



**Aaron,**  
*blood donor*

**Melissa,**  
*stem cell recipient*

# 2023–2024: Mid-year review

Presentation by Dr. Graham Sher, Chief Executive Officer  
Open Board Meeting  
Dec. 7, 2023



**Canadian  
Blood  
Services**

BLOOD  
PLASMA  
STEM CELLS  
ORGANS  
& TISSUES

PUBLIC

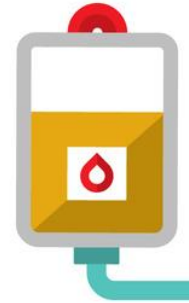
# Access to safe, high-quality products



**Continued delivering** safe, high-quality products and services while ensuring fiscal responsibility and continuing to meet demand.



**Increased** red blood cell and immunoglobulin demand and shifting donor behaviour is creating a challenging environment.



Strategy to **increase** plasma self-sufficiency is showing results.



Donor experience and a deep commitment to diversity, equity and inclusion **continue to guide our actions.**

# Adaptability and resilience in a challenging environment

## Fresh blood products

Meeting hospital demand. Work is underway to **increase blood product inventory levels** while demand for blood products has increased.

## Plasma

Plasma sufficiency, **volumes and donor base size increasing**. Eight plasma donor centres now operating.

## Stem cells

Enhancing processes to **navigate intermittent supply chain disruptions with minimal impact**. Continuing to meet patient demand.

## Organs and tissues

Deceased donations **increased**; living donations **decreased**. The Heart Program for Sensitized and High-Status Patients **went live**.



# 25th anniversary

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- For 25 years, we have worked diligently to **earn the trust of people in Canada.**
- The unwavering dedication and shared commitment of our employees, volunteers, donors and community of partners have **enabled us to ensure that lifesaving products and services get to patients in need.**





# Blood for Life

*Simone, blood donor,  
PFL member*



**Canadian  
Blood  
Services**

BLOOD  
PLASMA  
STEM CELLS  
ORGANS  
& TISSUES

# Increased demand coupled with collections challenges



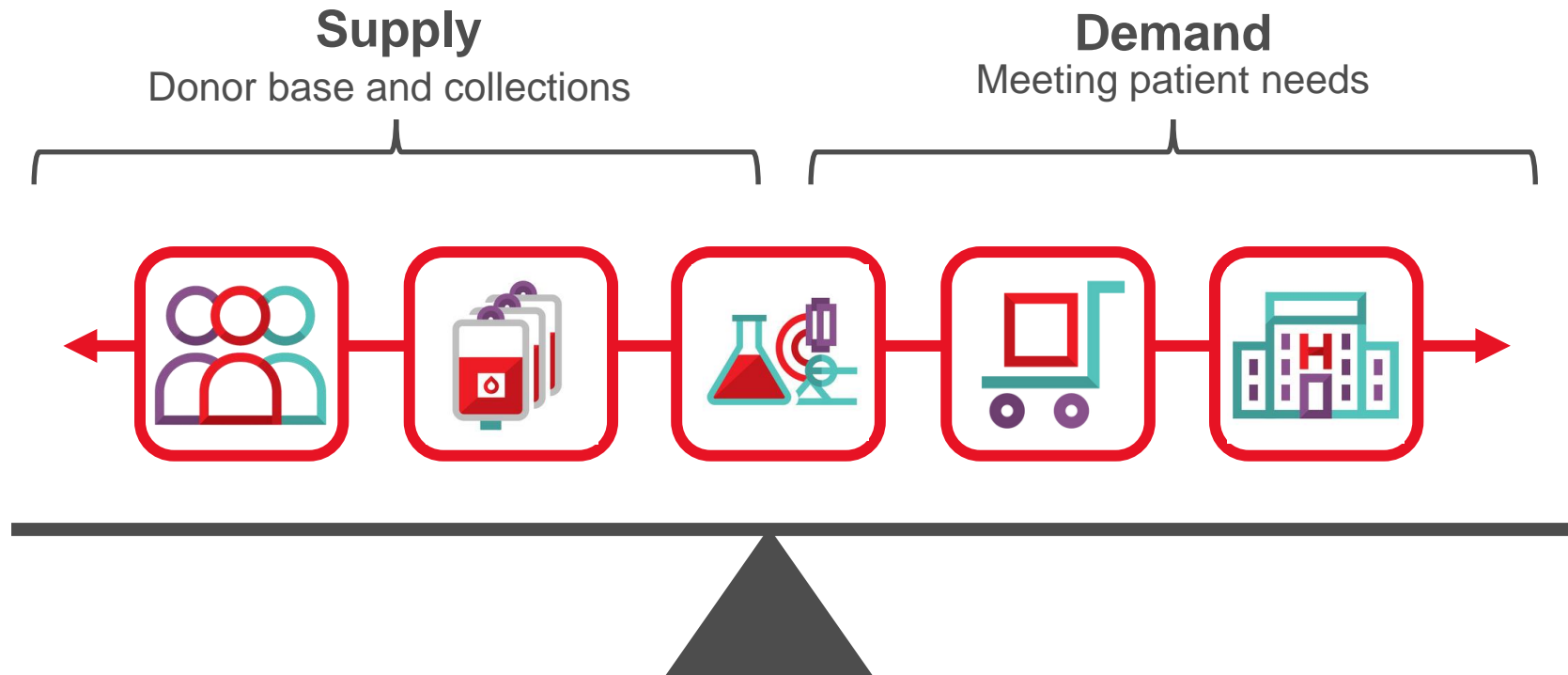
Demand for red blood cells has **increased** throughout the fiscal year.

A+ A- B+ B-  
O+ O- AB+ AB-

Whole blood collections have **increased modestly**; however, red blood cell inventory has been **less than optimal**.

