUBLIC INSTITUTIONS*

Caroline Barbir
President and General Manager
Centre hospitalier universitaire
Sainte-Justine

COLLÈGE DES MÉDECINS DU QUÉBEC

Dr. Jean-Marie Leclerc
Hematologist-Oncologist
Centre hospitalier universitaire
Sainte-Justine

Dr. Patricia Pelletier
Director of the Transfusion
Medicine Department
McGill University Health Centre

SCIENTIFIC RESEARCH COMMUNITY

Stéphanie Austin
Full Professor
Département de gestion des ressources humaines
École de gestion, Université du Québec à Trois-Rivières

RECIPIENTS

Daniel Tremblay
Member
Fondation de la greffe de moelle
osseuse de l'Est du Québec

DONORS AND VOLUNTEERS

Jacques Gédéon
President
Association des bénévoles du don de
sang, Outaouais chapter

ORDRE DES COMPTABLES PROFESSIONNELS AGRÉÉS DU QUÉBEC

Réal Couture, FCPA, FCA
Corporate Director

BUSINESS COMMUNITY

Caroline Banville
Partner
Counselling and Transactions
PricewaterhouseCoopers

Pierre Thivierge, CPA, CA
President, Octium Solutions Inc
Chief Financial Officer,
Quadra Chimie Ltd

* Within the meaning of the *Act respecting health services and social services.*

INFORMATIONS OF PUBLIC INTEREST ABOUT BOARD OF DIRECTORS MEMBERS

Members	Date of nomination	End of mandate	Place of residence	Age	Seniority	Membership in other boards of directors
Anne Bourhis	September 13, 2017	September 13, 2021	Montréal	53	4 years and 7 months	Investissement Québec
Jean-Frédéric Lafontaine	March 26, 2016	March 23, 2020*	Boucherville	52	5 years	Fédération des chambres de commerces du Québec, BIOQuébec, Q-CROC, Arion Orchestre Baroque
Nathalie Fagnan	January 30, 2019	January 29, 2022**	Montréal	55	2 years and 3 months	La Presse, Groupe La Veillée (Théâtre Prospero)
Daniel Tremblay	January 29, 2020	January 29, 2024	Québec	63	1 year and 3 months	None
Dr. Patricia Hudson	December 13, 2017	September 13, 2021	Montréal	59	4 years and 4 months	None
Caroline Barbir	October 19, 2016	October 19, 2020	Laval	63	5 years and 6 months	Centre hospitalier universitaire Sainte-Justine
Jacques Gédéon	January 29, 2020	January 29, 2024	Gatineau	71	1 year and 3 months	Association des bénévoles du don de sang (ABDS) – Outaouais chapter, Fondation Culture Outaouais, Mixmédiarts
Dr. Jean-Marie Leclerc	February 26, 2014 (renewal: January 29, 2020)	January 29, 2024	Laval	67	7 years and 2 months	Association des médecins hématologues et oncologues du Québec (AMHOQ) Q-CROC
Dr. Patricia Pelletier	September 13, 2017	September 13, 2021	Montréal	46	4 years and 7 months	None
Stéphanie Austin	January 29, 2020	January 29, 2024	Trois-Rivières	43	1 year and 3 months	Conseil de régie de l'École de gestion de l'Université du Québec à Trois-Rivières, Conseil d'établissement de l'École de Pointe-du-Lac, Conseil d'administration du Séminaire Saint-Joseph, Trois-Rivières
Caroline Banville	December 13, 2017	December 13, 2021	Montréal	50	4 years and 4 months	None
Pierre Thivierge	March 23, 2016	March 23, 2020*	Montréal	57	5 years	Gestion Infilise Inc, Hydro Technologies (Canada) Inc
Réal Couture	January 29, 2020	January 29, 2024	Québec	61	1 year and 3 months	None

* Upon expiry of their mandate, members remain on the board until they are either replaced or nominated again.
** The president and chief executive officer are chosen and named by the board members for a maximum term of five years.

BOARD COMMITTEES

The Board of Directors and its committees assume the statutory responsibilities described in the general regulations. These bodies deal with files specific to each of their areas of interest. The list of names appears on this page.

GOVERNANCE AND ETHICS COMMITTEE

Jean-Frédéric Lafontaine Atty, chair

Réal Couture, FCPA, FCA

Dr. Patricia Hudson

All committee members are independent.

Main areas of interest:

- Makeup of the board of directors and its committees (including the mandates of the directors)
- Governance review and modernization of the *Act respecting the governance of state-owned enterprises* (AGSE)
- Review of the annual report and improvements to the governance section
- Reactivation of the Scientific and Medical Advisory Committee (SMAC)

Individual attendance of directors at committee meetings:

Directors	Number of meetings	Attendance
Jean-Frédéric Lafontaine	**3**	**3**
Patricia Hudson	3	2
Réal Couture*	2	2

* Member since August 31, 2020.

AUDIT COMMITTEE

Pierre Thivierge, CPA, CA, chair

Dr. Jean-Marie Leclerc

Jean-Frédéric Lafontaine Atty

Réal Couture, FCPA, FCA

All committee members are independent.

Main areas of interest:

- Follow-up of crisis management during the COVID-19 pandemic
- Procedures regarding the liability thresholds under the *Act respecting contracting by public bodies*
- Budgetary process and follow-up of the 2020–2021 budget approval (pricing framework) by government authorities
- Supply strategy for stable products (including a status report on IVIg)
- Plasma self-sufficiency strategy (including the opening of new donor centres in 2021–2022 and 2022–2023)
- Follow-up on the development of the internal auditing function

Individual attendance of directors at committee meetings:

Directors	Number of meetings	Attendance
Pierre Thivierge	**8**	**8**
Jean-Frédéric Lafontaine	8	8
Jean-Marie Leclerc	8	5
Réal Couture	8	8

HUMAN RESOURCES AND COMPENSATION COMMITTEE

Anne Bourhis, chair

Stéphanie Austin

Caroline Barbir

All committee members are independent.

Main areas of interest:

- Salary relativity and wage structure of unionized and non-unionized staff
- Follow-up of mandate requests submitted to the Conseil du trésor (including the mandate to negotiate collective agreements)
- Recruitment process for the position of Vice President, Client Experience and Business Intelligence
- Talent and succession management program, acquisition policy and talent mobility
- Evolution of the employee experience (talent mobilization and retention)

Individual attendance of directors at committee meetings:

Directors	Number of meetings	Attendance
Anne Bourhis	**6**	**6**
Caroline Barbir	6	6
Stéphanie Austin	6	6

INFORMATION RESOURCES COMMITTEE

DIRECTOR MEMBERS	**Caroline Banville,** chair
	Daniel Tremblay
EXTERNAL MEMBERS	**Michèle Bureau** Consultant, Information Technology and Electronic Affairs Bureau et Associés
	Robert Charbonneau Information Technology Consultant

All committee members are independent.

Main areas of interest:

- Information system on the traceability of blood products (SIIATH)
- Strategy and roadmap for the SAP, outsourcing of system support
- Strategy and roadmap for the integrated management software package (PGI)
- 2020–2021 information technology objectives
- Strategy to manage security and follow-up of cybersecurity incidents
- Technology architecture (and enterprise architecture) procedures
- Updating of eProgesa
- Status report of IT assets

Individual attendance of directors at committee meetings:

Directors	Number of meetings	Attendance
Caroline Banville	**4**	**4**
Daniel Tremblay	4	4

ADVISORY COMMITTEES

RECIPIENT REPRESENTATIVES ADVISORY COMMITTEE

Fields represented	Members
COCQ-SIDA	**Michel Morin,** *chair*
ASSOCIATION DES PATIENTS IMMUNODÉFICIENTS DU QUÉBEC	**Geneviève Solomon,** *interim chair and vice-chair*
	Martine Allard
SOCIÉTÉ CANADIENNE DE L'HÉMOPHILIE, QUÉBEC CHAPTER	**Marius Foltea**
ASSOCIATION D'ANÉMIE FALCIFORME DU QUÉBEC	**Marlin Akplogan**
	Wilson Sanon
LEUCAN	**Pierre Verret**
SOCIÉTÉ DE LEUCÉMIE ET LYMPHOME DU CANADA	**Pascale Rousseau**
	Qi Li
BOARD OBSERVER	**Anne Bourhis**

All committee members are independent.

SAFETY ADVISORY COMMITTEE

Fields represented	Members
PUBLIC REPRESENTATIVE	**David Page,** *chair* National Director of Health Policy, Société canadienne de l'hémophilie, Montréal, Canada
INFECTIOUS DISEASES	**Dr. Susan Stramer** Vice-President of Scientific Affairs, Biomedical Services, American Red Cross, Gaithersburg, Maryland, United States
	Dr. Hans L. Zaaijer Professor, Blood-borne Infections, Sanquin Blood Supply Foundation , University Medical Centers, Amsterdam, Netherlands
	Dr. Louis M. Katz Chief Medical Officer, Mississippi Valley Regional Blood Center, Davenport, Iowa, United States Adjunct Clinical Professor of Infectious Diseases and Medicine, Roy and Lucille Carver College of Medicine, University of Iowa, United States
	Dr. Jutta Preiksaitis Professor Emeritus, Division of Infectious Diseases, Department of Medicine University of Alberta, Edmonton, Canada
EPIDEMIOLOGY	**Dr. Steven Kleinman** Biomedical Consultant, Victoria, Canada
TRANSFUSION MEDICINE AND PRACTICES	**Dr. Luiz Amorim** President and Chief Executive Officer, Hemorio, Rio de Janeiro, Brazil
	Dr. Rebecca Cardigan National Head of Component Development NHS Blood and Transplant, Cambridge, United Kingdom
	Dr. Reinhard Henschler Director, Institute of Transfusion Medicine, University Hospital Leipzig AöR, Leipzig, Germany
	Dr. Pierre Tiberghien Professor of Medicine, Immunology, Senior Advisor for Medical and Scientific Affairs, Europe and International, Établissement français du sang, La Plaine Saint-Denis (Paris), France Chief of the European Blood Alliance (EBA)
CANADIAN BLOOD SERVICES	**Dr. Steven Drews** Associate Director, Microbiology, Canadian Blood Services Associate Professor, Laboratory Medicine and Pathology, University of Alberta, Edmonton, Canada
REPRESENTATIVE OF THE RECIPIENT REPRESENTATIVES ADVISORY COMMITTEE	**Marius Foltea** Société canadienne de l'hémophilie – Québec chapter, Montréal, Canada
BOARD OBSERVER	**Dr. Patricia Pelletier** Director of Transfusion Medicine Service, Centre universitaire de santé McGill, Montréal, Canada

All committee members are independent.

