

Aaron,
blood donor



Melissa,
stem cell recipient

2023–2024: year-end review

Presentation by Dr. Graham Sher, Chief Executive Officer
Open board meeting
June 21, 2024



**Canadian
Blood
Services**

BLOOD
PLASMA
STEM CELLS
ORGANS
& TISSUES

PUBLIC

Refreshing our strategy



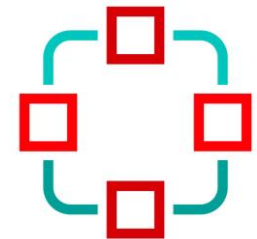
Match products and services to patient and health system needs.



Grow and diversify a flexible, sustainable donor and registrant base.



Invest in our people and culture.



Enhance our digital and physical infrastructure.

Organizational redesign to enable our strategy

- With the introduction of our innovative, refreshed strategy, we have restructured the organization in a way that will best provide value to patients, donors and the health systems in which we operate.
- Structuring ourselves in this way will enable us to:
 - **Sustainably grow and diversify** the donor base.
 - **Fully leverage the collections network** to support our growth strategy.
 - **Drive manufacturing and end-to-end supply chain excellence** for our evolving product portfolio.
 - Accelerate the **maturation of diversity, equity, inclusion and sustainability** in our organization.

New divisions created to enable our strategy



Ron Vezina
Donor engagement and
corporate reputation



Elizabeth Stucker
Collections



Jody Faught
Supply chain



Eloise Tan
Inclusion, sustainability
and engagement

Adaptability and resilience in a challenging environment

Fresh blood products

Meeting hospital demand. Recovered **inventory to optimal levels** while building a sustainable donor base to meet changing demand and better match evolving clinical needs.

Plasma

Sufficiency for immunoglobulins (Ig) increasing, despite increased demand for Ig. Nine plasma donor centres now operating.

Stem cells

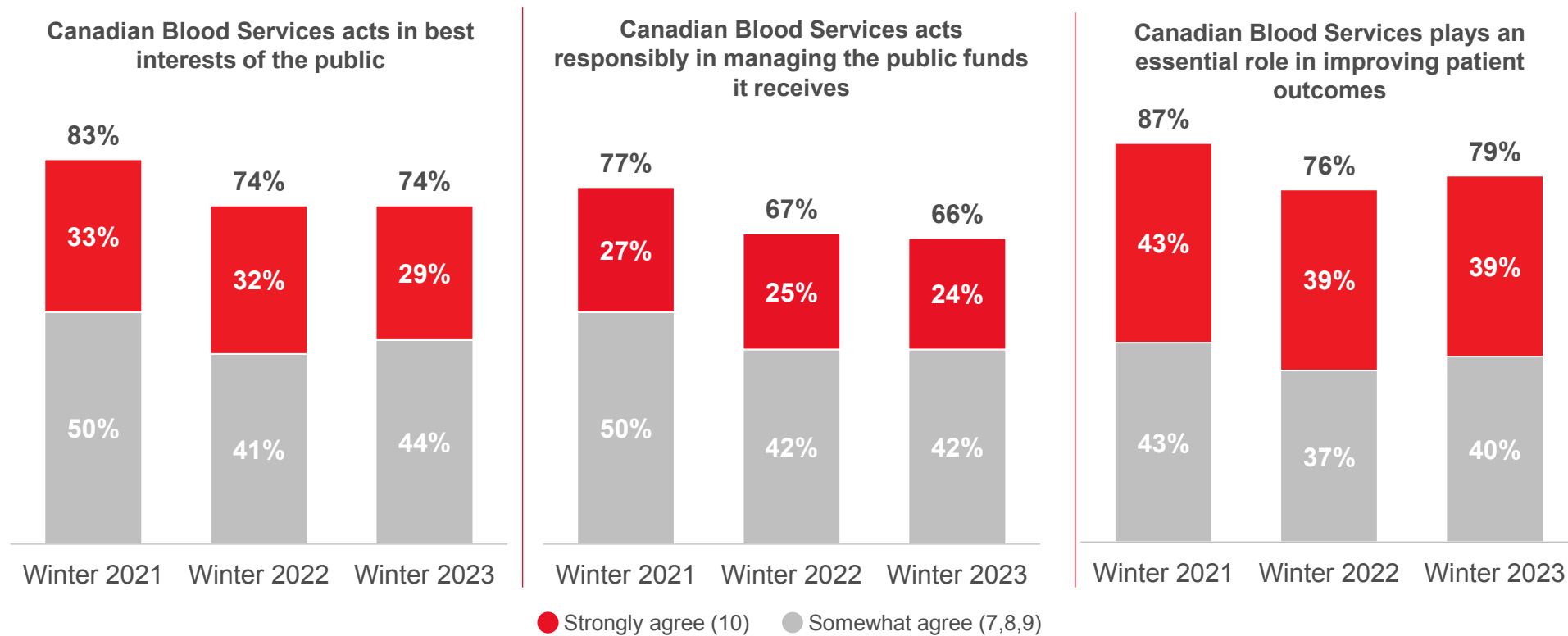
Focusing on **building the registry and engaging youth** on post-secondary campuses. Continuing to meet patient demand.

Organs and tissues

Deceased and living donations increased. The Heart Program for Sensitized and High-Status Patients **supporting patients interprovincially**.

Public trust in Canadian Blood Services

Trust metrics remain similar to one year ago.



Blood for Life

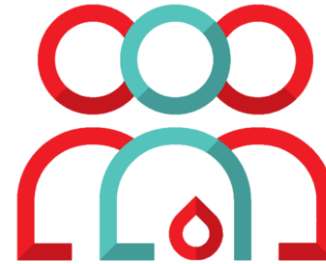
*Simone, blood donor,
PFL member*



Increased demand coupled with building a sustainable donor base



Recovering inventory to **optimal levels** while focusing on stabilizing performance and navigating a challenging environment.

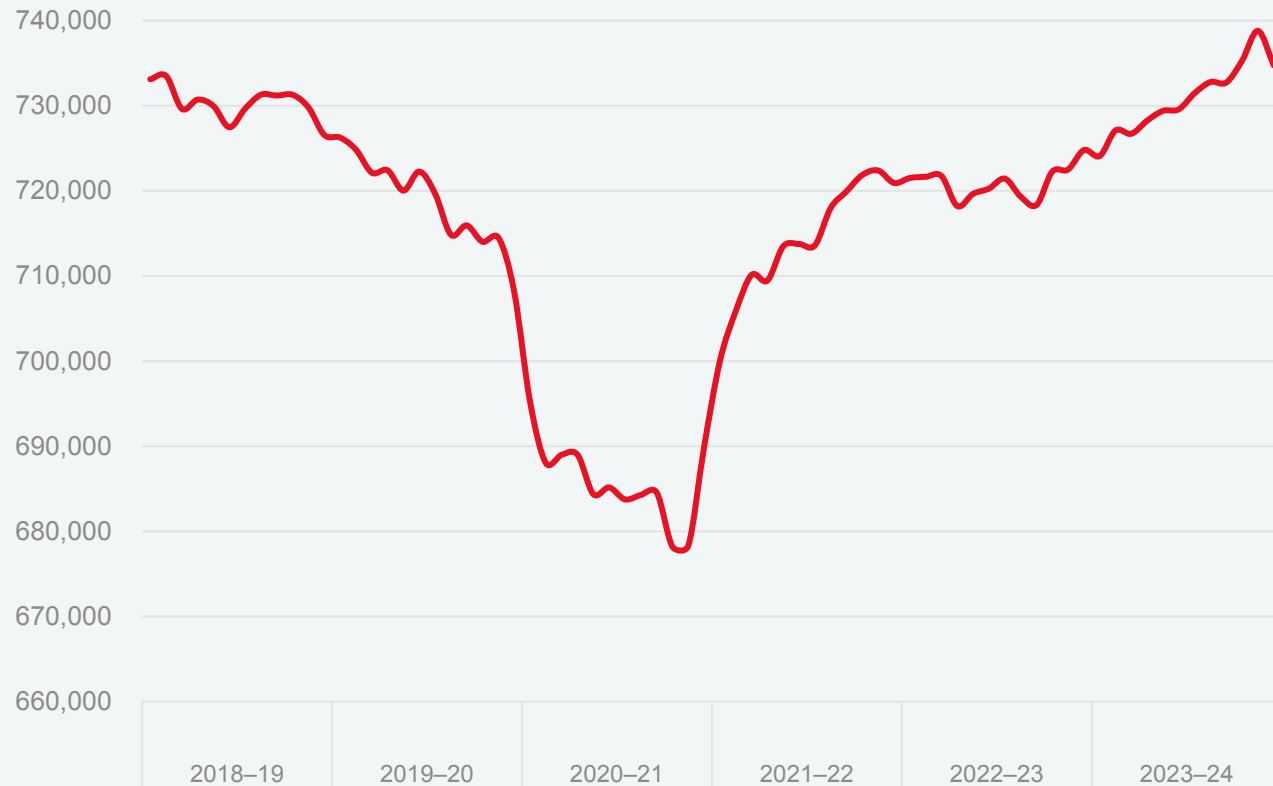


Focus on building a **resilient, sustainable and diverse donor base** that can support evolving patient needs.

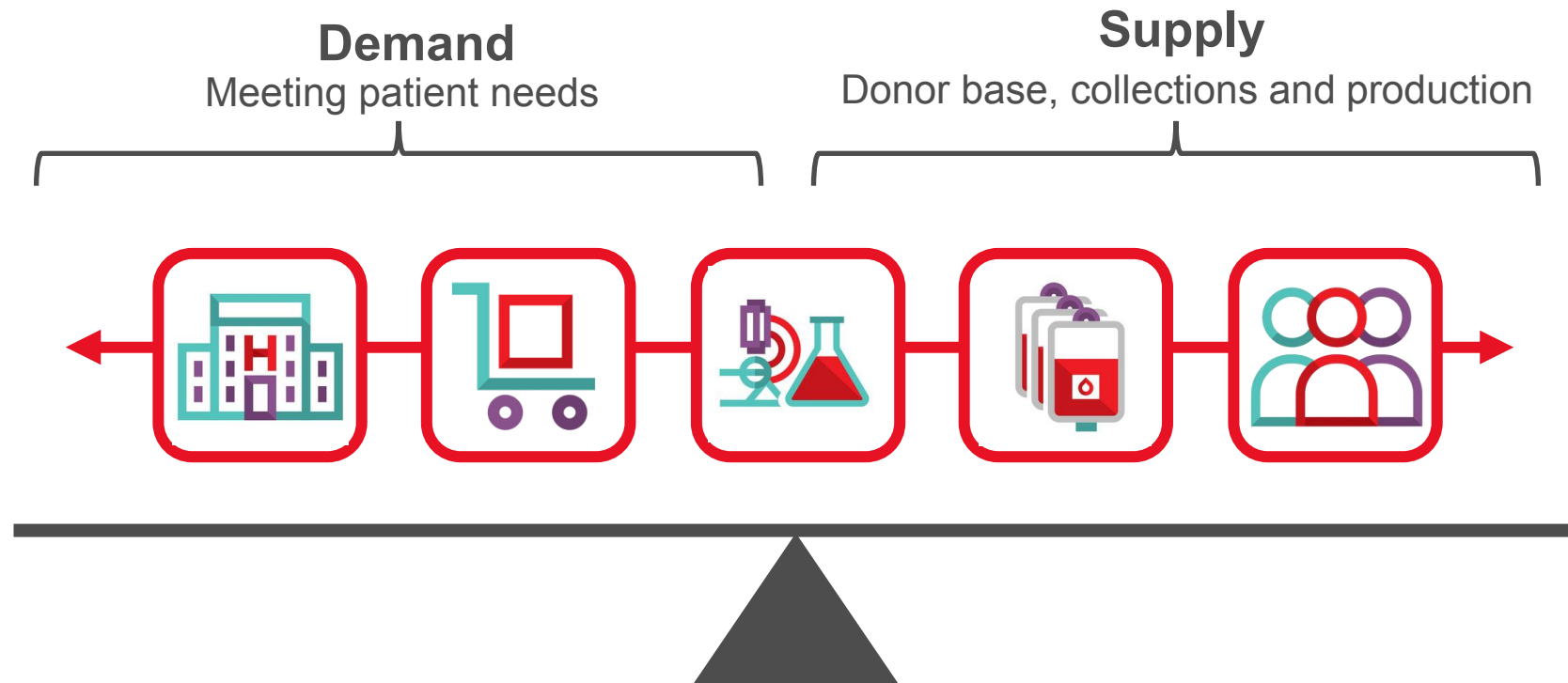
The demand for red blood cells (RBCs) increased post-pandemic

- Demand for RBCs has **increased post-pandemic and become more volatile**, driven by population growth and changing demographics, increased hospital activities, patient illness more progressed than pre-pandemic and shifting transfusion practices.