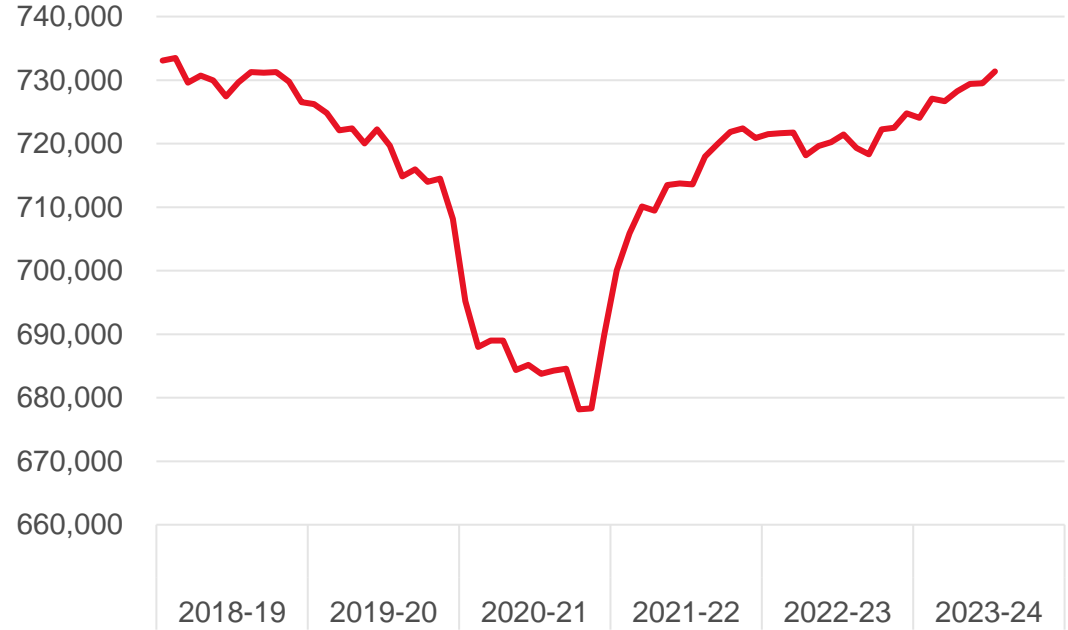
# Meeting patient needs is about keeping supply and demand in balance

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# The demand for red blood cells (RBCs) is returning to pre-pandemic levels

**Total RBCs issued**  
Trailing twelve months



- Post-pandemic, hospital activities are **progressively increasing**, resulting in increased demand for RBCs.
- **Demand has continually been met** with a smaller, highly committed donor base.

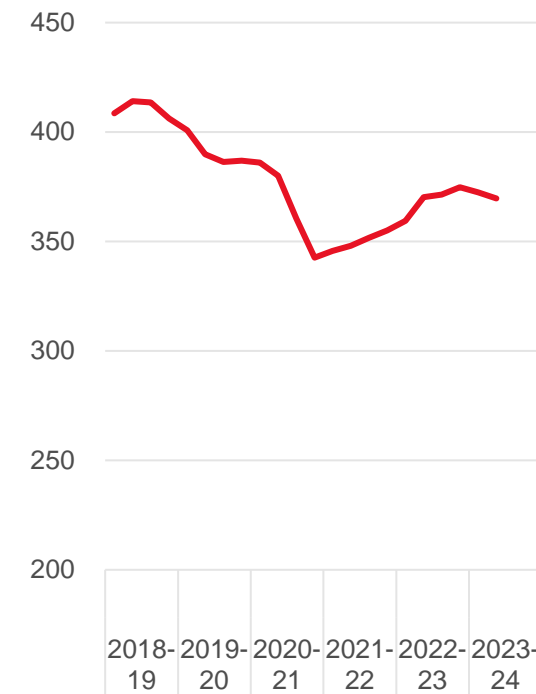


# Supply is being met by a smaller number of dedicated donors

## SUPPLY

Whole blood (WB) donor base (000s)