SCIENTIFIC AND MEDICAL ADVISORY COMMITTEE

Fields represented	Members
IMMUNOLOGY	**Yves St-Pierre,** *chair* Full Professor, Centre Armand-Frappier Santé Biotechnologie, Institut national de la recherche scientifique, Laval, Canada
IMMUNOHEMATOLOGY, GENOTYPING	**Greg Denomme** Senior Director, Immunology and Innovation, Senior Investigator, Blood Research Institute Versiti/Diagnostic Laboratories (BloodCenter of Wisconsin), Milwaukee, United States
EPIDEMIOLOGY OF TRANSFUSION	**Dean Fergusson** Director and Senior Scientist, Clinical Epidemiology Program Full Professor, Departments of Medicine, Surgery and School of Epidemiology and Public Health, University of Ottawa Ottawa Hospital Research Institute, Ottawa, Canada
TRANSFUSION, CELLULAR THERAPIES, IMMUNOLOGY	**Magali Fontaine** Professor of Pathology and Medicine, University of Maryland School of Medicine, Baltimore, Maryland, United States
HUMAN TISSUES	**Marisa Herson** Member of the board of the Australian Organ and Tissue Authority, Melbourne, Australia Honorary Associate Professor, Faculty of Health, Department of Ethics, Law and Professionalism, School of Medicine, Deakin University, Australia
TRANSFUSION MEDICINE	**Richard Kaufman** Medical Director, Adult Transfusion Service, Brigham and Women's Hospital, Boston, Massachusetts, United States Associate Professor of Pathology, Harvard Medical School
	Vincent Laroche Hematologist and co-director of the blood bank Director of the therapeutic apheresis and stem cell collection unit, CHU de Québec-Université Laval Medical expert in transfusion medicine, Réseau universitaire intégré de santé (RUIS) de l'Université Laval CHU de Québec-Université Laval, Québec, Canada
	Pieter Van Der Meer Senior Scientist, Department of Product and Process Development, Sanquin Blood Bank, Amsterdam, The Netherlands Research coordinator, Hematology Department, Haga Teaching Hospital
BIOLOGY/IMMUNOLOGY/ (MOLECULAR) HEMATOLOGY	**Tarik Möröy** Director of the Hematopoiesis & Cancer Research Unit and Full Research Professor Institut de recherches cliniques de Montréal, Montréal, Canada
TRANSFUSION, PRENATAL TRANSFUSION MEDICINE	**Chantale Pambrun** Director, Centre for Innovation Medical Director, National Immunohematology Reference Laboratory, Canadian Blood Services, Ottawa, Canada
CELLULAR THERAPIES, HEMATOLOGY	**Donna Wall** Professor, Pediatrics and Immunology, University of Toronto Section Head, Blood and Marrow Transplant and Cellular Therapy Hematology, The Hospital for Sick Children, Toronto, Canada

All committee members are independent.

DECISION-MAKING COMMITTEE

RESEARCH ETHICS COMMITTEE

Fields represented	Members
SPECIALISTS IN THE FIELD OF RESEARCH	**Clermont Dionne,** *chair* Full Professor, Département de réadaptation, Faculté de médecine, Université Laval Researcher, Centre de recherche du CHU de Québec – Université Laval, Axe Santé des populations et pratiques optimales en santé, Québec, Canada Centre de recherche en santé durable VITAM, Centre d'excellence sur le vieillissement de Québec (CEVQ), Québec, Canada
	Patrick Rochette Associate Professor, Département d'ophtalmologie et d'ORL, chirurgie cervico-faciale, Faculté de médecine, Université Laval Researcher, Centre de recherche du CHU de Québec, Université Laval Axe médecine régénératrice, Québec, Canada
	Jacques J. Tremblay Full Professor, Département d'obstétrique, gynécologie et reproduction, Faculté de médecine, Université Laval Researcher, Centre de recherche du CHU de Québec – Université Laval Axe Reproduction, santé de la mère et de l'enfant, Québec, Canada
LAW	**Me Geneviève Cardinal,** *vice chair* Head, Bureau de l'éthique de la recherche, president, Comité d'éthique de la recherche, Centre hospitalier universitaire Sainte-Justine Montréal, Canada
LAW, SUBSTITUTE LAWYER	**Alexandra Sweeney-Beaudry** Attorney, Health Law, Borden Ladner Gervais (BLG) Lecturer in the Master's in Health Law and Policy program Faculté de droit, Université de Sherbrooke, Sherbrooke, Canada
BLOOD DONORS	**Pierre Galarneau** Donor and volunteer, Association des bénévoles du don de sang, Montréal, Canada
RECIPIENT REPRESENTATIVES ADVISORY COMMITTEE, ETHICIST	**Michel Morin** Assistant Director, COCQ-SIDA, Montréal, Canada
RECIPIENT REPRESENTATIVES ADVISORY COMMITTEE (substitute member)	**Pierre Verret** Senior Lecturer, Faculté des sciences infirmières, Université Laval, Québec, Canada Associate member, Leucan
SUBSTITUTE ETHICIST	**Johane de Champlain Atty** Vice-Chair and Ethics Advisor, Comité central d'éthique de la recherche (MSSS), Montréal, Canada

All committee members are independent.

Executive Committee

Nathalie Fagnan

President and Chief Executive Officer

Sylvie Allard

Vice President, Client Experience and Business Intelligence

Martin Beaudry

Vice President, Information Technology and Digital Strategy

Dr. Marc Germain

Vice President, Medical Affairs and Innovation

Sébastien Gignac Atty

Vice President, General Secretariat, Risks and Auditing

Annie Gingras

Vice President, Quality and Development

Luc Lévesque

Vice President, Blood Products and Mother's Milk

Christine Ouimet

Vice President, Supply Chain

Dr. Nancy Robitaille

Vice President, Transfusional Medicine

Luc Vermeersch

Vice President, Finance and Infrastructure

Roselyne Zombecki

Vice President, People, Culture and Leadership

Remuneration of senior executives

Total remuneration of the 11 Héma-Québec senior executives was $2,524,311.

No bonus was paid to members of senior management, although this is subject to annual review based on performance criteria.

Legislative requirements

Compliance with laws

List of laws, regulations and policies that contain the legal obligations of Héma-Québec:

- *Sustainable Development Act*
- *Act respecting the Ministère du Conseil exécutif*
- *Act to facilitate the disclosure of wrongdoings relating to public bodies*
- *Politique gouvernementale relative à l'emploi et à la qualité de la langue française dans l'Administration*
- *Regulation respecting the distribution of information and the protection of personal information*
- *Politique de financement des services publics*
- *Act respecting contracting by public bodies*
- *Act respecting workforce management and control within government departments, public sector bodies and networks and state-owned enterprises*
- *Act respecting the governance and management of the information resources of public bodies and government enterprises (GMIR)*

Sustainable Development Act

Héma-Québec's action plan is set out in the framework of the 2015–2020 Government Sustainable Development Strategy and is structured around the following directions and objectives:

Government direction 1 – Strengthen governance for sustainable development in public administration

- Objective 1.1 – Strengthen the use of ecoresponsible management practices in the public administration
- Objective 1.2 – Strengthen the use of the principles of sustainable development by government departments and public bodies
- Objective 1.5 – Strengthen access to and participation in cultural life as a lever for social, economic and land development

Government direction 2 – Develop a sustainable and prosperous economy: green and responsible

- Objective 2.1 – Support the development of green and responsible business practices and models

Government direction 5 – Improve public health through prevention

- Objective 5.2 – Act to ensure that living environments are healthy and safe

Government direction 6 – Ensure sustainable land development and support community vitality

- Objective 6.2 – Strengthen community capabilities to support dynamic economic and social land development

Some objectives of the government strategy have not been included in the sustainable development plan since they did not apply to Héma-Québec's organizational reality. They are prioritized in order to optimize actions that can contribute to achieving the government's objectives. The table on the following pages outlines the plan's actions and achievements. Because of the pandemic of this past year, the objectives were not all met.

	Actions	Indicators	Targets	Results and summary of the activities carried out during the year	Target achieved
1	Optimize transportation	• Number of km/vehicles • Number of deliveries	• In connection with the opening of new donor centres, optimize routes and deliveries for maximum reduction of transportation	• No analysis has yet been done to assess changes	• Not begun (current logistics only)
2	Put in place an app to promote carpooling for travel between facilities	• Number of users • Number of carpoolers registered	• Between now and 2020	• Promote a web page dedicated to ride sharing between sites, including the “perso” component for carpooling to the office	• ACHIEVED – Before or on the planned date
3	Continue the distribution of trees, along with the development of herbs/urban architecture, coupled with a recipe component	• Number of participating sites • Number of participating employees	• Annual event, ongoing for the duration of the plan	• No task completed in 2020–2021	• NOT ACHIEVED – Started
4	Maintain and continue training and development initiatives and tools for meeting and sharing remotely (for example, WebEx, C@MPUS, Jabber)	• Number of training sessions • Number of participants	• Ongoing	• 700 teleworking permits in place; • TEAMS implemented for 1,500+ users	• NOT ACHIEVED – Started
5	Maintain the objective of adding contractual clauses incorporating sustainable development and ecoresponsible principles into calls for tenders and contracts	• Number of calls for tenders and contracts affected	• Ongoing	• Same result as in 2019–2020	• NOT ACHIEVED – Started
6	Promote the use of hybrid and electric vehicles	• Rate of use of electric vehicles	• Vehicles: integrate the courtesy vehicle fleet • Add charging stations – fall 2016 • Analyze the feasibility of completion for the next sites	• Reduction in the number of parking stickers (QC) from 215 to 180 • 2 hybrid vehicles and 1 electric vehicle acquired in 2020–2021	• NOT ACHIEVED – Started
7	Minimize product expiry and encourage inter-hospital transfer efforts	• Internal expiry rate (target by product set annually) • Follow-up and awareness raising among hospital clients	• Ongoing	• Packed red blood cells: 1.05%. • Platelets: 2.6%	• NOT ACHIEVED – Started
8	Reduce the use of paper (current and future initiatives, schedules, pay, Smart Suite, internal forms, fiscal statements, Web and Wi-Fi access)	• Amount of paper for recycling/trash	• Ongoing	• Amount of material recycled at the Montréal facility: > Cardboard: 22,880 kg per year > Paper: 2,746 kg per year	• NOT ACHIEVED – Started
9	Continue programs to encourage public transit and carpooling	• Number of participants	• Ongoing	• 136 persons subscribed to public transit incentive programs	• NOT ACHIEVED – Started