Total RBCs issued
Trailing twelve months



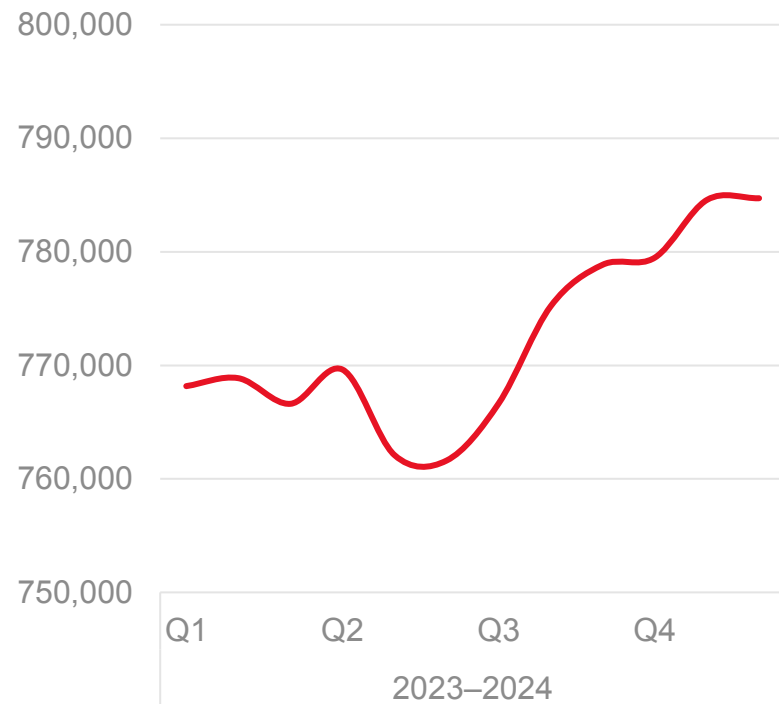
Restoring the balance of supply and demand



Increasing collections to meet patient needs and ensure optimal inventory levels

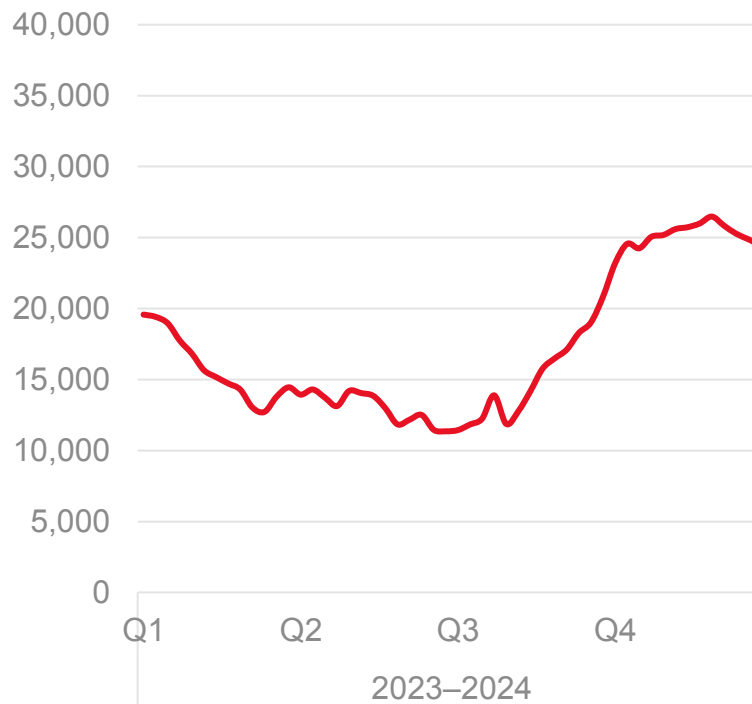
Total whole blood collections

Trailing twelve months



RBC inventory*

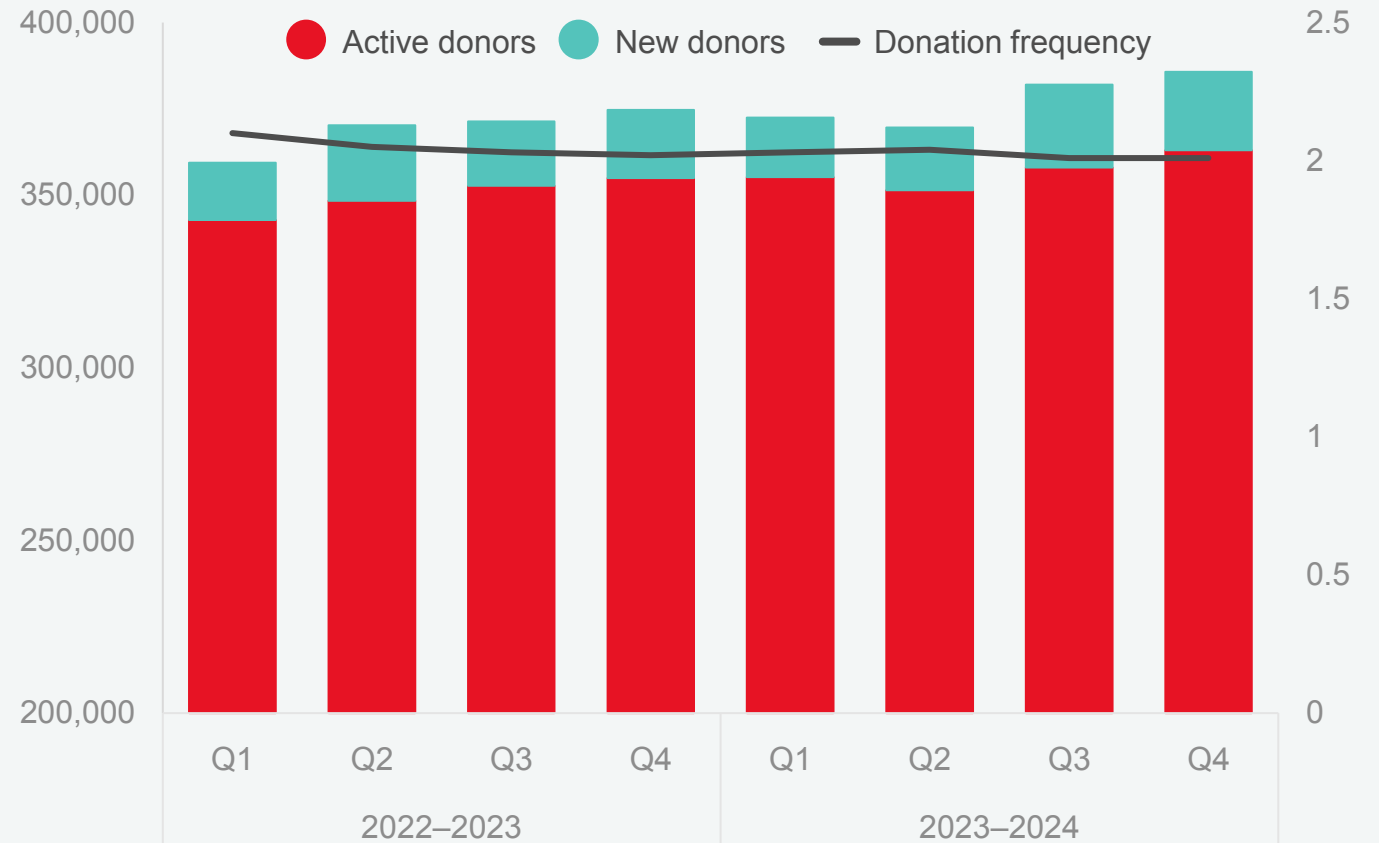
Weekly inventory levels



- Increased demand in combination with suboptimal blood collections during the first half of the fiscal year resulted in a **slow degradation of the RBC inventory**.
- Starting in the fall of 2023, the cumulative efforts to grow the donor base by increasing the opportunities to donate and by attracting and acquiring donors saw results.

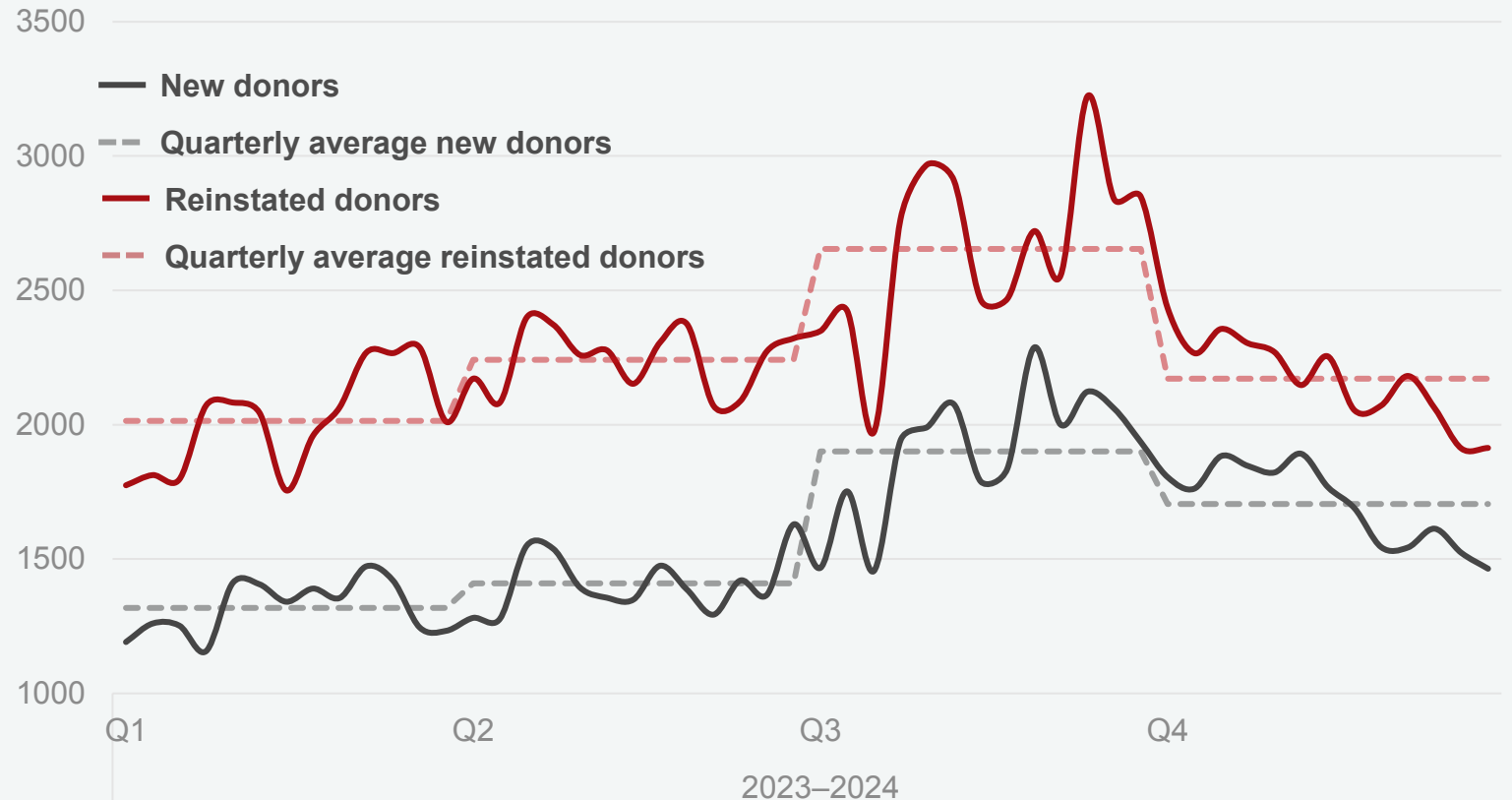
Building a resilient whole blood donor base

- The whole blood donor base **increased** since its lowest point during the COVID-19 pandemic.
- A significant portion of the growth observed this year was driven by increasing opportunities for people to donate.
- An intensified focus on growing the donor base continues into 2024–2025, with advancing plans to grow, build and sustain a diverse, resilient and healthy donor base.