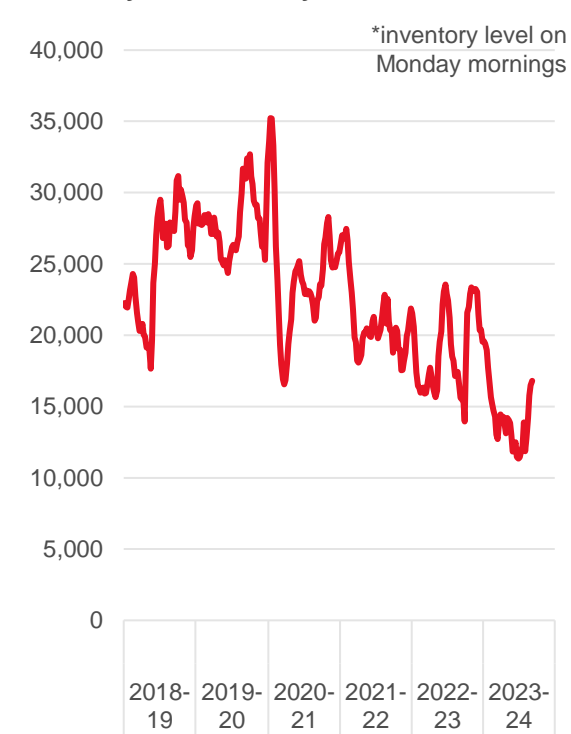
Quarter end result



Total WB collections Trailing twelve months



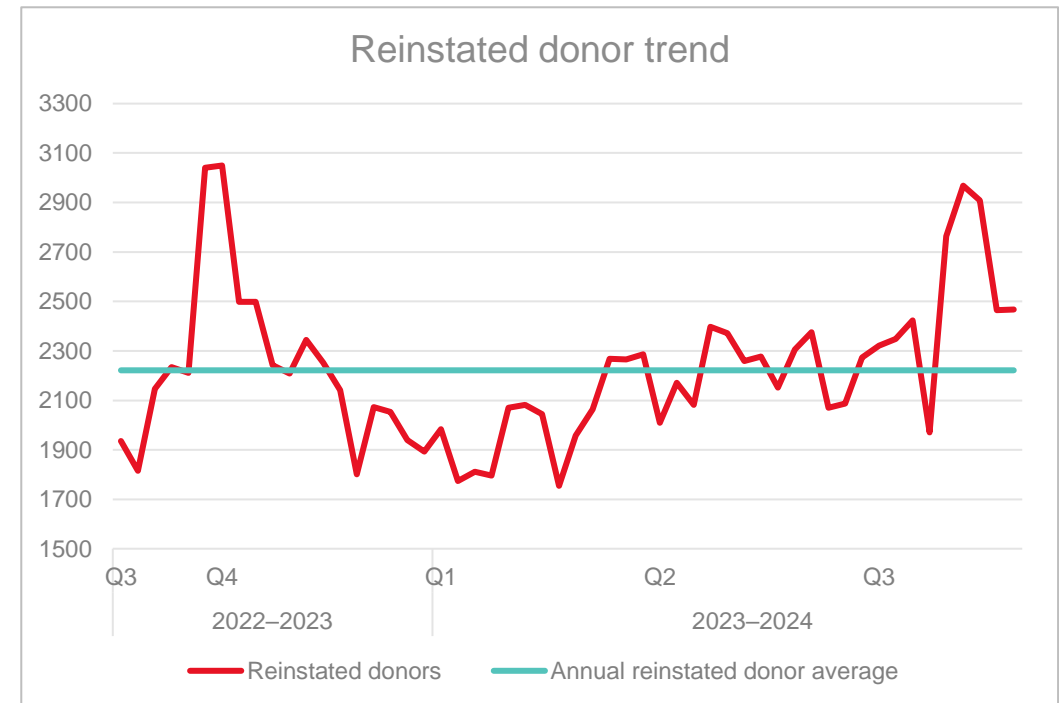
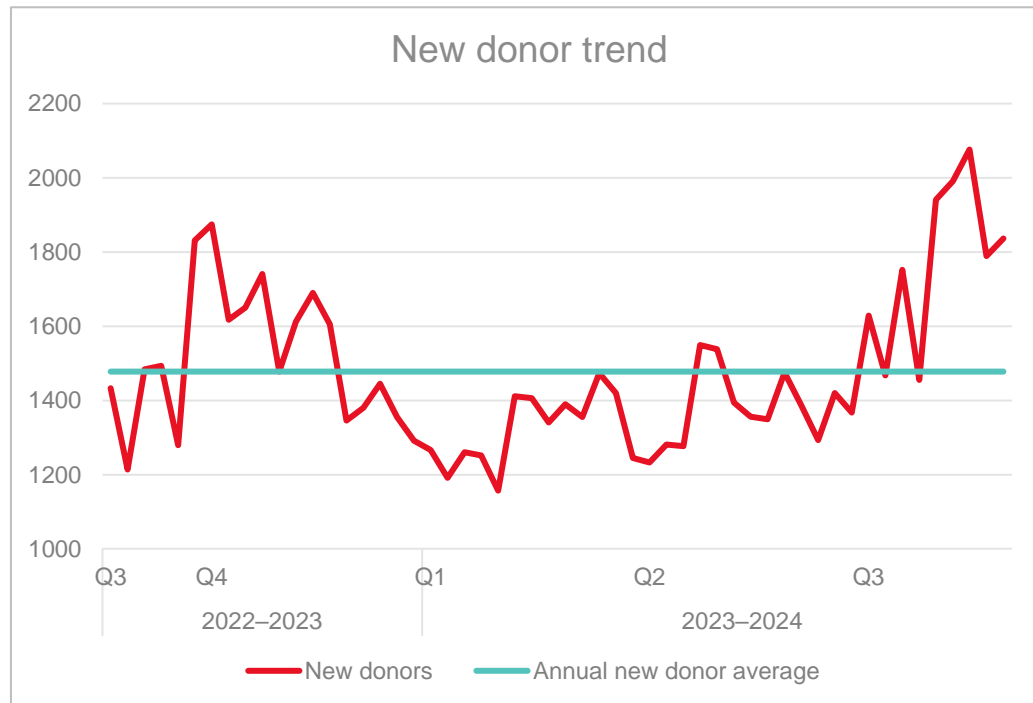
RBC inventory Weekly\* inventory level



- The supply of RBCs requires a **continuous balance between** the number of donors, the amount of blood collected and the right amount of inventory.
- Our smaller donor base and lower collections have resulted in a **slow degradation of our RBC inventory.**
- In order to get back to a healthy inventory level, we are **hyper-focused on giving every eligible donor an opportunity to donate** and attracting and acquiring new donors.