	Actions	Indicators	Targets	Results and summary of the activities carried out during the year	Target achieved
10	Continue photography courses (introduction and addition of composition and editing), review the exhibition concept (semi-permanent event)	• Number of participants • Report for each of the events	• Annual activity for the duration of the 2015–2020 action plan	• Not completed in 2019–2020	• NOT ACHIEVED – Started
11	Develop partnerships with municipalities in connection with the opening of PLASMAVIE Donor Lounges, with the approach of creating local jobs, purchasing from local suppliers and installing regional showcases	• Number of jobs created • Number of local suppliers	• Québec City in fall 2016 and Montréal in spring 2017 • Other sites and schedules to be established	• Maintain established partnerships with local suppliers. • Montréal opened on April 6, 2021	• NOT ACHIEVED – Started
12	Maintain the annual influenza vaccination program for staff on a voluntary basis	• Number of employees vaccinated	• Annual campaign	• No vaccinations were administered in 2020–2021 (reason: COVID-19 pandemic)	• NOT ACHIEVED – Started
13	Update the program for reimbursement of expenses related to physical activity and sporting events to expand and continue to promote a more active life style and better health for employees of the organization	• Number of employees participating	• Ongoing	• 47 employees partially reimbursed for physical activity expenses • 6 employees reim-bursed for participation in sporting events	• NOT ACHIEVED – Started
14	Continue training on the *Sustainable Development Act* principles (internally and with some partners). Implement specific training plans integrating the concept of sustainable development within daily activities	• Follow-up on the number of training sessions and presentations	• Ongoing	• No activity in 2020–2021 (pandemic); moved forward to 2021–2022	• NOT ACHIEVED – Started
15	Include volunteers in the plasma donation recruitment program	• Number of participants	• Ongoing	• Fewer than 50 volunteers helped recruit plasma donors (reason: COVID-19 pandemic)	• ACHIEVED – Before or on the planned date
16	Maintain the commitment of mobile blood drive organizing committees to serve the Héma-Québec mission	• Number of blood drives organized with their collaboration	• Ongoing	• 1,546 blood drives organized in partnership with organizing committees (1,845 organized by Héma-Québec)	• NOT ACHIEVED – Started

Act respecting the Ministère du Conseil exécutif

Héma-Québec directors are held to the highest ethical and professional standards, thereby fostering and preserving public trust and transparency in the management of Québec's biovigilance system.

Under the *Regulation respecting the ethics and professional conduct of public office holders*, Héma-Québec directors adopted a directors' code of ethics. It is reviewed annually by the Governance and Ethics Committee, and the directors sign a form every year attesting that they undertake to comply with it.

The directors' declarations of interests are verified at the beginning of every board or committee meeting and included in the minutes. Furthermore, no case has ever been brought forward under the directors' code of ethics, and no breach of conduct was reported in 2020–2021. Héma-Québec's directors' code of ethics can be consulted on page 69.

Act to facilitate the disclosure of wrongdoings relating to public bodies

Public trust in Héma-Québec stems not only from its ability to distribute safe, high-quality biological products of human origin, but also from every action taken and decision made. The organization's integrity is founded on sound financial management and the implementation of organizational values (integrity and honesty, respect, empowerment, and engagement).

To earn this trust and to comply with the *Act to facilitate the disclosure of wrongdoings relating to public bodies*, Héma-Québec maintains a policy governing the disclosure of wrongdoings. The aim of this policy is to encourage and facilitate the disclosure of wrongdoings relating to Héma-Québec that have been or are about to be committed, while protecting whistleblowers from reprisals.

During the year, no disclosure was made, nor information communicated to the person responsible for following up disclosures.

Politique gouvernementale relative à l'emploi et à la qualité de la langue française dans l'Administration

In accordance with the *Politique gouvernementale relative à l'emploi et à la qualité de la langue française dans l'Administration* (policy on the use and quality of French within the government), the standing committee chaired by the representative of the *Charter of the French Language* ensures that the language policy is implemented within the organization.

Regulation respecting the distribution of information and the protection of personal information

Pursuant to Division III of the *Regulation respecting the distribution of information and the protection of personal information*, Héma-Québec attests to having published the required documents and information on its website.

Access to information

In 2020–2021, five requests for access to documents held by Héma-Québec, 14 requests for access to personal information, and one request for corrections to personal information were received and processed within the timelines prescribed by the *Act respecting access to documents held by public bodies and the protection of personal information.*

PROCESSING OF ACCESS REQUESTS

Nature of the request	Processing time		Decision rendered	
Administrative documents	0–20 days	2	Accepted	3
	21–30 days	2	Partially accepted	1[1]
	31 days or more	1	Refused	1[1]
	Total	**5**	**Total**	**5**
Personal information	0–20 days	13	Accepted	12
	21–30 days	1	Partially accepted	0
	31 days or more	0	Refused	2[1]
	Total	**14**	**Total**	**14**
Corrections	0–20 days	1	Accepted	1
	21–30 days	0	Partially accepted	0
	31 days or more	0	Refused	0
	Total	**1**	**Total**	**1**

Total number of access requests subjected to reasonable accommodation measures	0
Number of review notices received from the Commission d'accès à l'information	0

[1] Provisions of the act justifying the decisions rendered: 14, 21, 22, 27, 35, 37, 53, 54, 57, 59, 88.1, 94

Information Security Committee

The Information Security Committee (ISC) provides support for information security management and coordination activities, specifically by monitoring the measures put in place to ensure the integrity, security and confidentiality of the information collected and held by Héma-Québec. In accordance with the *Regulation respecting the distribution of information and the protection of personal information*, the individuals in charge of information security and access to information and personal information sit on the committee.

The ISC continued developing its policies in keeping with the implementation of its action plan and follow-up of the recommendations.

In regard to risk management, measures were taken to strengthen cybersecurity. A new service partnership has increased network and system surveillance by continuously detecting new vulnerabilities. A second security adviser was hired to expand the services and broaden the spectrum of security checks.

Policy for the funding of public services

This section highlights information pertaining to Héma-Québec's fees to which the *Policy for the funding of public services* applies. Billing to parties other than Québec hospitals represents approximately 0.6% of the organization's total budget.

As a non-profit organization, Héma-Québec targets a funding level of 100%. This showed a slight deficit for billing, other than billing to hospitals. The difference of 16%, or $593,000, is not significant relative to Héma-Québec's total billing of $438 M.

Héma-Québec's fees are reviewed on April 1 of each year and indexed based on budgeted costs and volumes. Fees are set for each sector.

Labile products

Héma-Québec uses an activity-based accounting model to determine production and distribution costs, which are used to set fees (total cost) for each labile product. These fees are presented for approval to SigmaSanté, the joint procurement management organization designated by the Ministère de la Santé et des Services sociaux, and are endorsed by this organization.

Stable products

Héma-Québec uses full cost plus pricing to set the fees for stable products charged to a third party other than Québec hospitals to cushion itself against a potential increase in costs.

Héma-Québec acts as the distributor of these products. It purchases the products through calls for tenders and manages the reserve. Several suppliers are located in the United States; as such, Héma-Québec's purchases are subject to fluctuations in the exchange rates.

Innovative products (human tissues and stem cells)

For other activity sectors, the fees are mainly determined on a market-oriented basis since Héma-Québec does not have exclusive rights to distribute these products in Québec.

Billing other than Québec hospitals (in thousands of dollars)	Revenues	Costs	Funding level achieved
Labile and stable product sectors	1,600	2,265	71%
Innovative product sectors (human tissues and stem cells)	1,448	1,376	105%
Total	**3,048**	**3,641**	**84%**

Act respecting contracting by public bodies

In an effort to strengthen the transparency of the contract management process and to inform the public about the measures being applied to ensure this, the organization reports annually to its board of directors on the application of its *Contract Management Policy*, as well as to the Secrétariat du Conseil du trésor (SCT).

A series of measures dealing with the application of rules of ethics and conduct in the management of contracts by employees, the handling of complaints, and accountability are based on principles of accessibility, integrity, transparency and imputability that form the underpinnings of the *Act respecting contracting by public bodies*. This Act reinforces the accountability of senior executives of public bodies and fosters the sound management of public funds.

For the reference period, 43 authorization records were submitted to the SCT. Expenditures made on public markets subject to the *Act respecting contracting by public bodies* represented $219 M, for a total of 123 contracts of more than $25,000.

Because of the pandemic, Héma-Québec had to make some changes and adjustments, in addition to reviewing its way of doing business in regard to purchasing strategies and planning. For the reference period, the organization entered into two vital contracts for stable products valued at $181 M and incurred expenses for 51 ad hoc contracts directly tied to operations affected by the pandemic.

Act respecting workforce management and control within government departments, public sector bodies and networks and state-owned enterprises

The *Act respecting workforce management and control within government departments, public sector bodies and networks and state-owned enterprises* was adopted by the National Assembly in December 2014 to strengthen the mechanisms for managing and controlling the workforce of public bodies. Héma-Québec confirms that it has complied with the provisions of the Act that apply to it. In accordance with the prescribed terms and conditions, the organization communicated the required information about service contracts authorized by the president and CEO to the Conseil du trésor.

The organization also periodically informed the Minister of Health and Social Services about its staffing level, providing a breakdown by job category, in accordance with the terms and conditions determined by the Conseil du trésor.

The target set for Héma-Québec for 2020–2021 represented an 11.9% increase in paid hours compared with 2018–2019. This target reflects a certain percentage of hours worked because of COVID-19.

Héma-Québec reported 13,675 hours above this target level. Beyond COVID-19-related hours that were paid and recorded at March 31, 2021, the addition of plasma collection to GLOBULES and new collection centres generated a need for overtime hours.

STAFF BREAKDOWN BY PAID HOURS FOR THE PERIOD FROM APRIL 1, 2020, TO MARCH 31, 2021

Category	Hours worked	Overtime hours	Total paid hours	Full-time equivalent	Number of employees at March 31
Managerial staff	362,469	426	362,895	199	190
Professional staff	482,054	8,625	490,679	270	256
Nursing staff	296,243	11,429	307,671	169	221
Office staff, technicians and related staff	1,163,106	41,679	1,219,481	670	678
Labourers, maintenance and service staff	119,852	9,265	129,117	71	67
Students and interns	4,196	3	4,199	2	0
TOTAL 2020–2021	**2,427,921**	**71,425**	**2,514,042**	**1,381**	**1,412**
TOTAL 2019–2020			**2,274,932**	**1,250**	**1,418**

Act respecting the governance and management of the information resources of public bodies and government enterprises (GMIR)

During the past year, Héma-Québec consolidated the purchases made last year with the installation of robust collaborative equipment and tools capable of accounting for and managing all employees eligible for telework. The organization also integrated and replaced traditional IP telephone equipment with integrated communication tools adopted last year, such as Teams and Zoom apps. Héma-Québec also updated its bank of photocopiers and printers, replacing them with multifunctional devices that allowed for the digitization and electronic archiving of documents over the production of paper documents.

In-depth work on upgrading the main information platforms also progressed with adoption of the governance of IT assets and enterprise architecture. A strategy to provide a framework for the replacement of the integrated management software package was developed and will be implemented starting in 2021–2022.

Regarding donors, work to expand the functionalities of the JeDonne mobile app continued. Plasma and whole blood donors can now use this app to book appointments at all permanent centres. This model is being adapted to blood drives and will be functional between now and the end of 2021. For its part, managing the call centre has been transformed to enable agents to telework.