New and reinstated donors are contributing to donor base growth

- Intense focus on engaging the existing donor base also resulted in improvements in acquisition of new donors in Q3.
- The increased capacity to donate through the expansion of operating hours and additional mobile locations enabled recruitment of new and reinstated donors.
- In Q3, the removal of the variant Creutzfeldt-Jakob disease geographic deferral criteria brought in significant new and reinstated donors.



Ensuring safety and sufficiency while broadening participation



We continuously review our donor screening criteria as our understanding of disease patterns, blood testing and blood processing technologies advance **to ensure we maintain a high level of safety in the blood system.**



In Q2, the deferral period for donors with a history of most cured cancers and melanoma decreased to one year. Combined, these changes result in an approximate **increase of 2500 donors annually.**



In Q3, the geographic deferral for variant Creutzfeldt-Jakob disease was fully removed. More than **10,000 donations have been made by new and reinstated donors** as a result of this change.

Apology to 2SLGBTQIA+ communities

- On May 10, 2024, Canadian Blood Services delivered an apology to 2SLGBTQIA+ communities for the impact of a former donor deferral policy.
- The apology was delivered in-person to 2SLGBTQIA+ community members and employees during an event held at our head office.
- The apology — developed in close collaboration with 2SLGBTQIA+ communities — is a necessary step in our journey to further build trust and repair relationships with 2SLGBTQIA+ communities.
- Part of broader efforts to enhance inclusion for 2SLGBTQIA+ communities and all equity-deserving groups.



Diversity of the donor base

- Canadian Blood Services is committed to **further diversifying our donor population** to ensure we can continue to meet the needs of all patients, from all communities.
- We're engaging with ethnically diverse, equity-deserving and Indigenous communities to **build trust and strengthen relationships**.

Whole blood donor base

Ethnicity (groups)	Active donors	% active donors	Canadian population
Black	2,650	0.7%	4.3%
Arab	5,806	1.4%	1.9%
Indigenous	5,768	1.5%	5.0%
Hispanic/Latino	6,315	1.6%	1.6%
Other	24,987	6.5%	2.6%
South Asian	21,459	5.6%	7.1%
Asian	24,101	6.2%	7.7%
White	281,592	73.0%	69.8%

Building trust with under-represented communities

- Efforts are underway to **strengthen our relationships** with equity-deserving communities.
- We are **working with a partner organization** founded and run by women of colour to deepen dialogue with sickle cell and Black communities across Canada.
- In partnership with Black and South Asian community champions and blood donation advocates, we are **co-developing recruitment strategies and materials** to more meaningfully reach Black, South Asian and other under-represented communities.



Assessing policies for transfusion-transmitted malaria

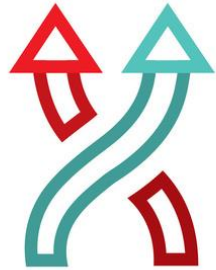
- Malaria is an illness caused by parasites that infect the liver and red blood cells and can hide unnoticed for decades.
- A risk-based decision-making (RBDM) analysis to assess current and potential risk mitigation approaches regarding transfusion-transmitted malaria was recently completed.
- The primary recommendation is to implement donor nucleic acid testing (NAT) for malaria in a subset of donors and change associated deferral criteria for all collection types (except source plasma).
- Canadian Blood Services is actively collaborating with testing assay developers to evaluate a malaria NAT. Until a malaria NAT is implemented, the current malaria deferral criteria will be maintained, to ensure continued safety of the blood supply.

Plasma for Life



*Amanka, plasma recipient,
PFL champion*

Why do we collect plasma?



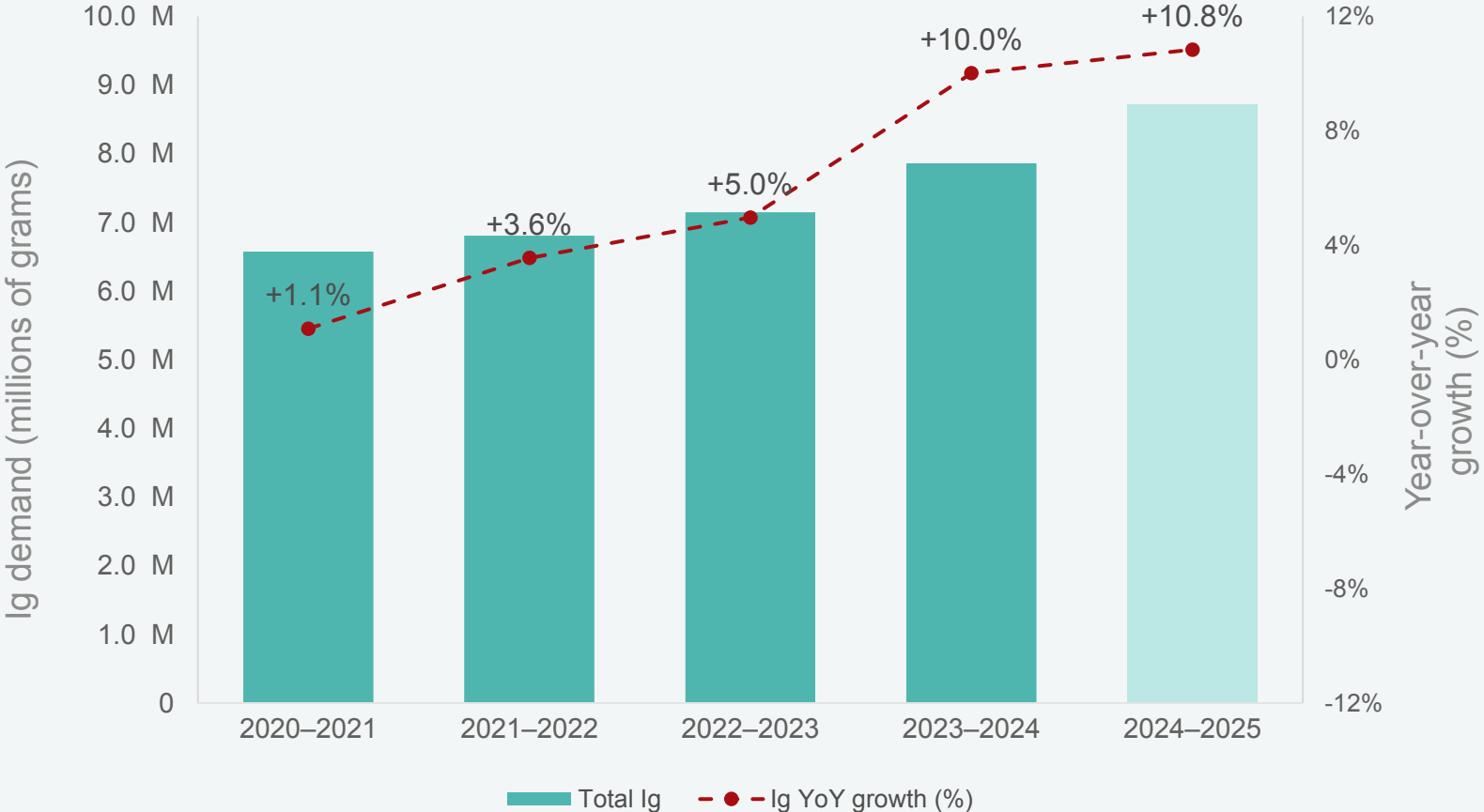
- To **meet the transfusion needs** of Canadian patients.



- For biological therapies called **plasma protein and related products (PPRPs)**, which treat Canadian patients with a variety of life-threatening conditions.

Demand for Immunoglobulin (Ig)

- Immunoglobulin distribution in 2023–2024 increased by **10 per cent** over 2022–2023.
- We anticipate continued growth into 2025–2026, with volume growth beginning to taper in 2026–2027 (8 per cent by 2028-2029).



Increasing the domestic security of immunoglobulin supply



Canadian Blood Services has been rapidly increasing plasma collections through the opening of plasma donor centres and through the expansion of plasma collection in the established network of collection centres.



In fall 2022, Canadian Blood Services announced a collaborative **agreement with Grifols** for the domestic end-to-end production of Canadian made immunoglobulin.

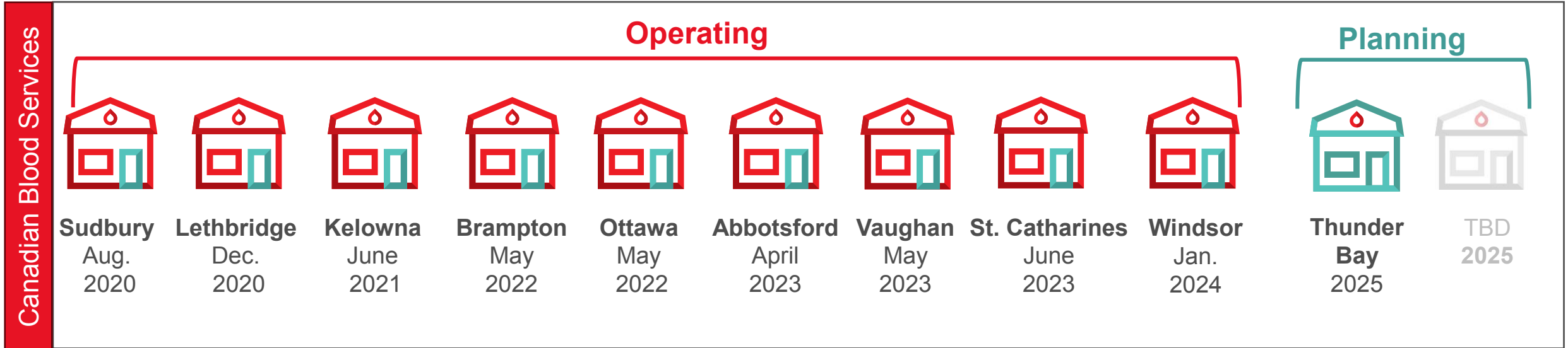


Canadian Blood Services and Grifols continue to collaborate as Grifols conducts property searches, primarily in Ontario, where **Grifols will operate under the *Voluntary Blood Donations Act* as an agent of Canadian Blood Services.**



Through this agreement, Canada **will reach a minimum target of 50 per cent sufficiency** in the shortest time possible.

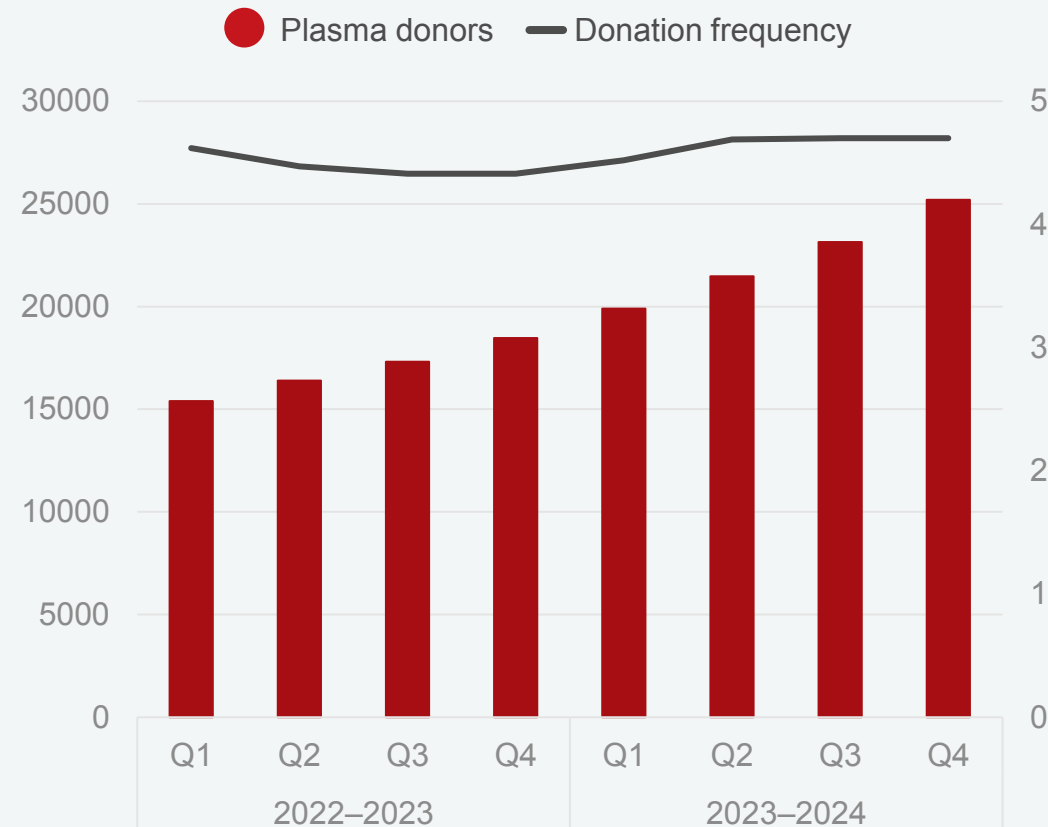
Building the network of plasma donor centres



- Complementing the Canadian Blood Services collections are the Grifols network of donor centres:
 - 11 sites operating across the country – in Alberta, Saskatchewan, Manitoba, New Brunswick and Nova Scotia.
 - Six sites opening by Spring 2025 – one in Alberta and five in Ontario.