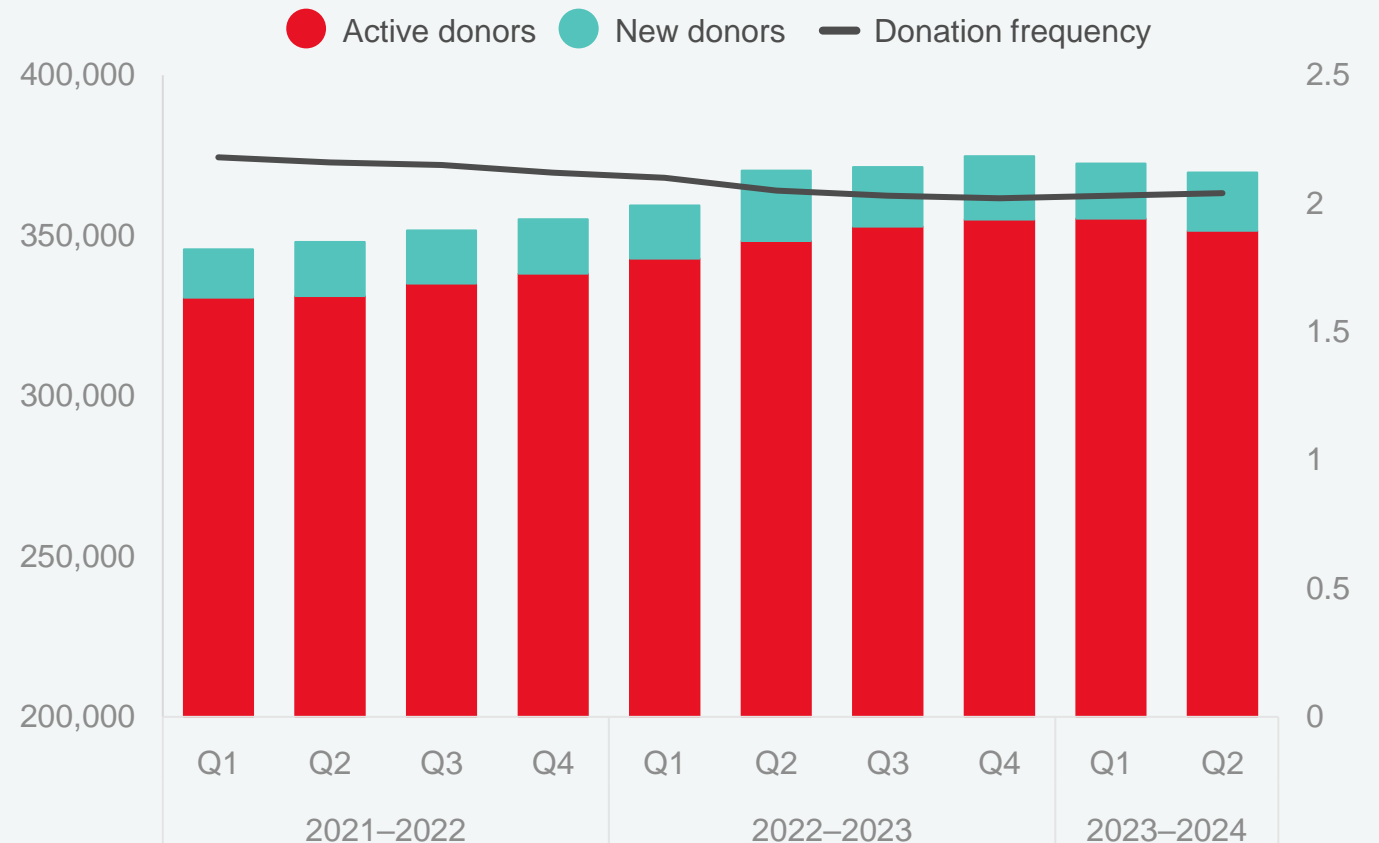
# Recruitment tactics are driving donor base growth

Although efforts are strategically focused on engaging the known existing donor base, the **acquisition of new donors is improving.**



# The required growth of the donor base is significant

- The whole blood donor base **increased** since its lowest point during the COVID-19 pandemic.
- However, the year-end donor base target is **over 410K active donors**.
- A significant portion of that growth will be **achieved by expanding where we collect**.
- Additional work continues on advancing plans to grow, build and sustain a diverse, resilient and healthy donor base.



# 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**.

## Donor base

Ethnicity (groups)	Active donors	% active donors	Canadian Population
Black	2,544	0.7%	4.3%
Arab	5,313	1.4%	1.9%
Indigenous	5,350	1.5%	5.0%
Hispanic/Latino	5,698	1.5%	1.6%
Other	19,633	5.3%	2.6%
South Asian	22,138	6.0%	7.1%
Asian	23,571	6.4%	7.7%
White	273,291	73.9%	69.8%

# Building trust with communities to address donation barriers and increase donor diversity

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- In partnership with diverse communities across the country, we are working to remove barriers to inclusion for donors and registrants, to ensure patients of all backgrounds and identities receive the life essentials they need.
  - Addressing anti-Black racism and other engagement work with Black communities.
  - Showing up for sickle cell communities to listen, learn and celebrate.
  - Funding collaborative research to foster donor diversity.
  - Working with the Canadian Council of Muslim Women to co-create and implement solutions to make the donor experience more inclusive.



*Andy, blood recipient, living with sickle cell disease*

# Evolving the donor deferral criteria

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- Canadian Blood Services is committed to ensuring the safety and sufficiency of Canada's blood and plasma supply, while also broadening participation in **Canada's Lifeline**.
- We continuously review and update 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.



# Assessing policies for transfusion-transmitted malaria

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- Malaria is an illness caused by parasites that are transmitted mainly through the anopheles mosquito bite. In humans, the malaria parasites infect the liver and the red blood cells and can hide unnoticed for decades, without causing any symptoms.
- **We are currently reviewing** current policies and mitigation strategies for transfusion-transmitted malaria and evaluating whether alternative risk management options exist that would allow for the continued safety of the blood supply while building a more inclusive donor base.
- Donor deferrals for malaria disproportionately impact diverse Black and South Asian communities. We are in the process of addressing, with stakeholders and community members, the exclusionary impact and stigma perpetuated by these criteria.

# Removing the vCJD donor deferral criteria

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- Variant Creutzfeldt-Jakob Disease (vCJD) is linked with exposure to Bovine Spongiform Encephalopathy — ‘Mad Cow Disease’ — and is **caused by a prion.**
- In 2022, the vCJD deferral for people who had spent time in most Western European nations and Saudi Arabia was **removed.**



Health Canada approved our request to fully remove the vCJD geographic deferral criteria.



All donors previously deferred because of time spent in United Kingdom, Republic of Ireland, and France are now invited to donate.

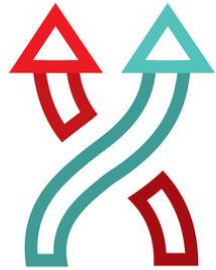
# Plasma for Life

*Lincoln, source plasma recipient*



# Why do we collect plasma?

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- 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.
  - Over 20 specific proteins are purified from human plasma; immunoglobulin (Ig) is one of the most commonly used products and demand is increasing.
  - Canadian Blood Services is responsible for ensuring an appropriate level of plasma sufficiency in Canada to secure immunoglobulin.