In response to limitations resulting from the continued widespread use of faxes in multiple procedures within the healthcare network, Héma-Québec installed a system to convert hospital requests received by fax. This system digitizes and automates the requests received, making it possible to manage them electronically.

During the 2020–2021 fiscal year, Héma-Québec accelerated its shift to a cloud-based platform as more than 75% of the systems were implemented or upgraded using these new technologies.

Security of operations and IT assets

This year, Héma-Québec a adopted a strategic plan with six components aimed at strengthening information security management:

1. Annual review of the governance and risk management plan regarding cybersecurity and adaptation to new operational threats and realities;
2. Increased robustness of current assets, ensuring constant updating and eliminating obsolete systems;
3. Strengthening of controls and monitoring of network settings;
4. Integration and regular review of identity and access controls;
5. Operation of response and backup plans. Sharing of information and collaboration with various government and private sector partners;
6. Awareness raising among users aimed at developing their reflexes to better detect threats and avoid falling into hacking traps.

Despite the high degree of activity by cybercriminals who targeted health organizations in 2020–2021, Héma-Québec did not report any event linked to cyberattacks.

Directors' Code of Ethics

Preamble

Héma-Québec's mission is to efficiently provide adequate quantities of safe, optimal blood components and substitutes, human tissues and cord blood to meet the needs of all Quebecers as well as to provide and develop expertise along with specialized and innovative services and products in the fields of transfusion medicine and human tissue transplantation. This mandate is pursuant to the *Act respecting Héma-Québec and the biovigilance committee* and to the recommendations of the Commission of Inquiry into the Blood System in Canada, headed by the Honourable Horace Krever.

Héma-Québec's directors, who are public administrators in accordance with the *Act respecting the Ministère du Conseil exécutif* (R.S.Q. M-30), are held to the highest ethical and professional standards, thereby fostering and preserving public trust and transparency in its mission.

Code of Ethics

1. General provisions

Définitions

In this code of ethics, unless the context dictates otherwise, the terms and expressions below are used as follows:

1.1 "Director or member of the Board of Directors": Person appointed to the Héma-Québec Board of Directors by the government, as well as the President and Chief Executive Officer, who is an ex officio member of the Board of Directors and acts as Secretary;

1.2 "Conflict of interest": Any real, apparent, potential or future situation in which a director may be inclined to give preference to his or her personal interest, or the interest of a related party, to the detriment of Héma-Québec;

1.3 "Board": Héma-Québec's Board of Directors;

1.4 "Related party": Individuals related by blood, adoption or marriage, or who have been living in a conjugal relationship for at least one year, as well as any organization, partnership or other entity in which the director or his/her friends and family may have a controlling interest.

Application and interpretation

1.5 This code of ethics applies to Héma-Québec's directors.

1.6 The code of ethics is not a substitute for any statutory, regulatory or ethical provision applicable to Héma-Québec directors, including those set out in the *Regulation respecting the ethics and professional conduct of public office holders*.

Where such provisions differ, Héma-Québec directors shall abide by the more stringent provision. Moreover, in case of doubt, they must act in the spirit of the principles described in the provisions.

1.7 The code of ethics in no way rules out the drafting of additional guidelines or rules pertaining to certain more specific sectors of activity or situations.

2. Management duties

2.1 Directors are appointed to contribute to the fulfillment of Héma-Québec's mission as part of their mandate. In carrying out their duties, they must adhere to the obligations imposed upon them by the laws, the constitution and the rules and regulations and act within the limits of the power conferred upon them.

2.2 The director must perform his/her duties with care and reserve:

2.2.1 The director must be rigorous and independent, and act in the best interests of Héma-Québec.

2.2.2 The behaviour of a director must be impartial.

2.2.3 The director must act within the limits of his/her mandate.

2.2.4 The director must be courteous and his/her relationships must be characterized by good faith so as to maintain the trust and consideration required by his/her role.

2.2.5 The director must not in any way participate in illicit activities.

2.2.6 In the carrying out of his/her duties and responsibilities, the director must make decisions without regard for any partisan political consideration. Moreover, he/she must demonstrate restraint in the public expression of personal opinions in matters directly concerning the activities of Héma-Québec and in which the Board of Directors has been involved.

2.3 The director must act with honesty, loyalty and solidarity:

2.3.1 2.3.1 The director must act with integrity and impartiality in the best interests of Héma-Québec.

2.3.2 The director must actively take part in the development and implementation of the general directions of Héma-Québec, which in no way precludes his or her right to dissent.

2.3.3 The director must be loyal and upstanding to his/her colleagues and honest in his/her dealings with them.

2.3.4 The director must dissociate the fulfillment of his/her duties from the promotion or exercise of his/her professional or business activities, save for the President and Chief Executive Officer, who is at the exclusive service of Héma-Québec.

2.4 The director must act with skill, diligence and efficiency:

2.4.1 The director must exercise his/her skills and abilities, demonstrating diligence and effectiveness in carrying out his/her mandate. He/she must also demonstrate independent professional judgment.

2.4.2 The director is responsible and accountable for all his/her actions taken in the performance of his/her duties.

2.4.3 The director must make informed decisions, taking into account any necessary expertise if need be and considering each file in its entirety.

2.4.4 All members of the Board of Directors must actively participate in the Board's work and attend meetings regularly. They must also be assiduous when taking part in Board committees.

2.4.5 The director must show discernment in the courses of action and choices he/she favors.

2.4.5 The director must show discernment in the courses of action and choices he/she favors.

2.5 The director must act according to the rules of confidentiality:

2.5.1 The director must respect the confidential nature of any information that comes to his/her attention in the course of his/her duties or by virtue of his/her position.

The first subparagraph is not intended to restrict necessary communications between Board members.

2.5.2 The director must not use confidential information that comes to his/her attention during the course of his/her duties for the purpose of obtaining a direct or indirect advantage, now or in the future, for him/herself or a related party.

3. Conflicts of interest

General provisions

3.1 The director must at all times maintain a high level of independence and avoid any situation in which there could be a personal advantage, direct or indirect, either now or in the future, which could jeopardize his/her independence, integrity or impartiality.

3.2 The director must prevent any conflict of interest or appearance thereof and avoid putting him/herself in a position that could ultimately prevent him/her from fulfilling his/her duties.

3.3 The director must avoid any situation which could compromise his/her capacity to fulfill his/her duties in an impartial, objective, professional and independent manner.

3.4 The director shall not commingle the assets of Héma-Québec with his/her own; he/she shall not use the assets of Héma-Québec for his/her personal gain or the gain of a related party.

3.5 The director may not use Héma-Québec's services or information for his/her personal benefit or for the benefit of a related party.

3.6 The director may not exercise his/her duties in his own interest or in the interest of a related party.

3.7 The director must not accept a current or future advantage from anyone if he/she has knowledge, evidence or reason to believe that this current or future advantage is granted to him/her for the purpose of influencing his/her decision.

3.8 The director shall not make a commitment to a third or related party nor grant that party any guarantee with regard to a vote he/she may be required to cast or to any decision whatsoever that may be made by the Board of Directors.

3.9 The director must avoid any situation in which he/she could be in a conflict of interest. Without limiting the scope of the foregoing, the director:

3.9.1 Is in a conflict of interest when the interests in question are such that he/she may be brought to show preference for some of them to the detriment of Héma-Québec, or where his/her judgment and loyalty could be negatively affected.

3.9.2 Is not independent from a given decision if there is a personal advantage or advantage to a related party, now or in the future, as described in article 3.1.

Preventive measures

3.10 At the start of each meeting, the director must declare any existing conflict of interest to the Chair and ensure the disclosure is recorded in the minutes.

3.11 The President and Chief Executive Officer may not, under penalty of dismissal, have a direct or indirect interest in a corporate body, partnership or other entity which could lead to a conflict of interest between him/herself and Héma-Québec. However, dismissal shall not be invoked if the interest is devolved upon the President and Chief Executive Officer by succession or gift, provided he/she renounces it or disposes of it promptly.

Any other director having a direct or indirect interest in a corporate body, partnership, or other entity which could lead to a conflict of interest between him/herself and Héma-Québec must, under penalty of dismissal, declare this interest in writing to the Chair of the Board and, if need be, abstain from participating in any deliberation or decision related to said corporate body, partnership or other entity in which he/she has an interest. The director must also withdraw from the meeting for the duration of the deliberations and vote concerning the matter.

3.12 The director must demonstrate impartiality:

3.12.1 The director shall not solicit, accept or demand any gift, favor, other advantage or consideration, for him/herself or a related party, either directly or indirectly, now or in the future, which could compromise his/her independence, integrity or impartiality; such is the case of gifts, favors, advantages or considerations other than what is customary and of modest value.

3.12.2 The director must not award, offer to award or promise to award to a third party a gift, favor or other advantage or consideration that could compromise his/her independence, integrity or impartiality.

4. Political activities

4.1 Any director who intends to run for public office must inform the Chair of the Board of Directors.

4.2 A Chair of the Board of Directors or President and Chief Executive Officer who wishes to run for public office must tender his/her resignation.

5. Post-mandate measures

5.1 After his/her mandate expires, the director must maintain confidentiality and refrain from disclosing any non-public data, information, debate or discussion to which he/she was privy by virtue of his/her position at Héma-Québec.

5.2 In the year following the expiration of his/her mandate, the director may not participate, either on his/her own behalf or that of a third party, in a procedure, negotiation or other operation to which Héma-Québec is a party and with regard to which he/she has information that is not available to the public.

As well, the director must refrain from offering advice based on information that is not publicly available regarding Héma-Québec or another corporate body, partnership or entity with which he/she has had significant direct dealings in the course of the year preceding the conclusion of his/her mandate.

5.3 A director who has relinquished his/her duties must act in such a way so as not to reap undue advantage from his/her previous duties in the service of Héma-Québec.

6. Responsibilities and sanctions

6.1 Compliance with the code of ethics is an integral part of the duties and obligations of directors.

6.2 A director who observes an ethical failure, perceived or real, must inform the Chair of the Board of Directors. If this failure involves the Chair of the Board of Directors, the director must inform the Chair of the Governance Committee.

6.3 The Chair of Héma-Québec's Board of Directors or, in the cases involving him or her, the Chair of the Governance Committee, must investigate to ensure that the code of ethics is respected and applied.

6.4 A director who infringes upon any of the provisions in the code of ethics leaves him/herself open to the sanctions outlined in the Regulation respecting the ethics and professional conduct of public office holders, in accordance with the procedure established in said regulation.

6.5 Héma-Québec's Board of Directors shall revise this code of ethics on an annual basis to ensure that it adequately reflects changes in the laws, rules, regulations and situations specific to Héma-Québec.

6.6 Each director undertakes to sign the code of ethics agreement form appended hereto at the start of his/her mandate and every year thereafter.

This code was adopted by the Board of Directors on May 7, 2014.