Building the plasma donor base

- In Q3 and Q4, the annual donation frequency for source plasma was **4.7 across the plasma collection network.**
- While recruitment of new donors remains challenging, a new strategy to nurture, educate and inspire prospective donors and encourage them to engage with the organization has been implemented.



Plasma collection at the plasma donor centres



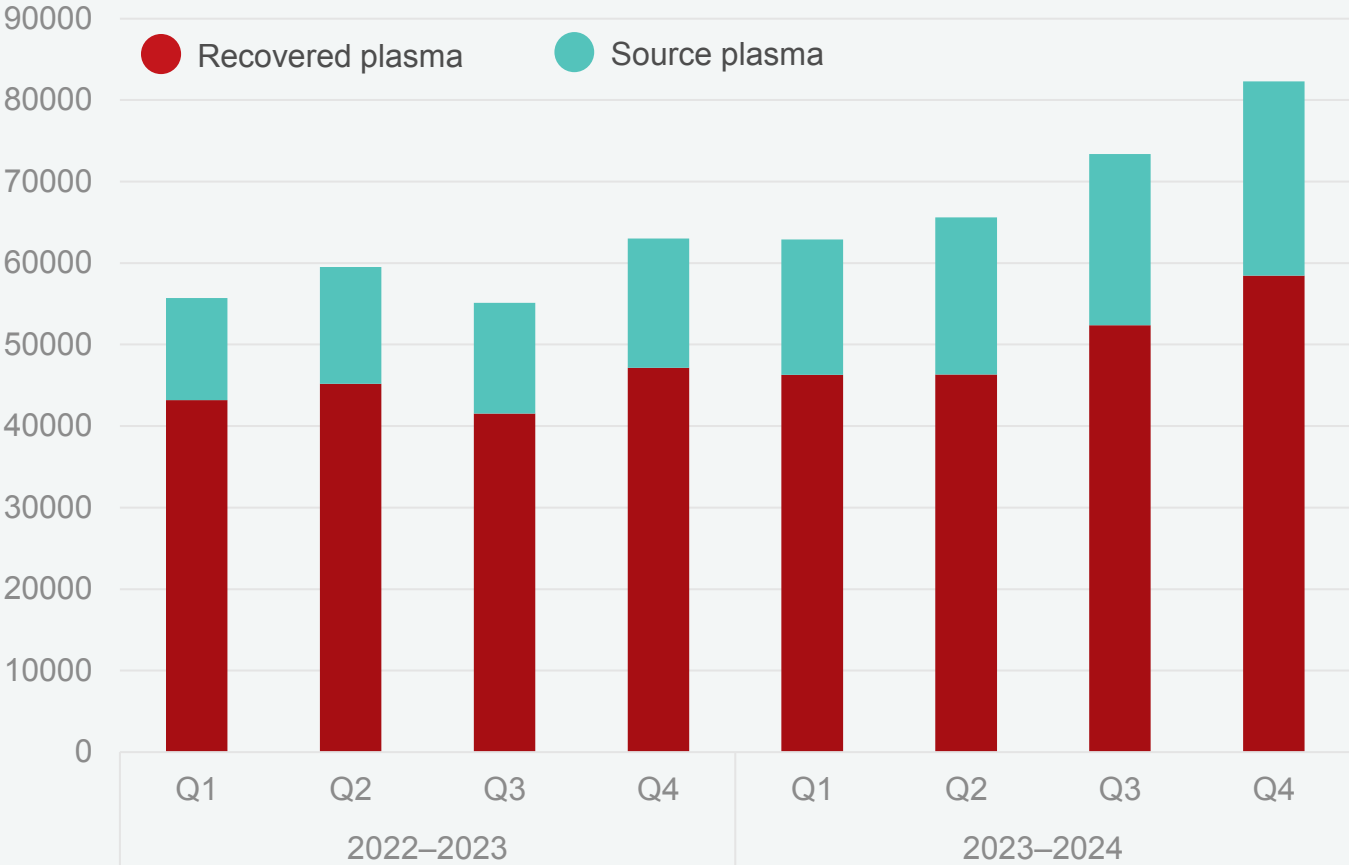
125,000

litres of plasma collected since August 2020

Total plasma sent for fractionation

- In 2023–2024, more than 284K litres of plasma were shipped for fractionation, an increase of **21 per cent** over fiscal year 2022–2023.
- Grifols sent 120K litres of plasma for fractionation through our strategic alliance.

Volume of plasma (L) shipped for fractionation



DOMESTIC IMMUNOGLOBULIN SUFFICIENCY

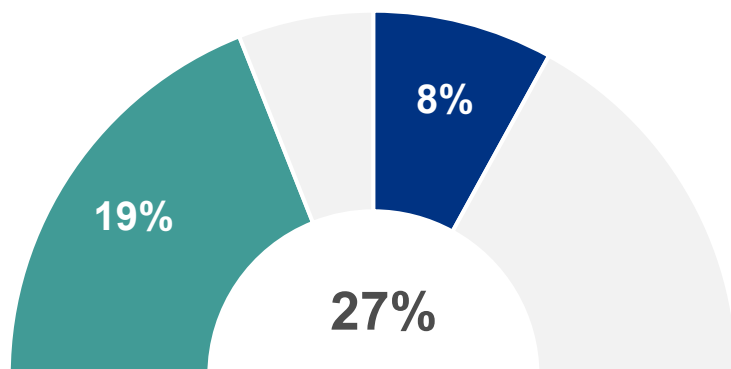
27%

19%

Canadian Blood Services contribution

8%

Grifols' contribution



Canadian immunoglobulin sufficiency

- Immunoglobulin sufficiency of 27 per cent, with contributions from Canadian Blood Services and Grifols



As lead Deputy Minister for the national blood portfolio, I am pleased that with the support of federal, provincial, and territorial government funding, Canadian Blood Services is collecting more plasma at blood and plasma donor centres. I am also glad to see that the country's sufficiency has now reached 25 per cent. This is exceptional progress towards Canadian Blood Services minimum target of 50 per cent sufficiency, which will ensure half of national demand for these immunoglobulins is made from plasma sourced from Canadian donors.

Thank you for your continued efforts to increase plasma collections and ensure the domestic security of immunoglobulins, a life-saving plasma derived medication, for patients in Canada. I look forward to hearing about further developments.



Excerpt from letter dated March 27, 2024
Stephen Brown
Deputy Minister, British Columbia



Plasma protein and related products



The plasma protein and related products (PPRP) formulary

- Canadian Blood Services manages a formulary of PPRP on behalf of the provincial and territorial ministries of health (not including Quebec). Products are provided to clinicians and their patients with approved national criteria and/or recommended best practices, ensuring that patients have equitable access across the country.
- In 2023–2024, there were approximately 50 PPRP available on the formulary and around 300M units (e.g., grams, international units) of product were provided to Canadian patients.

Continuing to mature the plasma protein and related products (PPRP) program to benefit patients

- In February 2024, GLASSIA — a medicine used in the treatment of adults with alpha-1 antitrypsin deficiency — was listed on the PPRP formulary. **The implementation of GLASSIA has required extensive collaboration with many partners, in part due to the transition from Prolastin-C.**
- While gene therapies used in the treatment for hemophilia B are not being reviewed through our joint review process with Canada’s Drug Agency (CDA-AMC; formerly Canadian Agency for Drugs and Technologies in Health), we have been asked for help and collaboration by the pan-Canadian Pharmaceutical Alliance in the negotiations for these therapies.



Continuing to mature the plasma protein and related products (PPRP) program to benefit patients

- The integration of pharmacists in hemophilia care teams in Ontario has **demonstrated clinician and patient satisfaction**. In 2024–2025, we will be working with additional provinces and territories to expand this model.
- The pilot project to distribute take-home PPRPs through Bayshore Specialty Pharmacy in Alberta **is underway**, with more than 100 patients currently receiving Hemlibra through this project. Starting in March 2024, the pilot was expanded to include GLASSIA, which has facilitated access to the product by patients in Alberta.

Stem Cells for Life

*Melissa, stem cell
recipient, LLSC group*

The stem cell program highlights



Registry growth is **recovering** post-pandemic with greater opportunities to leverage in-person events.



Hosted a meeting with sickle cell and stem cell transplant treating physicians in March to share knowledge and explore emerging opportunities in gene therapy for hemoglobinopathy patients.



New cord blood processing method was implemented, **addressing supply issues** experienced in 2022–2023.

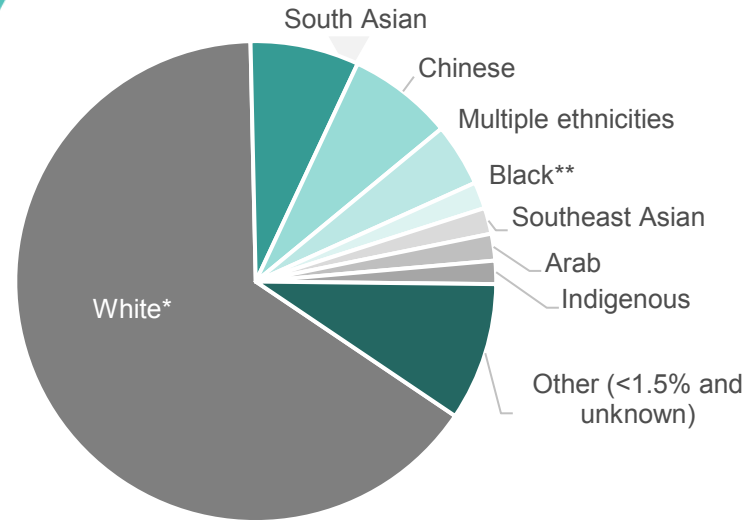
Swab at School recruitment campaign

- To create awareness and increase stem cell registrations among 17–35-year-olds, in February 2024, we partnered with post-secondary campus volunteer groups to hold 86 stem cell recruitment events.
- Generated over 3,800 consents to join the stem cell registry — the first step in getting potential donors on the registry.

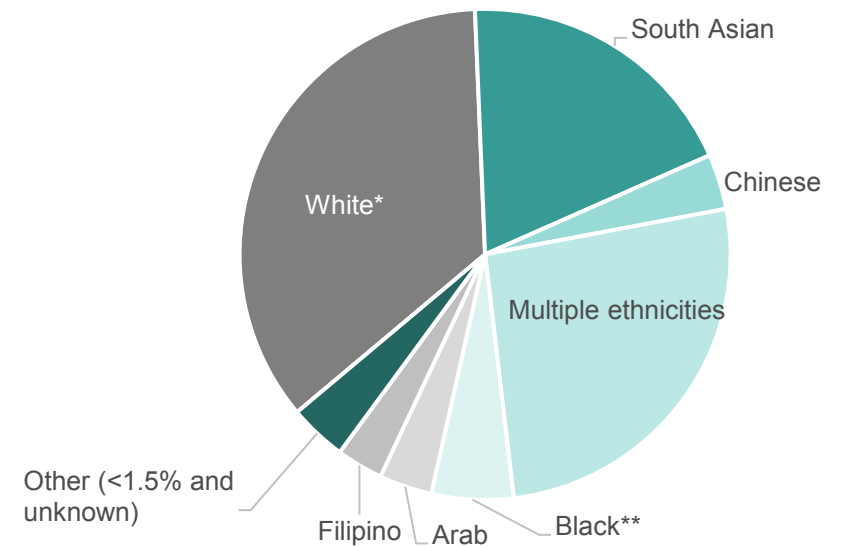


Stem Cell Registry and Cord Blood Bank: size and diversity

449,303 registrants



4,517 cord blood units



Ethnicity is self-reported by registrants.