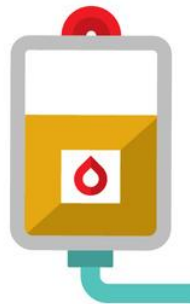
# Demand for immunoglobulin is starting to **recover**

- Currently the estimated demand for immunoglobulins in 2023–2024 is **expected to grow 7.8 per cent over 2022–2023**
  - While SCIg leads most of that growth (+12.3 per cent), it still only accounts for 26 per cent of total immunoglobulin volume
- The unanticipated growth in 2023–2024 is a quicker recovery to pre-pandemic levels than expected. We currently expect 8 per cent growth in future fiscal years but recognize the uncertainty of the changing environment.

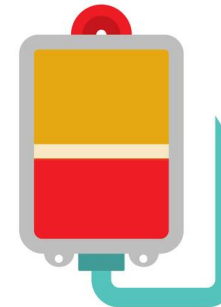


# How is plasma for fractionation collected?

Canadian Blood Services collects plasma for fractionation in two ways:



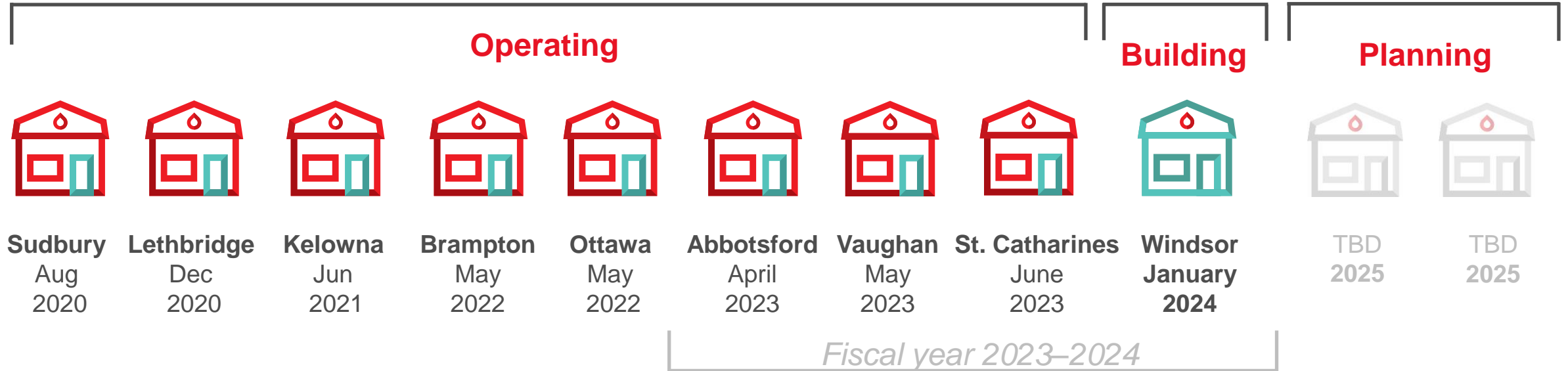
- **Source plasma** — collected by apheresis at dedicated plasma donor centres and select other donor centres.



- **Recovered plasma** — plasma collected through processing whole blood units.

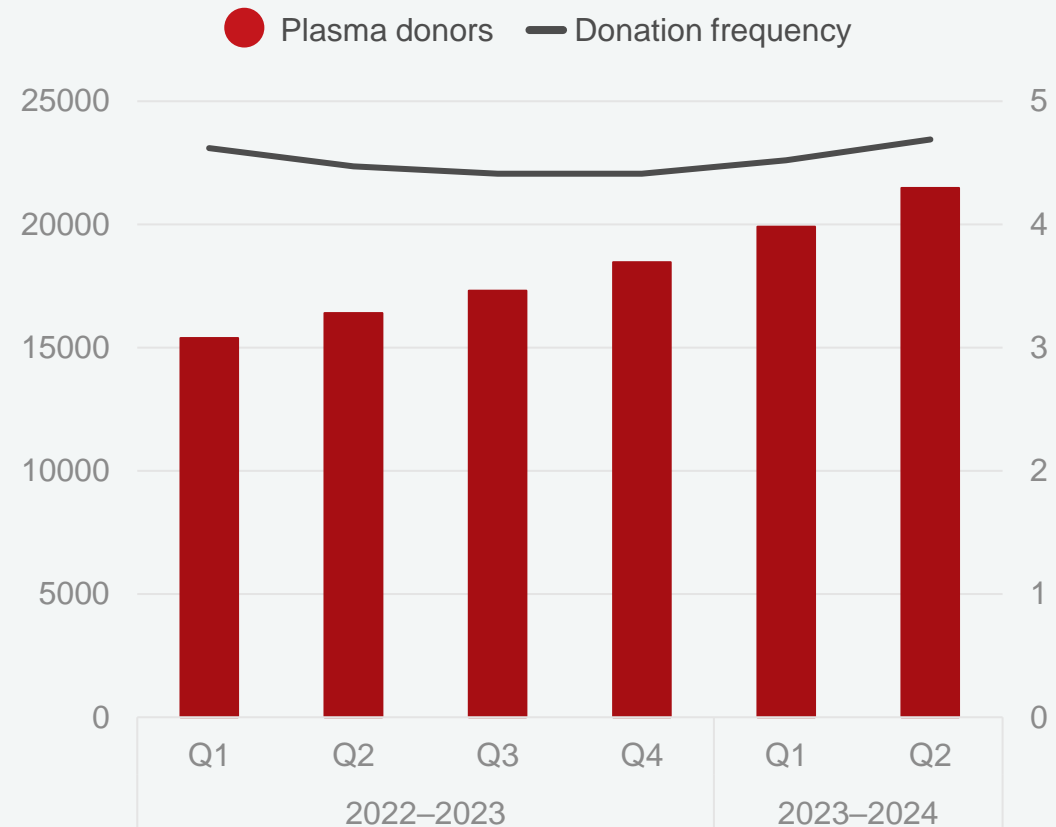


# Building the network of plasma donor centres

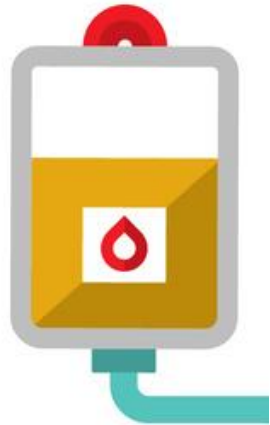


# Building the plasma donor base

- In Q2, the annual donation frequency for source plasma grew to **4.7 across the plasma collection network**, an increase of 6 per cent from 2022–2023.
- Building awareness and engaging prospective plasma donors has proven challenging, as behaviour and expectations have changed post COVID-19. **We continue to explore novel ways to attract new donors to plasma donation.**