Financial statements

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MANAGEMENT'S REPORT

The financial statements of Héma-Québec in this Annual Report were drawn up by Management, which is responsible for their preparation, presentation and the significant judgments and estimates included therein. This responsibility involves the selection of appropriate accounting policies that comply with Canadian Public Sector Accounting Standards. The financial information presented elsewhere in this Annual Report is consistent with that provided in the financial statements.

To fulfil its responsibilities, Management maintains a system of internal accounting controls designed to provide reasonable assurance that assets are safeguarded and that transactions are duly approved and properly recorded on a timely basis and in a manner suitable for preparing reliable financial statements.

Héma-Québec recognizes that it is responsible for conducting its affairs in accordance with the statutes and regulations governing it.

The Board of Directors monitors the manner in which Management carries out its financial reporting responsibilities and approves the financial statements. It is assisted in its responsibilities by the Audit Committee whose members are not part of Management. The Committee meets with Management and the Auditor General of Québec, reviews the financial statements, and recommends their approval to the Board of Directors.

The Auditor General of Québec has audited the financial statements of Héma-Québec in accordance with Canadian generally accepted auditing standards. His independent auditor's report states the nature and scope of the audit and expresses his opinion.

The Auditor General of Québec has full and unrestricted access to the Audit Committee to discuss any matter related to his audit.

Nathalie Fagnan, CPA, CA, IAS.A

President and Chief Executive Officer

Luc Vermeersch, CPA, CA

Vice-President, Finance and Infrastructure

Montréal, June 17, 2021

INDEPENDENT AUDITOR'S REPORT

To the National Assembly

Report on the Audit of the Financial Statements

Opinion

I have audited the financial statements of Héma-Québec (the Entity), which comprise the statement of financial position as at March 31, 2021, and the statement of operations and accumulated deficit, the statement of remeasurement gains and losses, the statement of changes in net debt and the statement of cash flows for the year then ended, and notes to the financial statements, including a summary of significant accounting policies.

In my opinion, the accompanying financial statements present fairly, in all material respects, the financial position of the Entity as at March 31, 2021, and its results of operations, its remeasurement gains and losses, its changes in its net debt and its cash flows for the year then ended in accordance with Canadian public sector accounting standards.

Basis for Opinion

I conducted my audit in accordance with Canadian generally accepted auditing standards. My responsibilities under those standards are further described in the *Auditor's Responsibilities for the Audit of the Financial Statements* section of my report. I am independent of the Entity in accordance with the ethical requirements that are relevant to my audit of the financial statements in Canada, and I have fulfilled my other ethical responsibilities in accordance with these requirements. I believe that the audit evidence I have obtained is sufficient and appropriate to provide a basis for my opinion.

Responsibilities of Management and Those Charged with Governance for the Financial Statements

Management is responsible for the preparation and fair presentation of the financial statements in accordance with Canadian public sector accounting standards, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is responsible for assessing the Entity's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Entity or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Entity's financial reporting process.

Auditor's Responsibilities for the Audit of the Financial Statements

My objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes my opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Canadian generally accepted auditing standards will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with Canadian generally accepted auditing standards, I exercise professional judgment and maintain professional skepticism throughout the audit. I also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for my opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Entity's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Entity's ability to continue as a going concern. If I conclude that a material uncertainty exists, I am required to draw attention in my auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify my opinion. My conclusions are based on the audit evidence obtained up to the date of my auditor's report. However, future events or conditions may cause the Entity to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

I communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that I identify during my audit.

Report on Other Legal and Regulatory Requirements

As required by the *Auditor General Act* (CQLR, chapter V-5.01), I report that, in my opinion, these accounting standards have been applied on a basis consistent with that of the preceding year.

On behalf of the Auditor General of Québec,

Roch Guérin CPA auditor, CA

Roch Guérin, CPA auditor, CA
Principal

Montréal, June 17, 2021

STATEMENT OF OPERATIONS AND ACCUMULATED DEFICIT FOR THE YEAR ENDED MARCH 31, 2021 (in thousands of dollars)

	2021 BUDGET	2021 ACTUAL	2020 ACTUAL
REVENUES			
Blood products (note 3)	395,646	345,758	376,720
Grants from the Gouvernement du Québec (notes 4 and 9)	55,561	70,361	31,827
Innovative products	14,130	11,769	12,124
Interest	301	87	609
SIIATH expertise	2,105	1,708	1,237
Other	5,701	5,889	5,278
	473,444	**435,572**	**427,795**
EXPENSES (note 4)			
Stable products	310,409	287,098	272,497
Labile products	119,422	98,814	125,367
Innovative products	41,508	40,001	32,369
SIIATH expertise	2,105	1,708	1,237
Expenses related to COVID	–	28,793	–
	473,444	**456,414**	**431,470**
ANNUAL OPERATING DEFICIT (before undernoted)	**–**	**(20,842)**	**(3,675)**
Transfer of the prior year's surplus (note 5)	–	–	(25,865)
ANNUAL OPERATING DEFICIT		**(20,842)**	**(29,540)**
ACCUMULATED OPERATING (DEFICIT) SURPLUS, BEGINNING OF YEAR	–	(3,675)	25,865
ACCUMULATED OPERATING DEFICIT, END OF YEAR	**–**	**(24,517)**	**(3,675)**

The accompanying notes are an integral part of the financial statements.

STATEMENT OF REMEASUREMENT GAINS AND LOSSES FOR THE YEAR ENDED MARCH 31, 2021 (in thousands of dollars)

	2021	2020
ACCUMULATED REMEASUREMENT GAINS, BEGINNING OF YEAR	19,274	1,867
Unrealized (losses) gains attributable to:		
Derivatives	(26,709)	17,155
Exchange rates	48	505
Amount reclassified to operating deficit		
Derivatives	(3,248)	(250)
Exchange rates	(505)	(3)
Net remeasurement (losses) gains for the year	**(30,414)**	**17,407**
ACCUMULATED REMEASUREMENT (LOSSES) GAINS, END OF YEAR	**(11,140)**	**19,274**

The accompanying notes are an integral part of the financial statements..

STATEMENT OF FINANCIAL POSITION AS AT MARCH 31, 2021 (in thousands of dollars)

	2021	2020
FINANCIAL ASSETS		
Cash and cash equivalents	17,134	15,579
Accounts receivable (note 6)	8,702	8,168
Grants receivable from the Gouvernement du Québec (note 9)	4,488	–
Inventories held for sale (note 7)	111,449	60,507
Derivatives	–	18,769
	141,773	**103,023**
LIABILITIES		
Line of credit (note 10)	63,104	13,022
Accounts payable and accrued liabilities (note 8)	50,217	36,700
Grants transferable to the Gouvernement du Québec (note 9)	–	8,075
Non-interest bearing advance from the Gouvernement du Québec	48,974	22,786
Debt (notes 10 and 11)	33,194	33,885
Employee future benefit liability (note 12)	12,842	12,582
Derivatives	11,188	–
	219,519	**127,050**
NET DEBT	**(77,746)**	**(24,027)**
NON-FINANCIAL ASSETS		
Tangible capital assets (note 13)	32,896	33,394
Prepaid expenses	3,157	3,154
Supply inventories	6,036	3,078
	42,089	**39,626**
ACCUMULATED (DEFICIT) SURPLUS	**(35,657)**	**15,599**
Accumulated operating deficit	(24,517)	(3,675)
Accumulated remeasurement (losses) gains	(11,140)	19,274
	(35,657)	**15,599**
Contractual commitments (note 15)		
Contingencies (note 16)		

The accompanying notes are an integral part of the financial statements.

ON BEHALF OF THE BOARD OF DIRECTORS,

Anne Bourhis
Chair of the Board of the Directors

Réal Couture, FCPA, FCA
Chair of the Audit Committee

STATEMENT OF CHANGE IN NET DEBT FOR THE YEAR ENDED MARCH 31, 2021
(in thousands of dollars)

	2021 BUDGET	2021 ACTUAL	2020 ACTUAL
ANNUAL OPERATING DEFICIT		**(20,842)**	**(29,540)**
Changes due to tangible capital assets:			
Additions	(18,545)	(6,355)	(3,697)
Amortization for the year	8,064	6,838	7,253
Loss on disposal and write-off		15	58
	(10,481)	**498**	**3,614**
Change due to other non-financial assets:			
Acquisition of prepaid expenses		(4,753)	(4,164)
Use of prepaid expenses		4,750	3,778
Acquisition of supply inventories		(21,424)	(18,038)
Use of supply inventories		18,466	17,634
		(2,961)	**(790)**
Net remeasurement (losses) gains for the year		(30,414)	17,407
Increase in net debt	**(10,481)**	**(53,719)**	**(9,309)**
NET DEBT, BEGINNING OF YEAR	(24,027)	(24,027)	(14,718)
NET DEBT, END OF YEAR	**(34,508)**	**(77,746)**	**(24,027)**

The accompanying notes are an integral part of the financial statements.

STATEMENT OF CASH FLOW FOR THE YEAR ENDED MARCH 31, 2021
(in thousands of dollars)

	2021	2020
OPERATING ACTIVITIES		
Annual operating deficit	(20,842)	(29,540)
Items not affecting cash and cash equivalents		
Amortization of tangible capital assets	6,838	7,253
Effective rate debt adjustment	9	30
Loss on disposal and write-off of tangible capital assets	15	58
Unrealized foreign exchange (gain) loss on cash and non-cash working capital items denominated in foreign currencies	(457)	502
	(14,437)	**(21,697)**
Changes in assets and liabilities related to operating activities		
Accounts receivable	(534)	(3,402)
Inventories held for sale	(50,942)	1,134
Accounts payable and accrued liabilities	13,730	(813)
Grants transferable to the Gouvernement du Québec	–	2,380
Grants receivable from the Gouvernement du Québec	(12,563)	–
Advance from the Gouvernement du Québec	26,188	13,752
Employee future benefit liability	260	728
Prepaid expenses	(3)	(386)
Supply inventories	(2,958)	(404)
Cash flows related to operating activities	**(41,259)**	**(8,708)**
CAPITAL ACTIVITIES		
Additions to tangible capital assets	(6,568)	(2,998)
Cash flows related to capital activities	**(6,568)**	**(2,998)**
FINANCING ACTIVITIES		
Line of credit	50,082	13,022
Increase in debt	10,022	6,785
Debt repayment	(10,722)	(9,925)
Cash flows related to financing activities	**49,382**	**9,882**
CHANGE IN CASH AND CASH EQUIVALENTS	**1,555**	**(1,824)**
CASH AND CASH EQUIVALENTS, BEGINNING OF YEAR	15,579	17,403
CASH AND CASH EQUIVALENTS, END OF YEAR	**17,134**	**15,579**
ADDITIONAL INFORMATION		
Interest paid	815	854
Interest received	106	643
Additions to tangible capital assets funded by accounts payable and accrued liabilities	682	895

The accompanying notes are an integral part of the financial statements.