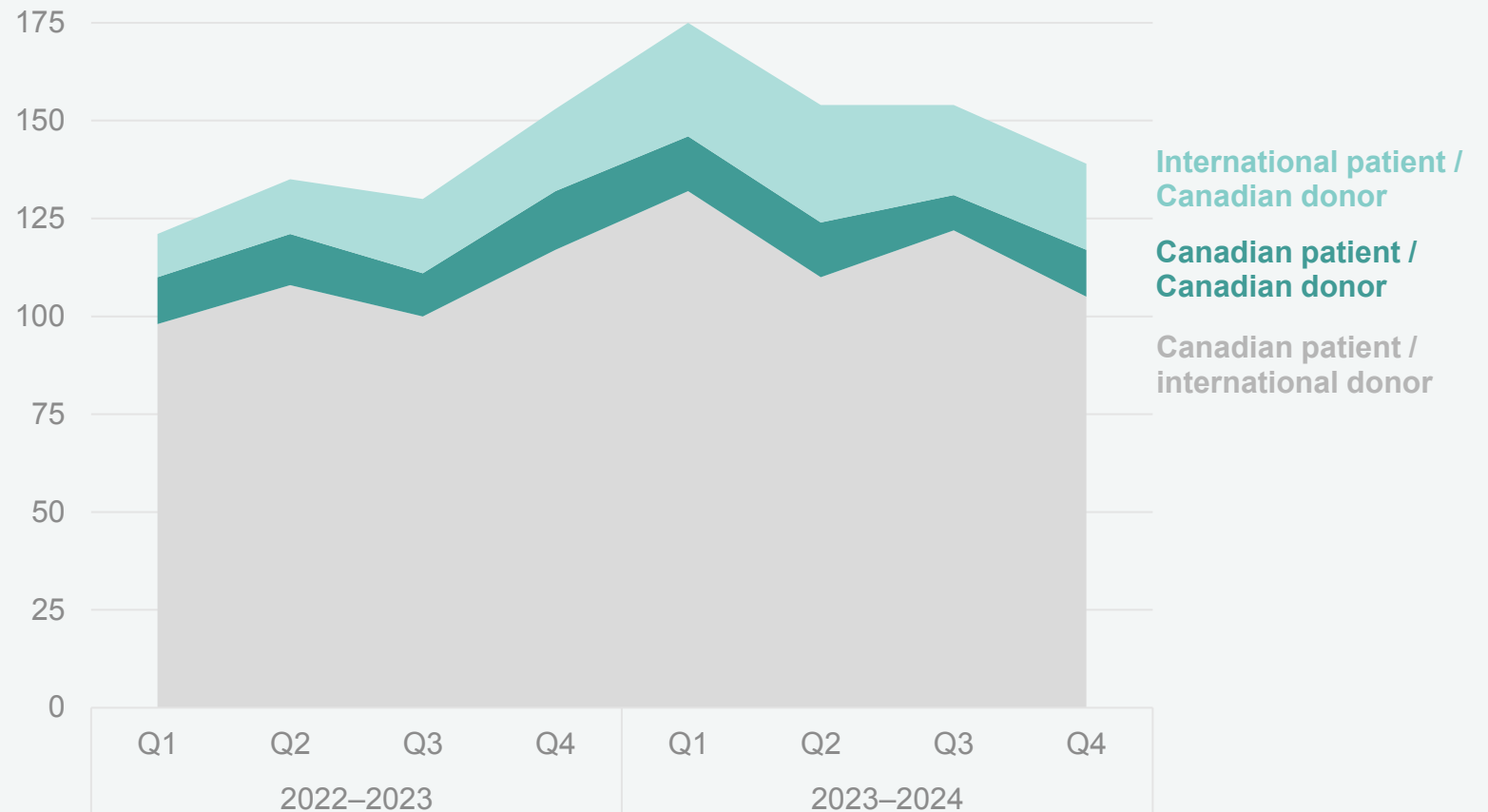
* Caucasian (White) was the category used when registrants were asked to self-identify.

**Black includes the categories "Black – African", "Black – Caribbean" and "Black – Other" when registrants were asked to self-identify.

The stem cell program **both** facilitates unrelated transplants for patients and supports research

- In 2023–2024, the stem cell program facilitated the procurement of **622 stem cell** products:
 - **518** stem cell products for Canadian patients.
 - **94** stem cell products for international patients from Canadian donors.
 - **10** cord blood units distributed for international patients.
- **101 cord blood units** were distributed to support 17 Canadian research studies.

Number of stem cell transplants facilitated by the stem cell program



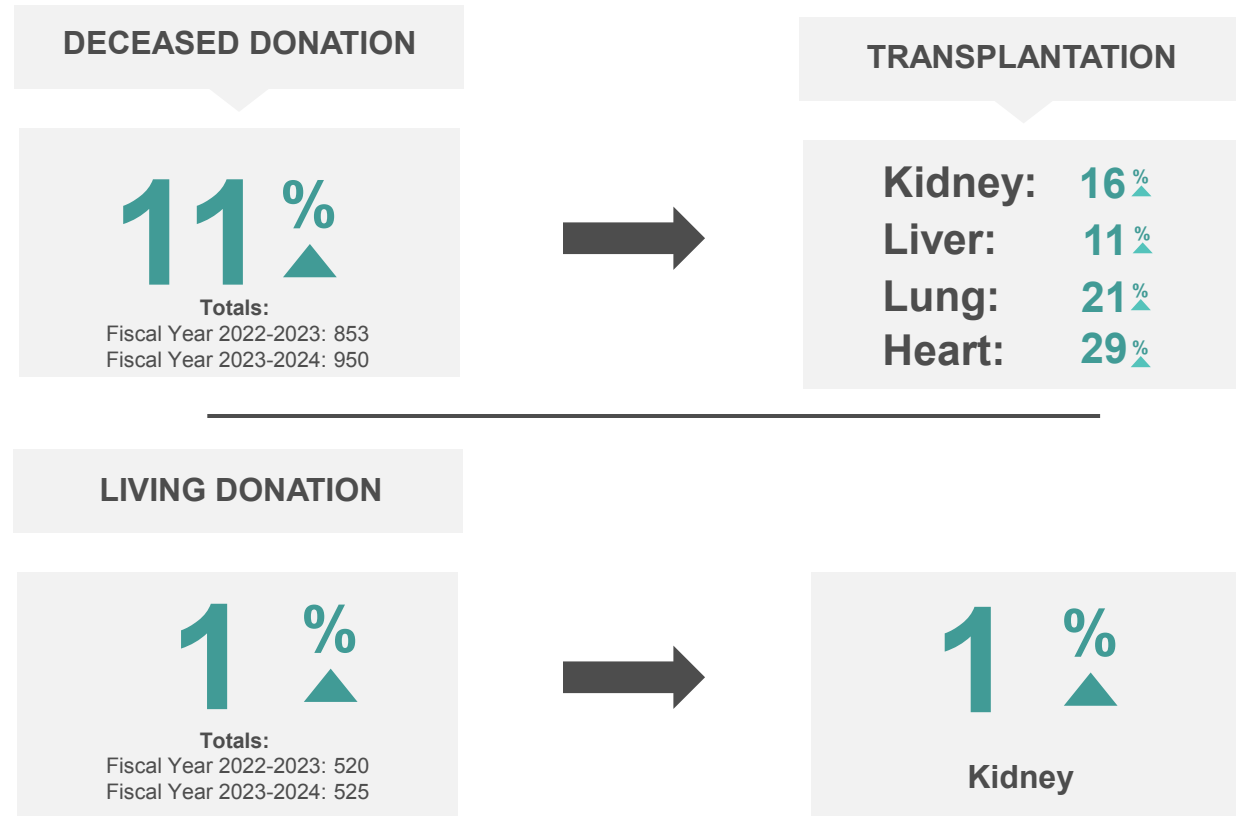
Organs & Tissues for Life



Paulo, organ recipient

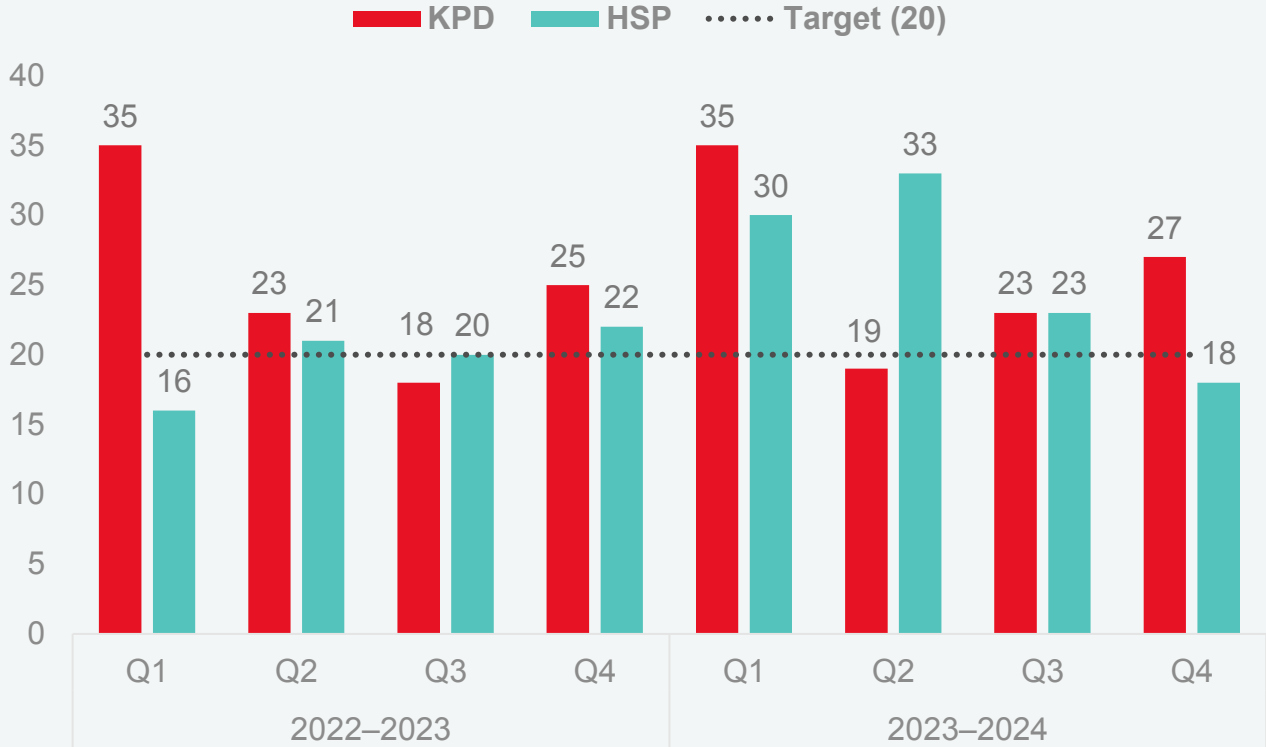
Comparison of donation and transplantation rates

Fiscal year 2023–2024 as compared to fiscal year 2022–2023*



Canadian Blood Services interprovincial kidney programs match donors with patients in need.

Total transplants over previous eight quarters



- In 2023–2024, just over 70 per cent of the kidneys donated through the Kidney Paired Donor (KPD) program were shipped to the transplant candidate’s hospital. These donors did not have to travel and leave their support system to donate their kidney.
- The Highly Sensitized Patient (HSP) program marked the ten-year anniversary of the first transplant facilitated by the program, which took place in March 2014.

Heart program for sensitized and high-status patients

- The heart program for sensitized and high-status patients launched in October 2023.
- Supporting a consistent national approach for the allocation of hearts for patients with the most urgent need or the hardest to match patients, the program has supported **17 transplants** to date.