# Plasma collection at the plasma donor centres



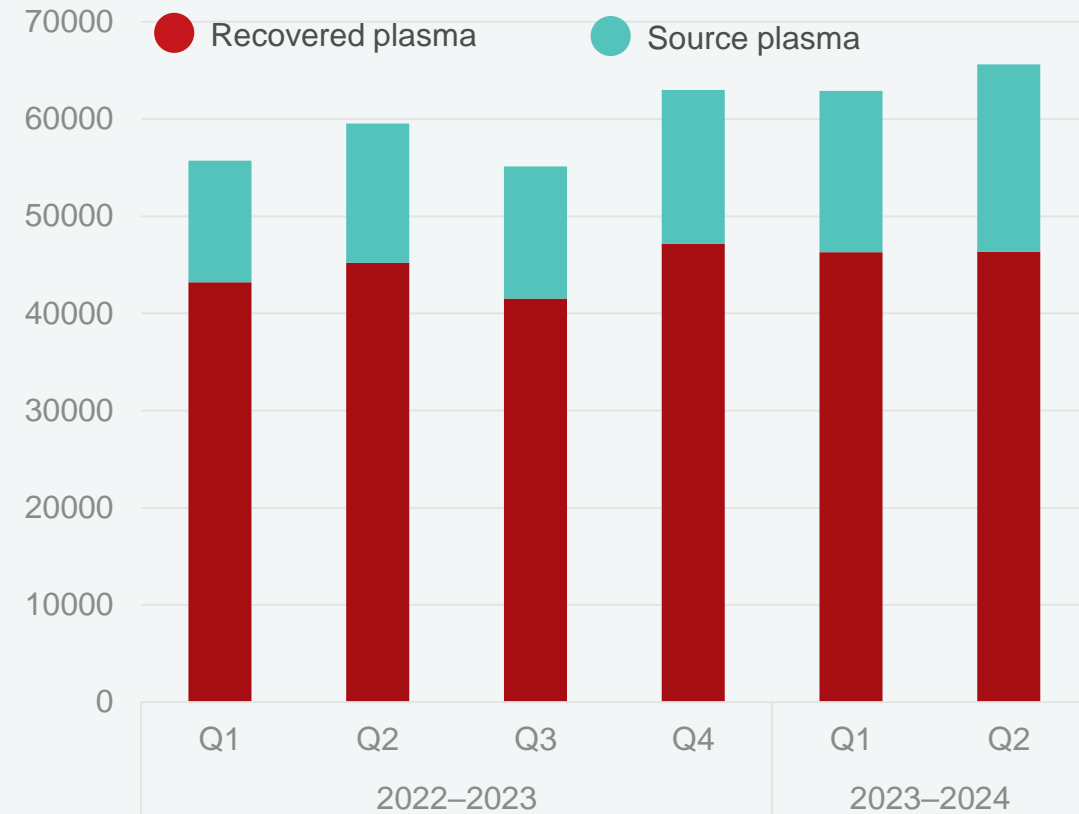
**100,000**

litres of plasma collected since August 2020

# Total plasma sent for fractionation

- **9 per cent more plasma shipped** for fractionation in 2023–2024 than in Q3 and Q4 of 2022–2023.

Volume of plasma (L) shipped for fractionation



# Increasing the domestic security of immunoglobulin supply

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



Grifols will collect and manufacture immunoglobulins in Canada **exclusively for patients in Canada.**



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



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.**

## IMMUNOGLOBULIN SUFFICIENCY

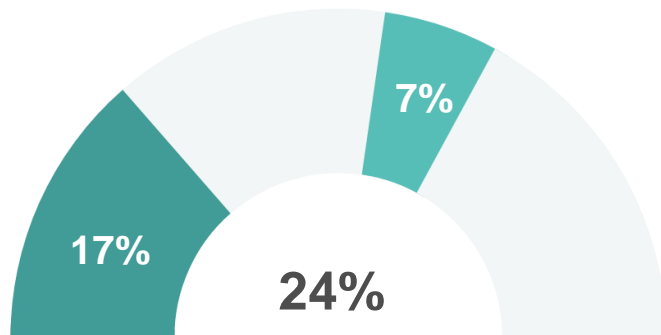
17%

Canadian Blood Services  
contribution

7%

Grifols' contribution

24% TOTAL



## Canadian immunoglobulin sufficiency

- Immunoglobulin sufficiency of 24 per cent, with contributions from Canadian Blood Services and Grifols



# Plasma protein and related products



We are Canada's Biological Lifeline



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

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- New immunoglobulin product (HyQvia) is now listed on the PPRP formulary with no restrictions and is available for hospitals to order.
- The Conference of Deputy Ministers approved the recommendation to list GLASSIA — a medicine used in the treatment of adults with alpha-1 antitrypsin deficiency — on the PPRP formulary. We are working with the vendor, clinicians, and the patient group to make GLASSIA available for ordering in the coming weeks.
- The provinces and territories have informed us that the new gene therapies for hemophilia will not be reviewed through our joint review process with Canada's Drug and Health Technology Agency (CADTH). We remain in dialogue with them to offer our expertise in the formulary management of hemophilia products.