Notes to financial statements – Year ended March 31, 2021 (tabular amounts are in thousands of dollars, unless otherwise indicated)

1. INCORPORATION AND NATURE OF OPERATIONS

Héma-Québec, constituted on March 26, 1998 by letters patent issued under Part III of the Companies Act (CQLR, chapter C 38), is continued in accordance with the provisions of the *Act respecting Héma-Québec and the biovigilance committee* (CQLR, chapter H-1.1). Héma-Québec's mission is to efficiently meet the needs of the Québec population for quality blood and other biological products of human origin. Héma-Québec operates in a regulated environment in compliance with the requirements of the *Food and Drug Act* (R.S.C. 1985, c. F-27) and its related regulations. To fulfil its mission, Héma-Québec also meets the requirements and regulations of several Canadian and international standards. Under the *Income Tax Act* (R.S.C. 1985, c. 1, 5th Supp.) and the *Taxation Act* (CQLR, chapter 1-3), Héma-Québec is not subject to income taxes.

Basis of accounting

For purposes of preparing financial statements, Héma-Québec mainly uses the *CPA Canada Handbook – Public Sector Accounting*. The use of any other source in the application of accounting policies must be consistent with the latter.

Use of estimates

The preparation of the financial statements of Héma-Québec in accordance with Canadian Public Sector Accounting Standards requires Management to make estimates and assumptions that affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities at the date of the financial statements and the recognition of amounts of revenues and expenses for the financial statement reporting period. The main estimates consist of the useful life of capital assets, the valuation of inventories held for sale, the allowance for pay relativity and new pay structure and the employee future benefit liability. Actual results could differ from Management's best estimates.

Financial instruments

Financial instruments comprise financial assets and liabilities as well as derivatives. Their measurement depends on their classification, as described below.

Cash and cash equivalents	Cost
Trade accounts receivable and other receivables	Cost
Grants receivable from the Gouvernement du Québec	Cost
Line of credit	Cost
Trade accounts payable, salaries and accrued vacation	Cost
Advance from the Gouvernement du Québec	Cost
Derivatives	Fair value
Debt and accrued interest payable	Amortized cost using the effective interest method

Héma-Québec uses derivative financial instruments to manage currency risk. Unrealized gains and losses on foreign exchange contracts are recognized until the settlement period in the statement of remeasurement gains and losses, and upon settlement, the accumulated balance of remeasurement gains and losses is reclassified as a foreign exchange gain or loss under expenses in the statement of operations and accumulated deficit.

Fair value hierarchy

Financial instruments recorded at fair value are classified using a fair value hierarchy that reflects the significance of the inputs used in making the measurements. The fair value hierarchy requires the use of observable market data whenever available. The fair value hierarchy has the following levels:

Level 1: The fair value of the instrument is determined using quoted prices (unadjusted) in active markets for identical assets or liabilities.

Level 2: The fair value of the instrument is determined using inputs other than quoted prices included within Level 1 that are observable either directly (i.e., as prices) or indirectly (i.e., derived from prices).

Level 3: The fair value of the instrument is determined using inputs that are not based on observable market data (unobservable inputs).

Derivative financial instruments are classified within Level 2 of the fair value hierarchy (the fair value of derivatives is based on inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly (i.e., as prices) or indirectly (i.e., derived from prices)).

REVENUES

Revenues are accounted for on an accrual basis. Revenues resulting from the sale of products are recognized once all the risks and rewards of ownership have been transferred to clients, while revenues from services are recognized as the services are rendered.

Revenues derived from Gouvernement du Québec grants are recognized in the period where events giving rise to such revenues occurred, provided the grants are authorized and all eligibility criteria, if any, are met.

EXPENSES

Employee benefit plans

Héma-Québec offers its employees defined benefit pension plans. Contributions are made by both Héma-Québec and plan members. Certain employees also have defined contribution plans. In addition, Héma-Québec provides its employees with certain post-employment benefits reported under "other plans," while providing certain retirees with health and life insurance benefits.

The cost of retirement benefits for the period is actuarially determined using the projected benefit method prorated on service. The cost of retirement benefits is measured using net current period benefit cost, amortization of actuarial gains and losses, and employee future benefit obligation interest expense, less the expected return on plan assets. Plan amendments give rise to a past service cost, which is recognized as an expense in the year of the amendments, net of the unamortized balance of discounted gains or losses, if any.

Employee future benefit obligations are actuarially determined using the projected benefit method prorated on services and Management's best estimates as to the expected rate return on plan investments, inflation rate, discount rate, rate of compensation increase, employee retirement ages and assumed health care cost trends.

Assets and expected return on plan assets are valued using a five-year smoothed market value method.

Actuarial gains or losses arise from, in particular, the difference between the actual return on plan assets and the expected return on plan assets, as well as the difference between plan experience and the actuarial assumptions used to determine the employee future benefit obligation, as well as changes to these assumptions. Actuarial gains and losses are amortized over the average expected remaining service life of participating employees.

A valuation allowance is recorded for any excess of the adjusted value of the accrued benefit asset (that is, the value of the accrued benefit asset less unamortized net actuarial losses) over the expected future benefit (that is, any withdrawable surplus or reduction in future contributions).

Notes to financial statements – Year ended March 31, 2021 (tabular amounts are in thousands of dollars, unless otherwise indicated)

2. SIGNIFICANT ACCOUNTING POLICIES (cont'd)

Employee benefit plans (cont'd)

An employee future benefit asset or liability is presented in the statement of financial position to reflect the difference at year end between the value of employee future benefit obligations and the value of plan assets, net of unamortized actuarial gains and losses and valuation allowance.

FINANCIAL ASSETS

Cash and cash equivalents

Héma-Québec's policy consists in presenting in the cash and cash equivalents line item bank balances, including bank overdrafts whose balances fluctuate frequently from being positive to overdrawn and are used to make up for cash deficiencies when they are held by the same institution.

Inventories held for sale

Inventories held for sale, consisting of stocks of blood products (labile and stable) and innovative products (cord blood and human tissues), are measured at the lower cost and net recoverable amount, with cost determined using the average cost method. The net recoverable amount is the estimated selling price less costs to sell.

Foreign currency translation

Foreign currency transactions are accounted for at the average monthly exchange rate. Monetary assets and liabilities denominated in foreign currency are translated at the exchange rate in effect on the statement of financial position date, whereas non-monetary items are translated at the historical average monthly exchange rate. Exchange rate fluctuations give rise to foreign exchange gains or losses that are recognized until the settlement period in the statement of remeasurement gains and losses and, upon settlement, the accumulated balance of remeasurement gains or losses is reclassified as a foreign exchange gain or loss under expenses in the statement of operations or accumulated deficit.

LIABILITIES

Advance from the Gouvernement du Québec

The Ministère de la Santé et des Services sociaux (MSSS) annually confirms a budgetary level with Héma-Québec for the acquisition of blood products by hospitals. Héma-Québec therefore records, under Advance from the Gouvernement du Québec, the amounts received from the MSSS, which acts as a third party payor for the purchase of labile and stable products on behalf of hospitals. Any payment below the proceeds from sales of blood products to hospitals becomes an amount receivable from the government, while any payment exceeding the sales of blood products to hospitals is recovered in accordance with a timeline agreed upon between the MSSS and Héma-Québec.

NON-FINANCIAL ASSETS

By their nature, the non-financial assets of Héma-Québec are normally used to provide future services.

Tangible capital assets

Tangible capital assets are recorded at cost, which consists of expenses directly attributable to their acquisition, and amortized on a straight-line basis over their useful lives commencing on the date they are ready for commissioning, using the following periods.

Building, betterment to building and other	from 10 to 40 years
Machinery and automotive equipment	5 and 10 years
Office furniture and equipment	5 and 10 years
Computer hardware and software	3 years
Systems development	5 and 7 years

Land and tangible capital assets under construction or development are not amortized.

When conditions indicate that a tangible capital asset no longer contributes to Héma-Québec's ability to provide goods and services, or that the value of future economic benefits associated with the tangible capital asset is less than its net book value, the cost of the tangible capital asset is reduced to reflect the decline in the asset's value. Writedowns are accounted for as expenses for the year in the statement of operations and accumulated deficit and are subsequently not reversed.

INTER-ENTITY TRANSACTIONS

Inter-entity transactions are transactions entered into between entities controlled or subject to joint control by the Gouvernement du Québec.

Assets received for no consideration from a Gouvernement du Québec reporting entity are recognized at their carrying amount. Services received at no cost are not recognized. The other inter-entity transactions were carried out at the exchange amount, which is the amount of the consideration agreed for the item transferred or service provided.

3. BLOOD PRODUCTS

The budgeted prices for all blood products are submitted every year to the Centre d'acquisitions gouvernementales (CAG) which is the joint procurement group designated by the Minister of Health and Social Services under Division VI of the Act respecting Héma-Québec and the biovigilance committee. Following consultations with the Blood System Procurement and Financing Management Committee (PFMC), the budgeted prices are confirmed by CAG. The PFMC is an advisory committee to the Direction de la biovigilance, which falls under the purview of the Direction générale des services de santé et médecine universitaire. The PFMC's role is to make recommendations on financial and accounting issues relating to the supply of blood products.

The prices for the 2019-2020 year were maintained for the billing of blood products for the 2020-2021 year.

Notes to financial statements – Year ended March 31, 2021 (tabular amounts are in thousands of dollars, unless otherwise indicated)

4. EXPENSES

	STABLE PRODUCTS	LABILE PRODUCTS	INNOVATIVE PRODUCTS[1]	SIIATH EXPERTISE[2]	COVID[3]	2021 TOTAL	2020 TOTAL
Stable products	233,803	–	–	–	14,400	248,203	239,641
Salaries and benefits	6,020	99,331	12,823	1,358	5,641	125,173	110,416
Blood drives	2,078	14,531	233	–	30	16,872	17,035
Medical supplies	558	10,001	5,211	–	805	16,575	16,041
Buildings and premises	59	10,671	368	45	657	11,800	11,172
Amortization of tangible capital assets	736	5,729	359	4	10	6,838	7,252
Purchase of cord blood, stem cells, labile products and human tissues	–	–	6,815	–	–	6,815	6,243
Purchased services	16,859	(25,106)	13,728	269	2,248	7,998	5,669
Other expenses	82	3,088	261	4	2,720	6,155	5,537
Freight and shipping	67	4,185	764	1	790	5,807	5,282
Advertising and public relations	27	3,241	32	-	898	4,198	4,473
Information technology	–	4,103	–	27	317	4,447	3,641
Interest on long-term debt	–	718	–	–	–	718	846
Insurance	–	872	–	–	–	872	633
Other interest and bank charges	–	103	–	–	48	151	51
Loss on disposal of tangible capital assets	–	–	15	–	–	15	25
Foreign exchange gain	(2,401)	(13)	(37)	–	–	(2,451)	(373)
Subtotal	**257,888**	**131,454**	**40,572**	**1,708**	**28,564**	**460,186**	**433,584**
Plasma for fractionation[4]	33,297	(33,297)	–	–	–	–	–
Change in inventories[5]	(4,087)	657	(571)	–	229	(3,772)	(2,114)
Total	**287,098**	**98,814**	**40,001**	**1,708**	**28,793**	**456,414**	**431,470**

[1] Innovative products comprise the following activity sectors: stem cells, human tissues and mother's milk.
[2] SIIATH expertise includes activities related to the Système d'information intégré sur les activités transfusionnelles et d'hémovigilance awarded by the MSSS.
[3] Grant revenue equal to COVID expenses was recognized as at March 31, 2021.
[4] Some expenses related to plasma extraction are reallocated to stable products based on litres of plasma shipped to the fractionator.
[5] Change in inventories includes plasma for fractionation, labile products, cord blood and human tissues.