Supporting the organ and tissue donation and transplantation system in Canada



The **pan-Canadian organ donation and transplantation governance framework**, expected to increase accountability and trust and improve health outcomes for patients, has been approved.



Promoted the consistency of provincial public education and awareness activities through *Leave Well (Partir Bien)*.

**Safety, surveillance,
innovation, quality
and research**



Mitigating the risk of climate change on the system

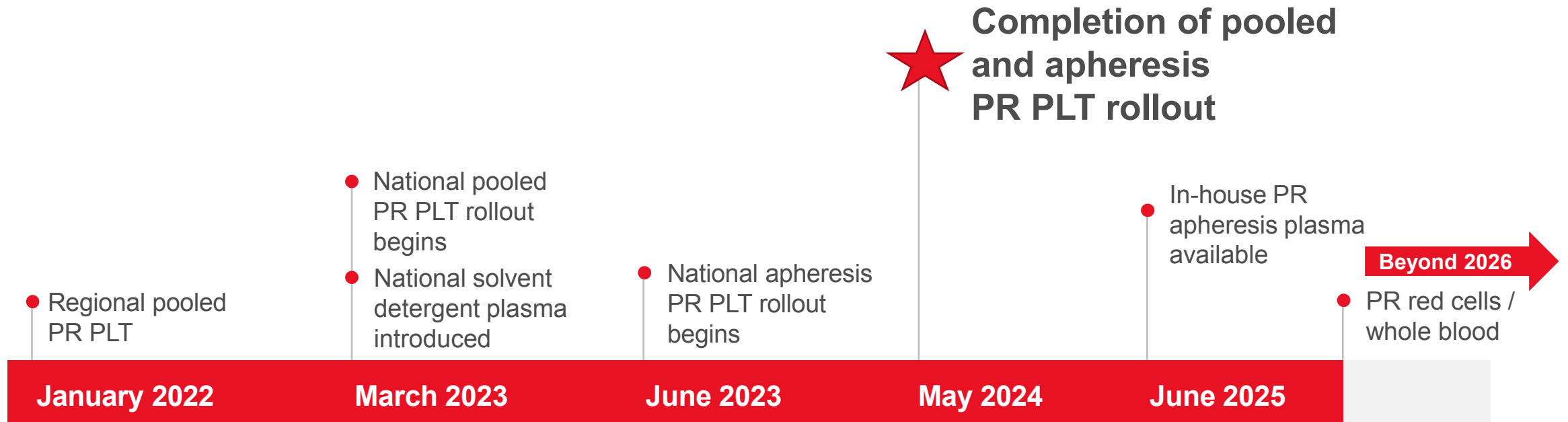
- Climate change is expected to impact the risk of encountering certain infections in Canada.
- To monitor potential threats to the safety of the blood supply, Canadian Blood Service will establish a multi-year surveillance program focused on vector-borne parasites with an in-house testing capability.
- Tick-borne pathogens will be the focus in the coming years.

Post-implementation of new donor eligibility approach

- In September 2022, Canadian Blood Services moved to a sexual behaviour-based screening approach to assess the risk for sexually transmitted human immunodeficiency virus (HIV) and hepatitis C virus (HCV).
- There has been no change in HIV prevalence per 100,000 donations following the implementation of this screening approach.
- On implementation, 0.17% of donors were deferred from donating and the deferral rate has now decreased to approximately 0.06%.
- Evaluations continue on the impact of pre-exposure prophylactic (PrEP) medications on the safety of the blood supply.

Pathogen inactivation roadmap

As of May 2024, 100 per cent of platelets (PLT) manufactured are pathogen reduced (PR).

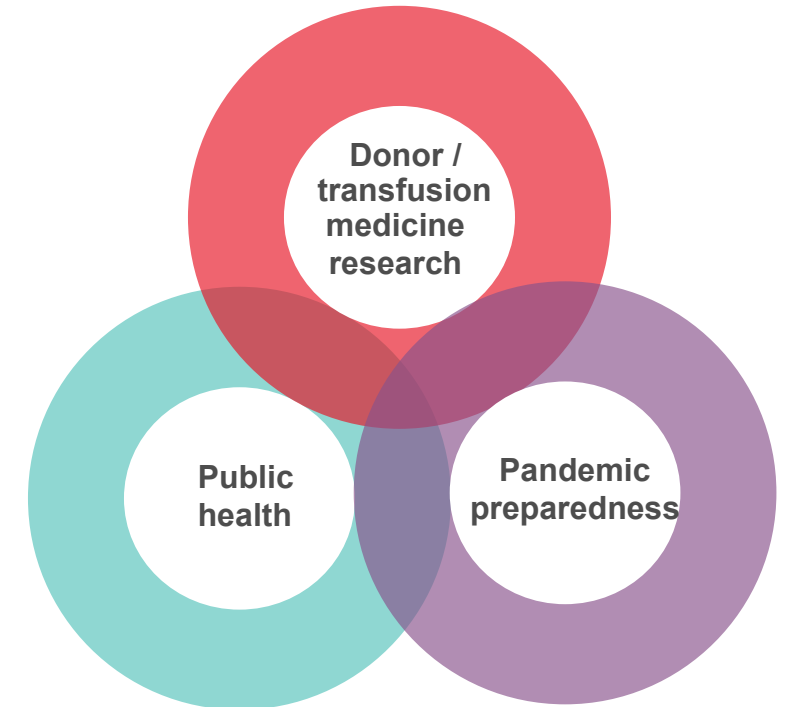


100 per cent of quality indicators are meeting targets

Performance indicator	Target	Quarterly average
Number of fresh blood products recalled due to errors, accidents or post-donation information	≤ 300	223
Number of serious errors or accidents related to fresh blood products	0	0
Number of Health Canada critical observations	0	0
Number of adverse transfusion reactions	< 20	10
Number of type A non-conformance reports	≤ 2	0
Number of serious stem cell events	0	0
Number of recalled plasma units for fractionation	< 150	72
Timely execution of supplier recalls	< 24 hours	1 executed in <24 hours

Leveraging our capabilities to add value to the public health system

- Canadian Blood Services is seen as a **key contributor** to population health, public health initiatives and pandemic preparedness.
- In collaboration with the COVID-19 Immunity Task Force, Canadian Blood Services tested more than **one million blood samples** for COVID-19 antibodies, providing valuable data for the COVID-19 Seroprevalence Study.
- Donation research and clinical studies would not be possible **without donor and/or product data**.
- Efforts are underway to **further enhance** our capabilities and capacity.



High-impact research and development

- **Promoting appropriate utilization:**
 - Improving clinical practices: albumin use.
- **Ensuring an adequate supply:**
 - Maximizing the expansion of stem cells from cord blood.
- **Minimizing the adverse effects of transfusion:**
 - Understanding why antibodies can prevent a harmful immune response.
- **Optimizing quality:**
 - Examining how donor factors affect red blood cell quality.
- **Replacing or improving blood products through new therapies or technologies**
 - Developing a proof-of-concept CAR-T laboratory.

Sustaining Canada's Lifeline



*Cara, blood recipient and
cord blood stem cell donor*

Our strategic commitment to sustainability



Reflect and serve the diversity of Canada.



Create an inspiring, caring place to work.

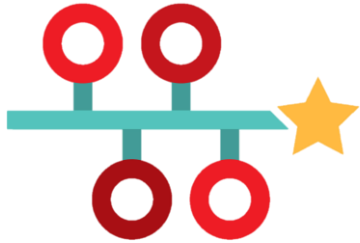


Operate a climate-resilient, sustainable lifeline.

**Reflect and serve
the diversity of
Canada**



Advancing diversity, equity and inclusion (DEI) as a shared responsibility



Making DEI an organizational priority:
DEI strategic priorities were integrated into our Strategic Plan 2024+ and sustainability framework, aligning with broader organizational objectives.



Leveraging survey data:
Results from the 2023 employee inclusion survey were shared organization-wide, guiding our efforts and tracking progress towards DEI goals.



Cultivating inclusion:
Key events like Black History Month and International Women's Day celebrated diversity and empowered under-represented voices.

Advancing Reconciliation as a shared responsibility

- **Monthly engagement sessions**
 - Established monthly drop-in sessions for leaders to gain insights into Indigenous engagement and learning from members of the First Peoples Group consulting agency.
- **Engaging Indigenous communities**
 - The Lethbridge plasma donor centre is building relationships with the Blood tribe. In January, they hosted Elders for a smudging and learning opportunity around the history and meaning behind smudging.



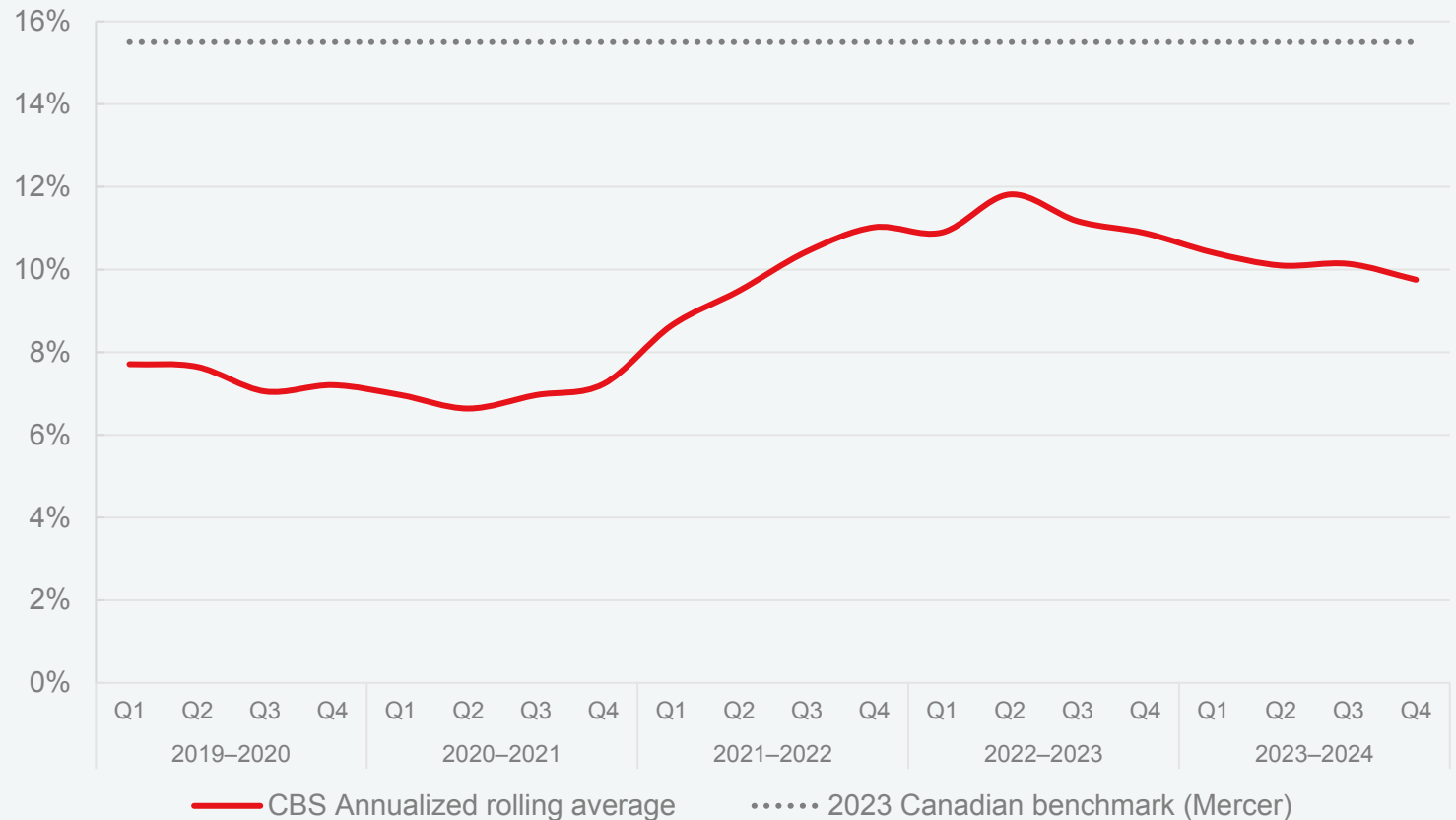
**Create an
inspiring, caring
place to work**



Workforce shifts post-pandemic

- Canadian Blood Services has **experienced workforce shifts** in the aftermath of the pandemic.
- Voluntary turnover remains above pre-pandemic levels, however, we have witnessed a **gradual decline in overall turnover** this fiscal year.