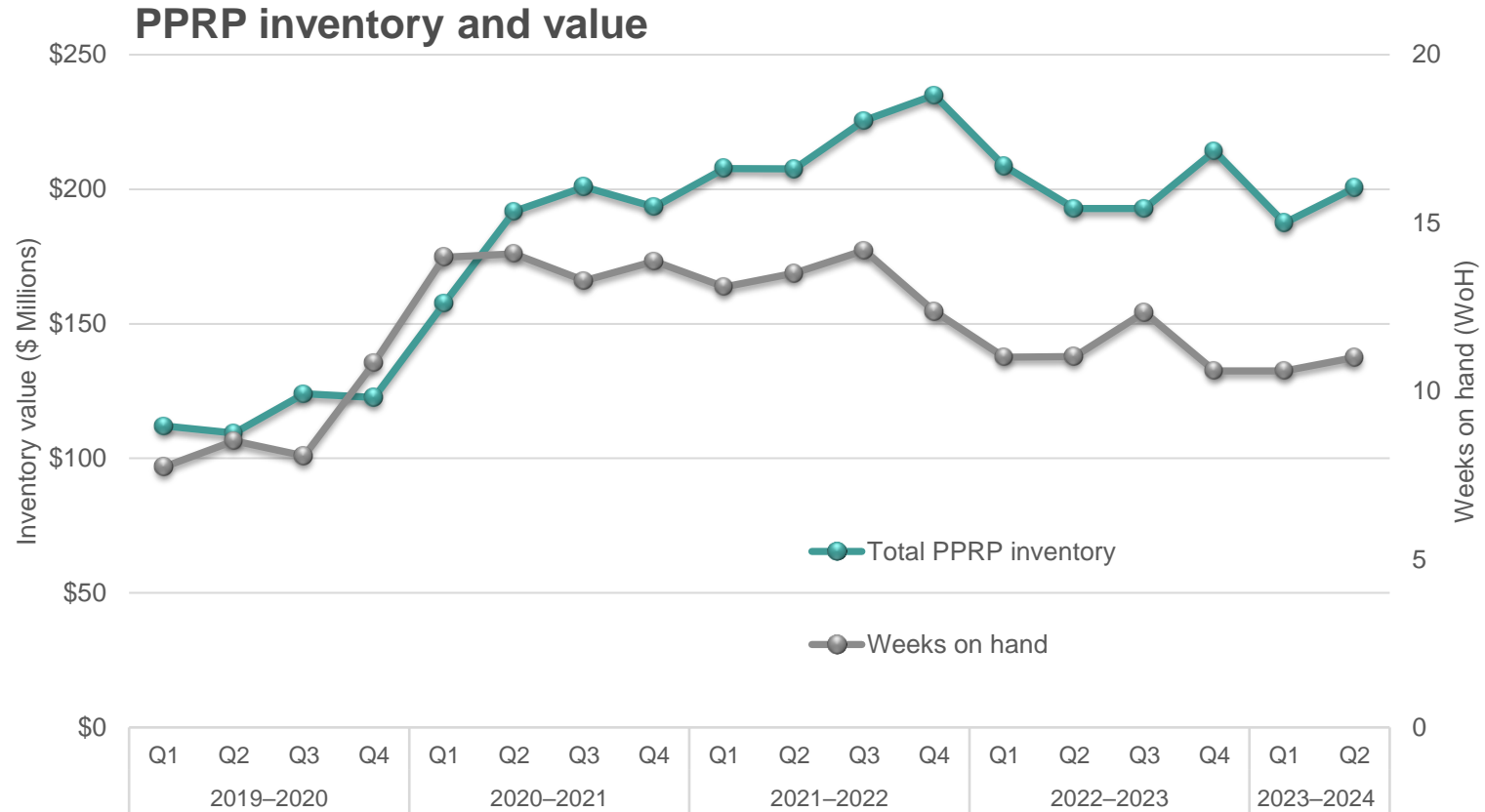


# Continuing to mature the PPRP program to benefit patients

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- The pilot project in Alberta to distribute take-home PPRPs through a specialty pharmacy — Bayshore Pharmacy — **went live in October 2023.**
- A pilot project integrating pharmacists into hemophilia care teams continues to **demonstrate patient and clinician satisfaction as well as significant savings.** A business case was presented to the provinces and territories, proposing a national roll-out to all hemophilia treatment centres.

# PPRP inventory



# Stem Cells for Life

Tom, stem cell recipient



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PLASMA  
STEM CELLS  
ORGANS  
& TISSUES



# The stem cell program continues to focus on meeting patient needs

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Celebrated the **10-year anniversary** of cord blood banking at Canadian Blood Services.



The Cord Blood Bank has been recognized internationally in the World Marrow Donor Association (WMDA) 2022 **rankings as one of the top six banks for its size.**