5. ACCUMULATED OPERATING SURPLUS

As required by the provisions of section 25 of the *Act respecting Héma-Québec and the biovigilance committee,* any funding surpluses resulting from the application of prices are paid into the General Fund of the Consolidated Revenue Fund, unless a prior agreement between the Minister of Health and Social Services and Héma-Québec is entered into on the use of the surplus.

6. ACCOUNTS RECEIVABLE

	2021	2020
Trade accounts receivable	3,688	2,716
Other receivables	2,738	3,232
Commodity taxes	2,276	2,220
	8,702	**8,168**

7. INVENTORIES HELD FOR SALE

	2021	2020
Stable products	78,865	31,696
Plasma for fractionation	26,032	22,049
Labile products	2,420	3,201
Cord blood	2,408	1,913
Human tissues	1,724	1,648
	111,449	**60,507**

8. ACCOUNTS PAYABLE AND ACCRUED LIABILITIES

	2021	2020
Trade accounts payable	23,745	19,818
Salaries and accrued vacation	20,766	11,987
Benefits	4,798	3,880
Deferred revenues	860	953
Accrued interest payable	48	62
	50,217	**36,700**

Notes to financial statements – Year ended March 31, 2021 (tabular amounts are in thousands of dollars, unless otherwise indicated)

9. GRANTS RECEIVABLE FROM AND GRANTS TRANSFERABLE TO THE GOUVERNEMENT DU QUÉBEC

	2021	2020
Grants transferable, beginning of year	8,075	6,466
Grants paid	65,873	39,902
Grants recognized as revenue [1]	(70,361)	(31,827)
MSSS recovery	(8,075)	(6,466)
(Grants receivable) grants transferable, end of year	**(4,488)**	**8,075**

[1] Grant revenue of $28.8 million was recorded in relation to COVID expenses during the year.

10. CREDIT FACILITIES

Héma-Québec was authorized by the Minister of Health and Social Services to establish a borrowing plan under section 78 of the *Financial Administration Act* (CQLR, chapter A-6.001). Under this borrowing plan, Héma-Québec may borrow over the short term or under line of credit from financial institutions or the Québec Minister of Finance, as manager of the Financing Fund, and over the long term from said Minister.

The authorized amount for the April 1, 2021 to March 31, 2022 period is for requirements not exceeding $170.96 million. The authorized amount for the previous plan ending March 31, 2021 was $94.6 million. The borrowings provided for under this plan serve primarily to fund bank overdrafts, asset acquisitions and renewals, loan renewals and the implementation of product safety improvement projects. Héma-Québec's borrowing terms comprise rates similar or equivalent to Gouvernement du Québec rates. Under this plan, Héma-Québec had drawn down $63 million on its line of credit as at March 31, 2021 ($13 million as at March 31, 2020). The interest rate for this line of credit was 0.3125% as at March 31, 2021.

Héma-Québec also has a $15 million revolving line of credit with a financial institution under terms that may be changed at the bank's option. As at March 31, 2021 and 2020, this line of credit, which is repayable at any time, was undrawn. The line of credit bears interest at the bank's prime rate less 0.25%.

11. DEBT

	2021	2020
Borrowings from the Financing Fund repayable in monthly instalments of 568 (principal only) (531 in 2020), at fixed rates ranging from 0.74% to 3.31% (1.34% to 3.31% in 2020), maturing from 2022 to 2046	29,704	26,096
Borrowings from the Financing Fund repayable in monthly instalments of 54 (principal only) (83 in 2020), at fixed rates ranging from 2.98% to 3.93% (1.80% to 3.93% in 2020), renewable from 2022 to 2023 and maturing from 2024 to 2031	3,490	7,789
	33,194	**33,885**

Assuming renewal under the same terms, principal repayments on debt over the upcoming fiscal years are as follows:

2022	7,411
2023	6,453
2024	5,447
2025	3,653
2026	2,976
2027 and thereafter	7,370

12. EMPLOYEE FUTURE BENEFIT LIABILITY

Héma-Québec has several funded and unfunded defined benefit plans to ensure that pension, post-retirement and post-employment benefits are paid to most employees. Actuarial valuations of the retirement plans were carried out as at December 31, 2019. The employee future benefit obligations shown as at March 31, 2021 and retirement benefit expense for the fiscal year then ended are based on an extrapolation of the latest actuarial valuations.

The defined benefit plans are based on years of service and final average salary. They also provide for partial indexation of pension benefits based on inflation.

The actuarial valuations of the other post-retirement and post-employment benefit plans were carried out as at January 1, 2019. The employee future benefit obligations shown as at March 31, 2021 and retirement benefit expense for the fiscal year then ended are based on an extrapolation of that latest actuarial valuation.

Héma-Québec also has defined contribution plans under which the commitment is limited to the total value of the individual accounts of plan participants. No expense was recognized in these plans during the year.

Actuarial gains and losses are amortized over the expected average remaining service life of active participating employees, which is 12 years for the unionized employee pension plan, 15 years for the non-unionized employee pension plan, 6 years for the supplemental pension plan, 13 years for post-retirement benefits and 2 years for post-employment benefits

Notes to financial statements – Year ended March 31, 2021 (tabular amounts are in thousands of dollars, unless otherwise indicated)

12. EMPLOYEE FUTURE BENEFIT LIABILITY (cont'd)

CLASSIFICATION OF EMPLOYEE FUTURE BENEFIT LIABILITY

	2021	2020
Pension plans	5,284	5,209
Other plans	7,558	7,373
Total employee future benefit liability	**12,842**	**12,582**

RECONCILIATION OF FINANCIAL POSITION

	2021		2020	
	PENSION PLANS	OTHER PLANS	PENSION PLANS	OTHER PLANS
Pension plan assets	295,409	–	275,291	–
Employee future benefit obligation	269,339	6,137	253,964	6,090
Financial position surplus (deficit)	**26,070**	**(6,137)**	**21,327**	**(6,090)**
Unamortized actuarial gains	(7,034)	(1,421)	(5,869)	(1,283)
Valuation allowance	(24,320)	–	(20,667)	–
Employee future benefit liability, end of year	**(5,284)**	**(7,558)**	**(5,209)**	**(7,373)**

EMPLOYEE FUTURE BENEFIT OBLIGATION

	2021		2020	
	PENSION PLANS	OTHER PLANS	PENSION PLANS	OTHER PLANS
Employee future benefit obligation, beginning of year	253,964	6,090	231,804	6,097
Current period benefit cost	13,942	3,532	12,640	4,641
Interest expense on obligation	13,126	65	12,639	73
Benefits paid	(10,024)	(3,413)	(10,464)	(3,992)
Actuarial (gain) loss	(1,669)	(137)	7,345	(729)
Employee future benefit obligation, end of year	**269,339**	**6,137**	**253,964**	**6,090**

PENSION PLAN ASSETS

	2021		2020	
	PENSION PLANS	OTHER PLANS	PENSION PLANS	OTHER PLANS
Pension plan assets, beginning of year	275,291	–	262,362	–
Employer contributions	9,955	–	9,567	–
Employee contributions	6,139	–	6,196	–
Expected return on plan assets	14,473	–	14,576	–
Benefits paid	(10,024)	–	(10,464)	–
Actuarial loss on assets	(425)	–	(6,946)	–
Pension plan assets, end of year	**295,409**	**–**	**275,291**	**–**

FAIR VALUE OF PLAN ASSETS AS AT MARCH 31

	2021		2020	
Bonds	37,908	13%	31,875	13%
Shares	36,274	12%	41,344	16%
Other	219,301	75%	180,031	71%
Total	**293,483**	**100%**	**253,250**	**100%**

ACTUAL RETURN ON PLAN ASSETS

	2021	2020
Expected return on plan assets	14,473	14,576
Actual return on plan assets	14,048	7,630
Actuarial loss on assets	**(425)**	**(6,946)**
Actual rate of return	5.05%	2.88%

EMPLOYEE FUTURE BENEFIT EXPENSE FOR THE YEAR

	2021		2020	
	PENSION PLANS	OTHER PLANS	PENSION PLANS	OTHER PLANS
Current period net benefit cost	7,803	3,532	6,444	4,641
Amortization of actuarial gains	(79)	–	(1,071)	–
Change in valuation allowance	3,653	–	6,137	–
Benefit expense	**11,377**	**3,532**	**11,510**	**4,641**
Interest expense on obligation	13,126	65	12,639	73
Expected return on plan assets	(14,473)	–	(14,576)	–
Benefit interest expense	**(1,347)**	**65**	**(1,937)**	**73**
Total benefit expense	**10,030**	**3,597**	**9,573**	**4,714**

Notes to financial statements – Year ended March 31, 2021 (tabular amounts are in thousands of dollars, unless otherwise indicated)

12. EMPLOYEE FUTURE BENEFIT LIABILITY (cont'd)

SIGNIFICANT ASSUMPTIONS

	2021		2020	
	PENSION PLANS	OTHER PLANS	PENSION PLANS	OTHER PLANS
Employee future benefit obligation as at March 31				
Discount rate	5.30%	2.20%	5.20%	2.00%
Rate of compensation increase	3.25%	3.25%	3.25%	3.25%
Inflation rate	2.00%	–	2.00%	–
Benefit expense for the years ended March 31				
Discount rate	5.20%	2.00%	5.,50%	2.40%
Expected rate of return on plan assets	5.20%	–	5.50%	–
Rate of compensation increase	3.25%	3.25%	3.25%	3.25%
Demographic factors				
Mortality	CPM-2014 projected using improvement scale CPM-B		CPM-2014 projected using improvement scale CPM-B	