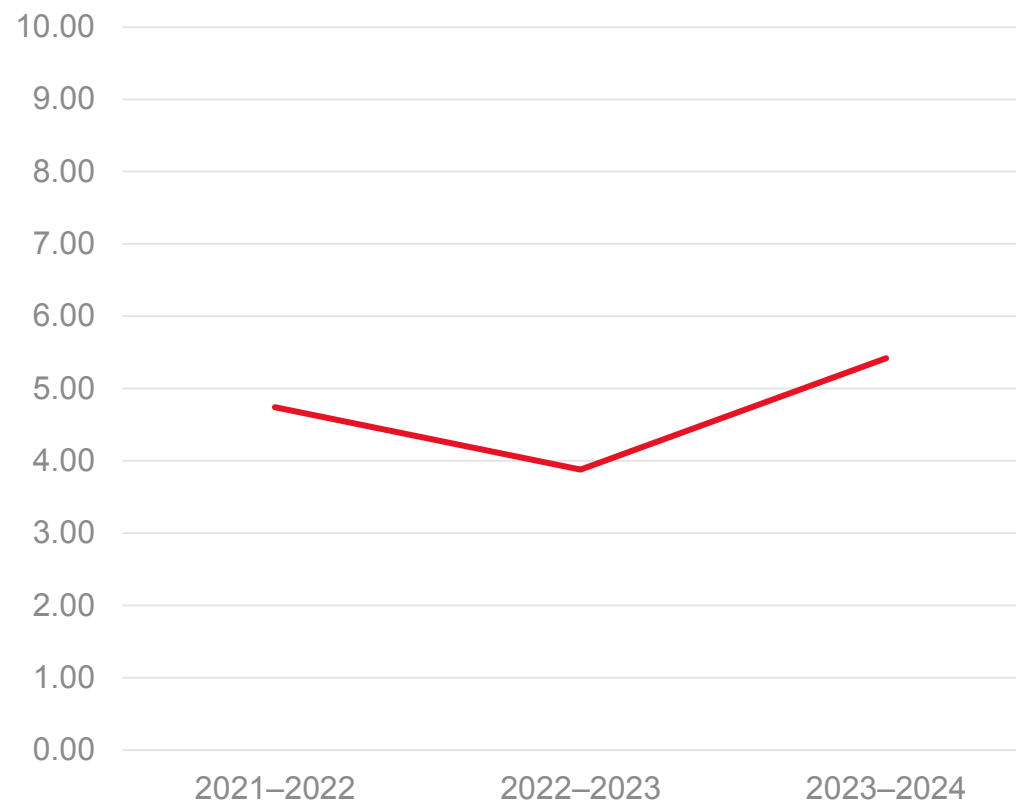
Voluntary turnover 12 month rolling average



Occupational Health and Safety: Worker's Compensation Board (WCB)-reportable injury frequency

- The increase in injury frequency observed this fiscal year may be a result of normalizing operations in the post-pandemic environment.
- **The most common types of worker injuries include manual material handling injuries** and exposure to biological or chemical agents.

Reportable injury frequency



Supporting the well-being of employees



- Introduced the new **Bright Breaks Platform** comprised of both live and on-demand seven-minute breaks to better assist employees in incorporating wellness into their days. Breaks are focused on such well-being themes as stretching, moving, breathing, nutrition, and learning.



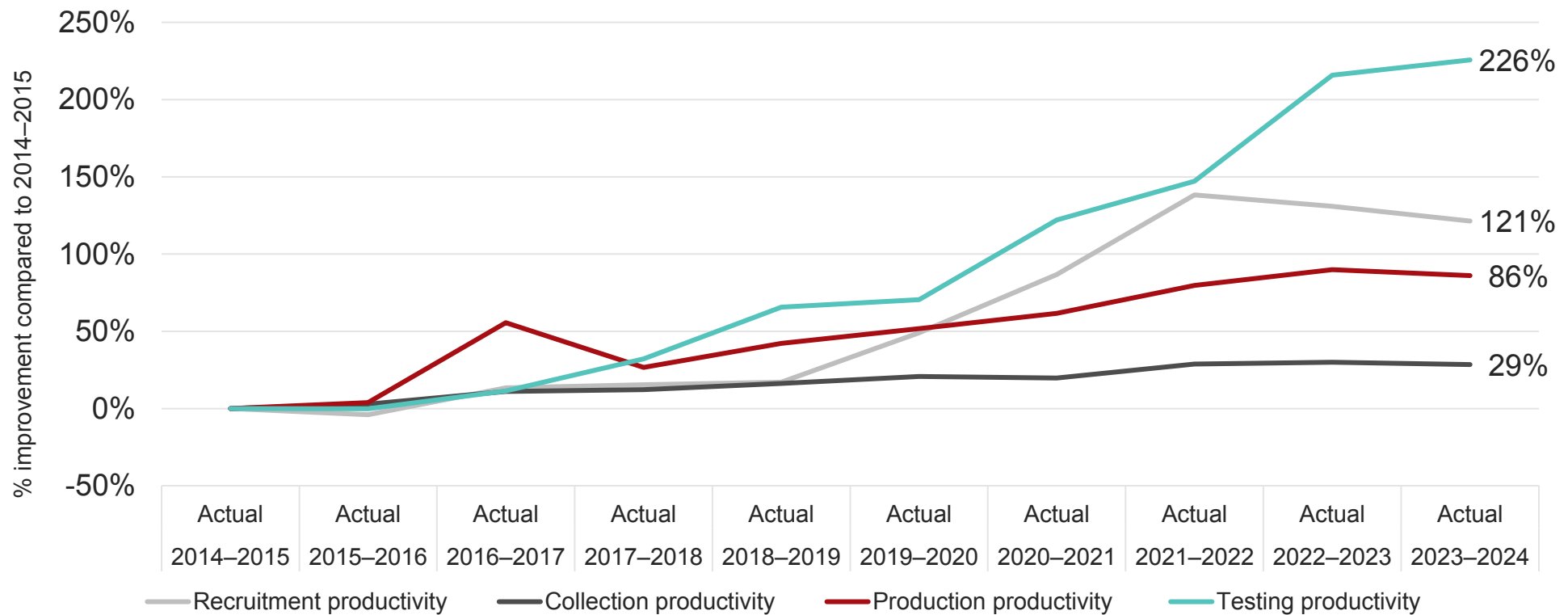
- Launched the **Peer Support Network**, composed of employees available to provide welcoming, confidential and empathetic peer support to colleagues using active listening and resource referral.

Financial results

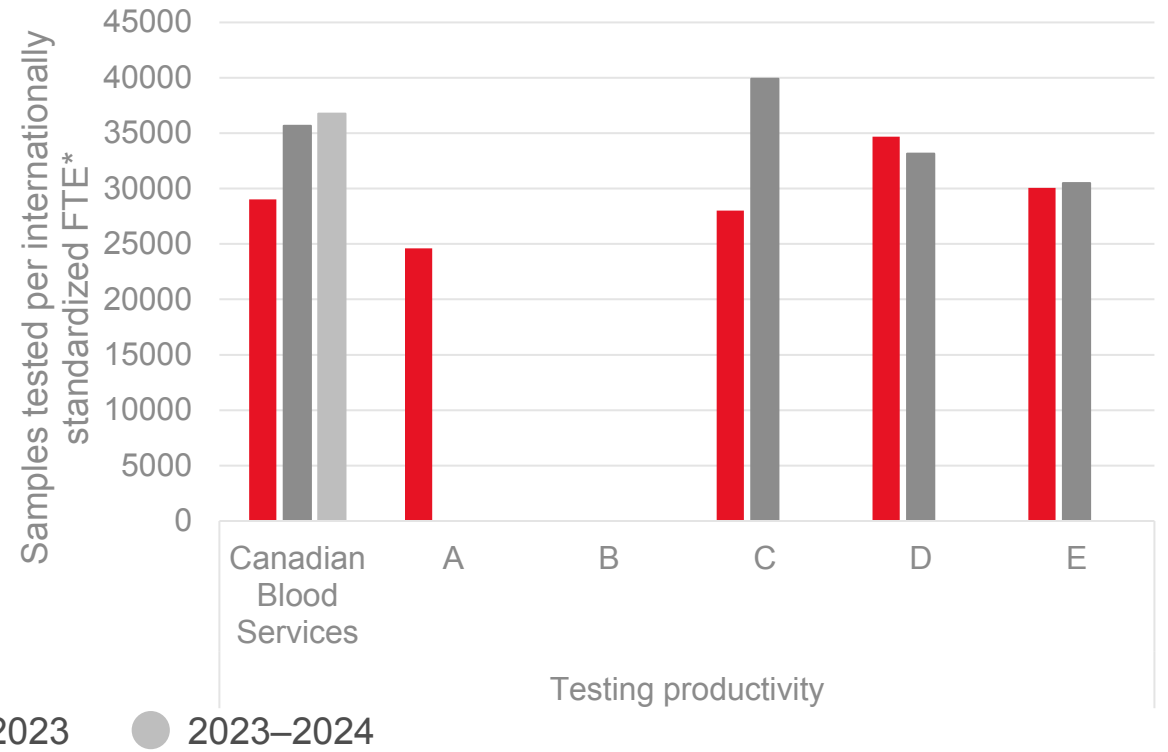
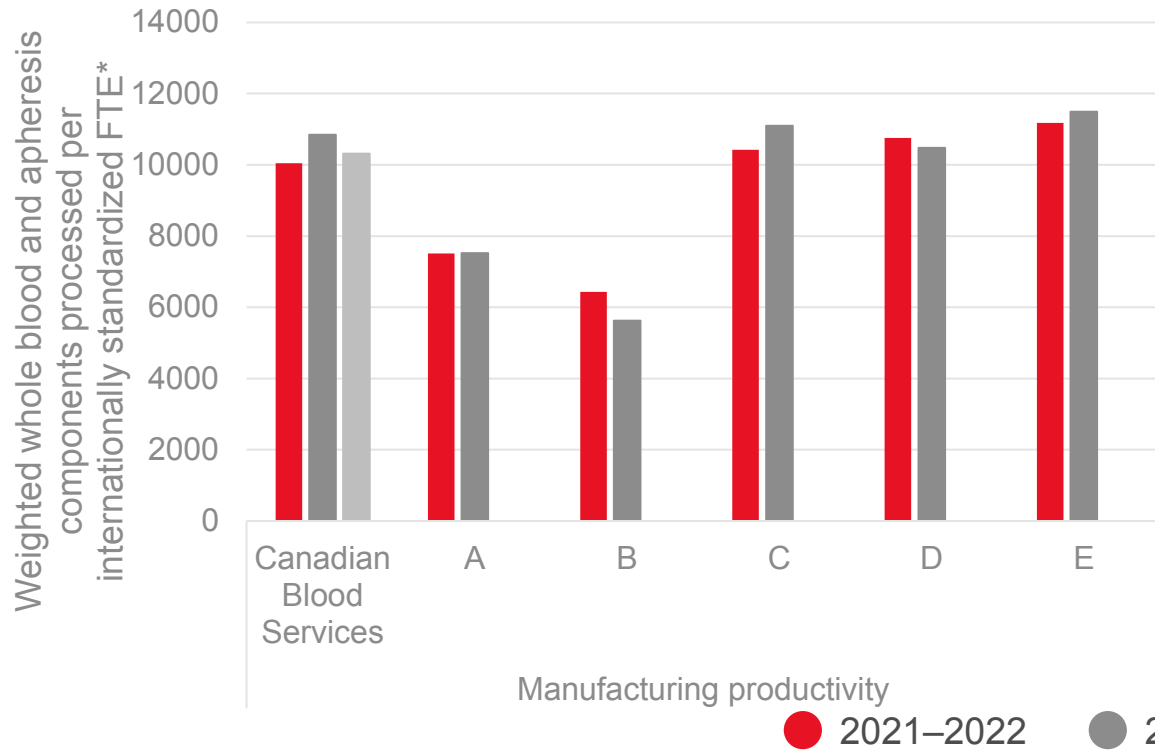


Productivity improvements

Changing donor behavior has put pressure on collection and recruitment productivity in recent years. Investments in donor recruitment and collections have been necessary to keep pace with growing demand.