13. TANGIBLE CAPITAL ASSETS

2021	LAND	BUILDING, BETTERMENT TO BUILDING AND OTHER	MACHINERY AND AUTOMOTIVE EQUIPMENT	OFFICE FURNITURE AND EQUIPMENT	COMPUTER HARDWARE AND SOFTWARE	SYSTEMS DEVELOPMENT	TOTAL
Cost							
Opening balance	2,140	49,817	30,889	5,020	13,538	17,653	119,057
Additions	–	2,547	964	139	1,858	847	6,355
Disposals and write-off	–	–	(134)	–	(3,264)	(472)	(3,870)
Closing balance*	**2,140**	**52,364**	**31,719**	**5,159**	**12,132**	**18,028**	**121,542**
Accumulated amortization							
Opening balance	–	32,611	22,364	4,447	11,927	14,314	85,663
Amortization for the year	–	2,533	1,903	92	944	1,366	6,838
Disposals and write-off	–	–	(119)	–	(3,264)	(472)	(3,855)
Closing balance	**–**	**35,144**	**24,148**	**4,539**	**9,607**	**15,208**	**88,646**
Net carrying amount	**2,140**	**17,220**	**7,571**	**620**	**2,525**	**2,820**	**32,896**

2020	LAND	BUILDING, BETTERMENT TO BUILDING AND OTHER	MACHINERY AND AUTOMOTIVE EQUIPMENT	OFFICE FURNITURE AND EQUIPMENT	COMPUTER HARDWARE AND SOFTWARE	SYSTEMS DEVELOPMENT	TOTAL
Cost							
Opening balance	2 140	48,953	29,968	4,918	13,501	17,225	116,705
Additions	–	864	1,460	102	716	555	3,697
Disposals and write-off	–	–	(539)	–	(679)	(127)	(1,345)
Closing balance*	**2 140**	**49,817**	**30,889**	**5,020**	**13,538**	**17,653**	**119,057**
Accumulated amortization							
Opening balance	–	30,049	20,820	4,358	11,771	12,699	79,697
Amortization for the year	–	2,562	2,028	89	832	1,742	7,253
Disposals and write-off	–	–	(484)	–	(676)	(127)	(1,287)
Closing balance	**–**	**32,611**	**22,364**	**4,447**	**11,927**	**14,314**	**85,663**
Net carrying amount	**2,140**	**17,206**	**8,525**	**573**	**1,611**	**3,339**	**33,394**

* The closing balance includes the following tangible capital assets under development:

	LAND	BUILDING, BETTERMENT TO BUILDING AND OTHER	MACHINERY AND AUTOMOTIVE EQUIPMENT	OFFICE FURNITURE AND EQUIPMENT	COMPUTER HARDWARE AND SOFTWARE	SYSTEMS DEVELOPMENT	TOTAL
2021	–	2,347	313	113	660	710	4,143
2020	–	930	489	38	384	66	1,907

Notes to financial statements – Year ended March 31, 2021 (tabular amounts are in thousands of dollars, unless otherwise indicated)

14. RISK MANAGEMENT AND FINANCIAL INSTRUMENTS

Risk management

In the normal course of its operations, Héma-Québec is exposed to various financial risks, described below. Management assesses these risks and implements strategies to minimize their impact on its performance.

I. Credit risk

Credit risk is the risk that one entity's failure to discharge an obligation under a financial instrument will cause a financial loss for the other party. Héma-Québec is exposed to credit risk resulting from the possibility that parties may default on their financial obligations, where there is a concentration of transactions with a same party or a concentration of third party financial obligations with similar economic characteristics that would be affected in the same way by future developments. Héma-Québec's financial instruments exposed to credit risk include the following line items: cash and cash equivalents, trade accounts receivable, other receivables and grants receivable from the Gouvernement du Québec.

The credit risk associated with cash and cash equivalents is limited as the counterparty is a Canadian chartered bank which is assigned a high credit rating by national rating agencies.

Credit risk arising from trade accounts receivable is limited as they primarily involve public bodies that are Gouvernement du Québec reporting entities. Such receivables are collectible during the following year.

Other receivables primarily include amounts receivable under contractual agreements with suppliers and a client. Credit risk is limited as these receivables are provided for under the contracts and Héma-Québec has met its purchase obligations. These amounts are collectible within 60 days after the end of the fiscal year.

The credit risk arising from grants receivable from the Gouvernement du Québec is limited as they have already been granted to Héma-Québec by the Gouvernement du Québec. These grants are collectible during the following year.

The carrying amount of Héma-Québec's financial instruments exposed to credit risk represents the maximum amount of credit risk to which the organization is exposed and totalled $33.9 million ($40.3 million in 2020). None of these financial instruments was impaired and Management estimates that the credit quality of all instruments which have not been impaired or are not past due is strong as at the date of the financial statements (none as at March 31, 2020).

II. Liquidity risk

Liquidity risk is the risk that Héma-Québec will not have the necessary funds to meet a demand for cash or fund its obligations associated with financial liabilities as they come due. Liquidity risk also includes the risk that Héma-Québec will not be able to liquidate its financial assets on a timely basis at a reasonable price.

Héma-Québec actively manages its cash and cash equivalents that arise from its operations and believes it has sufficient liquidity and credit facilities to ensure the necessary funds to meet its current and long-term financial obligations at a reasonable cost, if required. Credit facilities are disclosed in note 10.

As at March 31, 2021 and 2020, the contractual maturities of the financial liabilities were as follows:

	2021				
	2022	2023	2024 AND THEREAFTER	TOTAL	CARRYING VALUE
Trade accounts payable, salaries and accrued vacation	44,511	–	–	44,511	44,511
Line of credit	63,104	–	–	63,104	63,104
Advance from the Gouvernement du Québec	48,974	–	–	48,974	48,974
Interest on debt	601	461	1,378	2,440	2,558
Debt	7,411	6,453	19,445	33,309	33,194
Total non-derivative financial instruments	**164,601**	**6,914**	**20,823**	**192,338**	**192,341**
Derivative financial instruments	11,188	–	–	11,188	11,188
Total financial instruments	**175,789**	**6,914**	**20,823**	**203,526**	**203,529**

	2020				
	2021	2022	2023 AND THEREAFTER	TOTAL	CARRYING VALUE
Trade accounts payable, salaries and accrued vacation	31,805	–	–	31,805	31,805
Line of credit	13,022	–	–	13,022	13,022
Advance from the Gouvernement du Québec	22,786	–	–	22,786	22,786
Interest on debt	737	588	1,555	2,880	3,004
Debt	7,150	6,435	20,424	34,009	33,885
Total non-derivative financial instruments	**75,500**	**7,023**	**21,979**	**104,502**	**104,502**

III. Market risk

Market risk is the risk that the market value or future cash flows of a financial instrument will fluctuate because of changes in market prices. Market risk is threefold, comprising interest rate risk, currency risk and other price risk.

Héma-Québec is exposed to interest rate risk and currency risk.

Interest rate risk:

Interest rate risk is the risk that the fair value or future cash flow of a financial instrument will fluctuate because of changes in market interest rates.

Héma-Québec is exposed to the risk associated with changes in interest rates with respect to its line of credit bearing interest at a variable rate. As at March 31, 2021, if the interest rate in effect had increased or decreased by 10%, the variation in operating surplus would not have been material.

Héma-Québec's debt bears interest on a fixed rate basis. Accordingly, Héma-Québec's exposure to interest rate risk related to its cash flows is minimal, as Héma-Québec does not intend to early repay debt.

Currency risk:

In the normal course of operations, Héma-Québec purchases its stable products primarily in U.S. dollars and is therefore exposed to fluctuations in that currency. Héma-Québec has established a currency risk management policy and enters into derivative financial instruments to manage currency risk exposures particularly through foreign exchange contracts.

Notes to financial statements – Year ended March 31, 2021 (tabular amounts are in thousands of dollars, unless otherwise indicated)

14. RISK MANAGEMENT AND FINANCIAL INSTRUMENTS (cont'd)

III. Market risk (cont'd)

Currency risk (cont'd) :

To manage the currency risk related to the purchase of stable products, medical supplies, blood drive supplies, stem cells, cord blood and human tissues, Héma-Québec entered into 26 foreign exchange contracts to cover 90% of its expected foreign currency requirements in an amount of US$198 million at a rate of 1.31443 for the period from April 1, 2021 to March 17, 2022 (in 2020, 26 contracts for an amount of US$187.9 million at a rate of 1.319 for the period from April 2, 2020 to March 18, 2021).

As at March 31, 2021, unrealized losses on foreign exchange contracts in the amount of $11.2 million were recognized in the statement of remeasurement gains and losses (unrealized gains of $18.8 million as at March 31, 2020) and were measured based on the difference between the foreign currency contract purchase rates and the rate of 1.2575 on quoted prices (unadjusted) in active markets for identical instruments (1.4187 as at March 31, 2020).

The statement of financial position includes the following amounts in Canadian dollars with respect to financial assets and liabilities denominated in foreign currencies:

	2021	2020
U.S. DOLLARS		
Cash and cash equivalents	2,623	12,280
Trade accounts receivable and other receivables	1,270	626
Trade accounts payable	5,200	4,565
EUROS		
Trade accounts receivable and other receivables	–	37
Trade accounts payable	476	93
OTHER CURRENCIES		
Trade accounts payable	7	–

Based on the financial assets and liabilities denominated in foreign currencies held by Héma-Québec as at the date of the financial statements, a 3% change in the U.S. dollar exchange rate (3% in 2020), corresponding to market volatility in the last 12 months, would not have any material effect on the operating surplus or on the remeasurement gains and losses.

15. CONTRACTUAL COMMITMENTS

Héma-Québec has entered into long-term leases expiring at various dates over the next 17 years for its operating facilities and administrative premises. In some instances, the leases for premises include renewal options of up to 15 years. The lease expense for the premises for the year ended March 31, 2021 amounted to $3.5 million ($3.5 million in 2020).

Future minimum payments under long-term leases total $30.2 million ($33.7 million as at March 31, 2020) and are as follows:

2022	3,408
2023	3,294
2024	3,041
2025	2,487
2026	2,344
2027 and thereafter	15,646

16. CONTINGENCIES

Héma-Québec is exposed to various claims and legal actions in the normal course of operations. Management believes that potential outlays arising from those disputes have been sufficiently provisioned and foresees no adverse material effect on the financial position or results of Héma-Québec.

17. RELATED PARTY TRANSACTIONS

Héma-Québec is related to all entities controlled or jointly controlled by the Gouvernement du Québec. It is also related to its key management personnel, their close relatives and to entities for which one or more of these persons have the power to determine the financial and administrative decisions. Key management personnel consists of members of the Board of Directors and Management Committee and the President and Chief Executive Officer of Héma-Québec.

Héma-Québec has entered into no significant transactions with related parties at a value different from that which would have been arrived at had the parties not been related.

18. COMPARATIVE FIGURES

Certain prior-year figures have been reclassified to conform to current-year presentation.

HÉMA-QUÉBEC

www.hema-quebec.qc.ca

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Laurent Paul Ménard

Coordination and research
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Paul Gilbert

Revision and translation
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Graphic design
Stanko Josimov

Photos
Marc Couture
Fotografika
Stanko Josimov

Montréal facility
4045, boulevard Côte-Vertu
Montréal (Québec) H4R 2W7

Québec City facility
1070, avenue des Sciences-de-la-Vie
Québec (Québec) G1V 5C3

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