Productivity improvements



* Full-time equivalent (FTE)

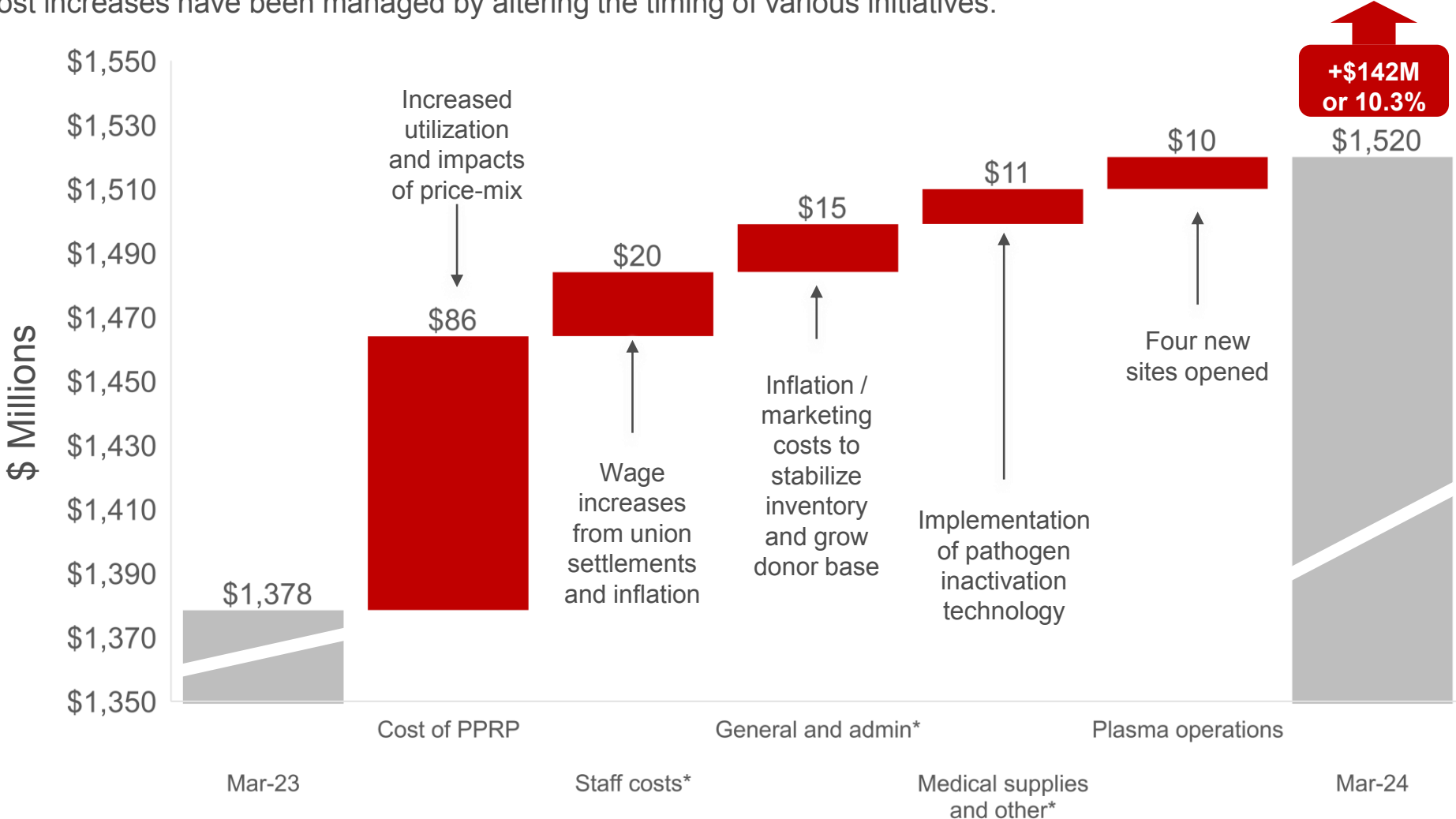
Financial position

Key takeaway: Management will continue to monitor liquidity ratio and days of unreserved cash and are exploring avenues for additional funding. Mitigating this risk is the availability of our line of credit.

Financial target	Trend	Current status	Insights												
Working capital 2.8:1 > 1:1 target	<table border="1"> <tr><th>Period</th><td>Mar-23</td><td>June-23</td><td>Sep-23</td><td>Dec-23</td><td>Mar-24</td></tr> <tr><th>Value</th><td>3.4</td><td>3.8</td><td>3.0</td><td>3.2</td><td>2.8</td></tr> </table>	Period	Mar-23	June-23	Sep-23	Dec-23	Mar-24	Value	3.4	3.8	3.0	3.2	2.8		<ul style="list-style-type: none"> • Healthy current working capital driven by timely members payments and inventory reaching targets.
Period	Mar-23	June-23	Sep-23	Dec-23	Mar-24										
Value	3.4	3.8	3.0	3.2	2.8										
Liquidity ratio 0.7:1 >0.7:1 target	<table border="1"> <tr><th>Period</th><td>Mar-23</td><td>June-23</td><td>Sep-23</td><td>Dec-23</td><td>Mar-24</td></tr> <tr><th>Value</th><td>0.8</td><td>1.1</td><td>1.0</td><td>0.9</td><td>0.7</td></tr> </table>	Period	Mar-23	June-23	Sep-23	Dec-23	Mar-24	Value	0.8	1.1	1.0	0.9	0.7		<ul style="list-style-type: none"> • Days unreserved cash and liquidity ratio dipped below target as a member drew down on a long-standing advance.
Period	Mar-23	June-23	Sep-23	Dec-23	Mar-24										
Value	0.8	1.1	1.0	0.9	0.7										
Days unreserved cash 11 at year end 14 to 45 days target	<table border="1"> <tr><th>Period</th><td>Mar-23</td><td>June-23</td><td>Sep-23</td><td>Dec-23</td><td>Mar-24</td></tr> <tr><th>Value</th><td>13</td><td>18</td><td>16</td><td>15</td><td>11</td></tr> </table>	Period	Mar-23	June-23	Sep-23	Dec-23	Mar-24	Value	13	18	16	15	11		<ul style="list-style-type: none"> • Anticipated growth in PPRP is expected to increase inventory which will put further pressure on liquidity and days of unreserved cash.
Period	Mar-23	June-23	Sep-23	Dec-23	Mar-24										
Value	13	18	16	15	11										
PPRP inventory weeks on hand (WoH) 10.2 at year end 8.7 to 10.7 target	<table border="1"> <tr><th>Period</th><td>Mar-23</td><td>June-23</td><td>Sep-23</td><td>Dec-23</td><td>Mar-24</td></tr> <tr><th>Value</th><td>10.6</td><td>10.6</td><td>11.0</td><td>10.4</td><td>10.2</td></tr> </table>	Period	Mar-23	June-23	Sep-23	Dec-23	Mar-24	Value	10.6	10.6	11.0	10.4	10.2		<ul style="list-style-type: none"> • PPRP inventory levels have been within target since mid-year 2023–2024. • In Q3, the organization started receiving immunoglobulin manufactured from plasma collected in Canada.
Period	Mar-23	June-23	Sep-23	Dec-23	Mar-24										
Value	10.6	10.6	11.0	10.4	10.2										

Statement of operations — year-over-year actuals

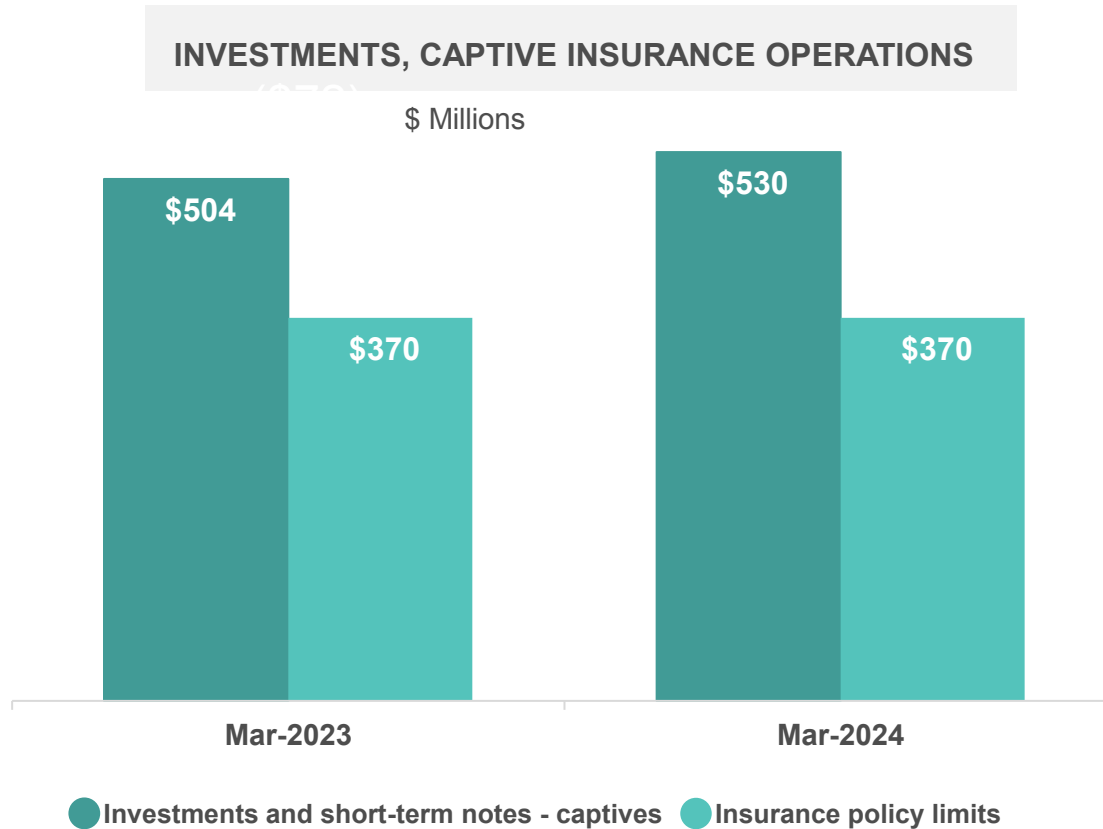
Key takeaway: Wage pressures due to union settlements, increased marketing and recruitment spend and other inflationary cost increases have been managed by altering the timing of various initiatives.



* Excludes costs related to plasma operations sites.

Captives

Key takeaway: Captives continue to be in a healthy position.



- Members provided funding for the CBS Insurance Company Limited (CBSI) primary insurance policy in its early years. Those funds were invested, and the investments have increased such that no further funding has been required for several years.
- The portfolio is conservatively managed with a diversified portfolio consisting of 75 per cent fixed income securities and 25 per cent equity securities.
- Investments continue to be sufficient to cover insurance policy limits.

Increasing resilience, adaptability, diversity, inclusivity and strength in Canada's Lifeline

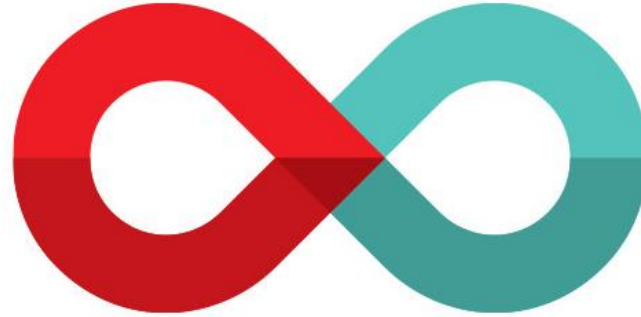
- In 2023–2024, we continued to deliver **safe, high-quality products**, rebuilding our red blood cell inventory and intensifying our commitment to building and diversifying the donor base.
- As we begin executing on our new strategic plan, we **are relentlessly working to prepare to respond to the challenges** on the horizon and to meet the future needs of Canadian health care.



Together, we are Canada's Lifeline



Alan,
*blood donor, stem cell registrant,
PFL member, volunteer*



Kim,
blood recipient