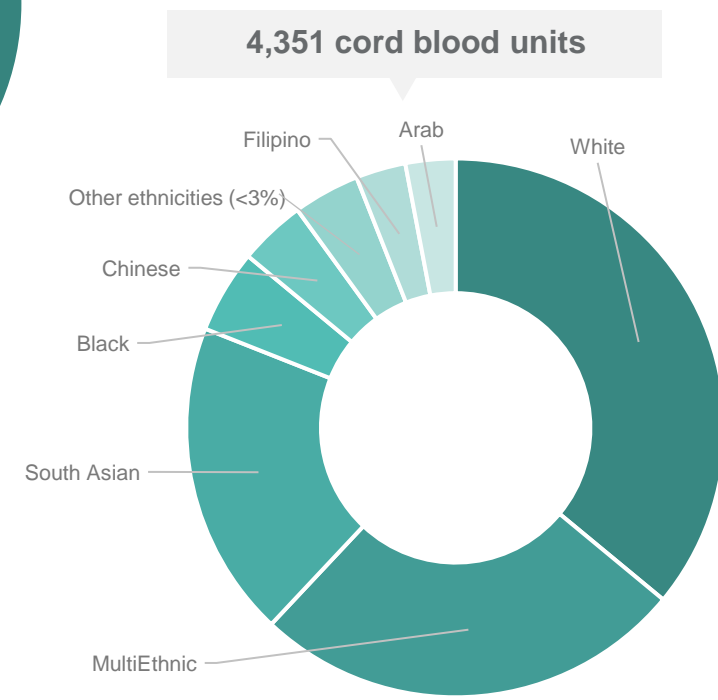
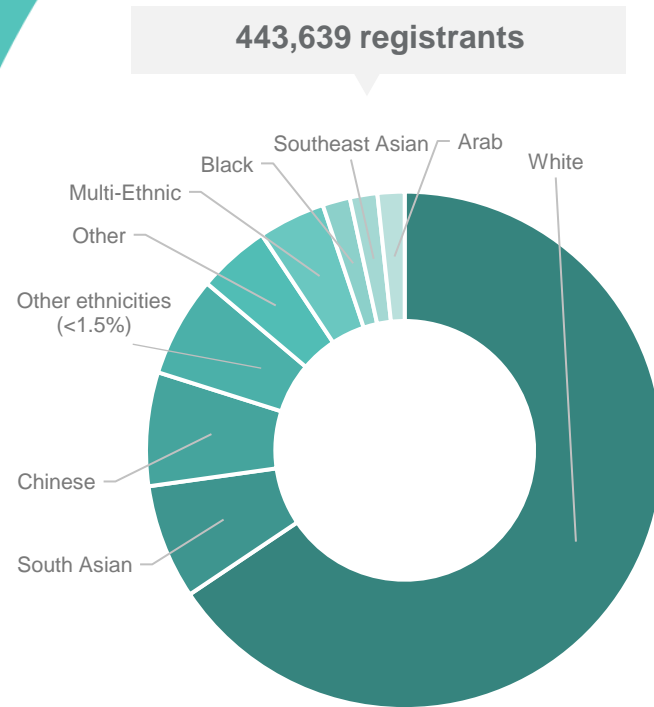
The stem cell program **continues to enhance processes** to navigate intermittent supply chain disruptions with minimal impact.

# Hope on the Hill

In November, Canadian Blood Services and Héma-Québec hosted an event for Parliament Hill staff, giving elected officials and staff a front-row seat in learning about the importance of growing and diversifying the national Stem Cell Registry.



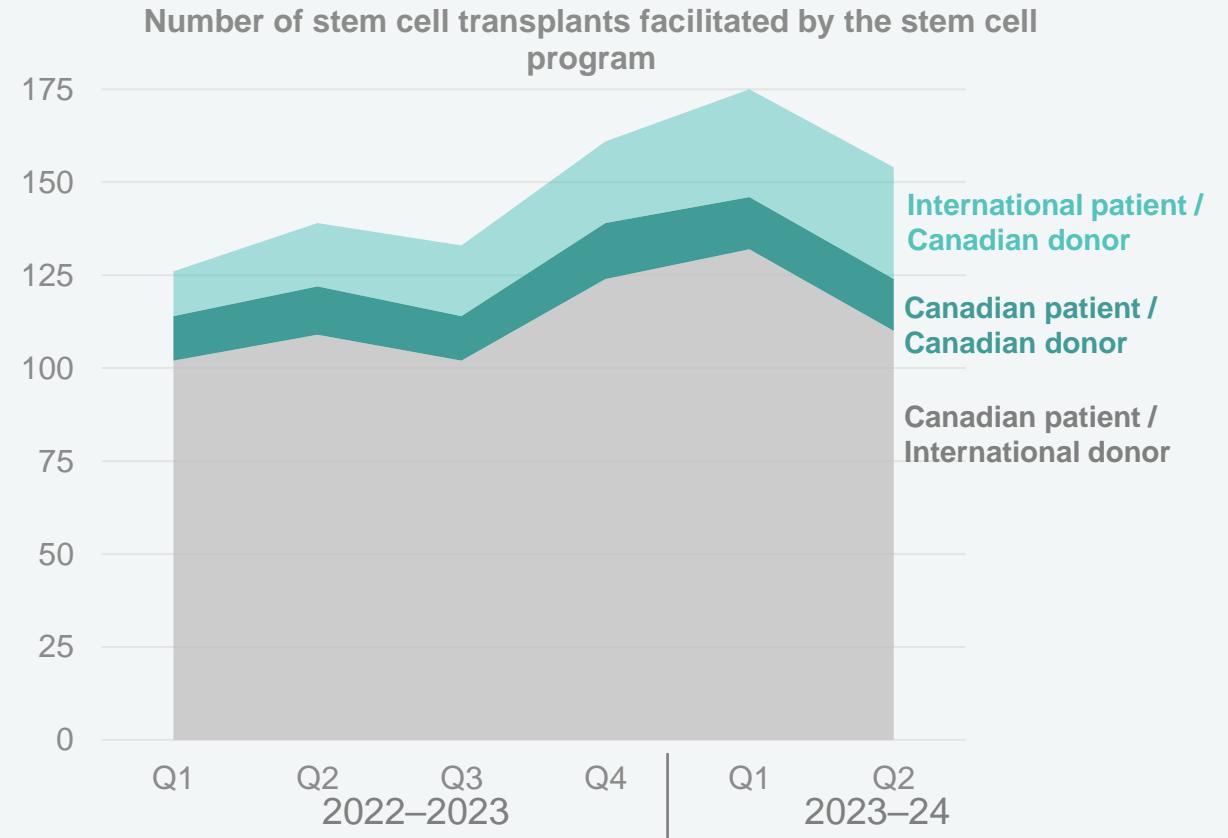
# Stem Cell Registry and Cord Blood Bank: size and diversity





# The stem cell program facilitates transplants for **both** Canadian and international patients

- In 2023–2024 Q1 and Q2, the stem cell program facilitated **329** unrelated transplants:
  - **270** stem cell products for Canadian patients
  - **51** stem cell products for international patients from Canadian donors
  - **Eight** cord blood units distributed for international patients



# Organs & Tissues for Life



Everad, organ recipient

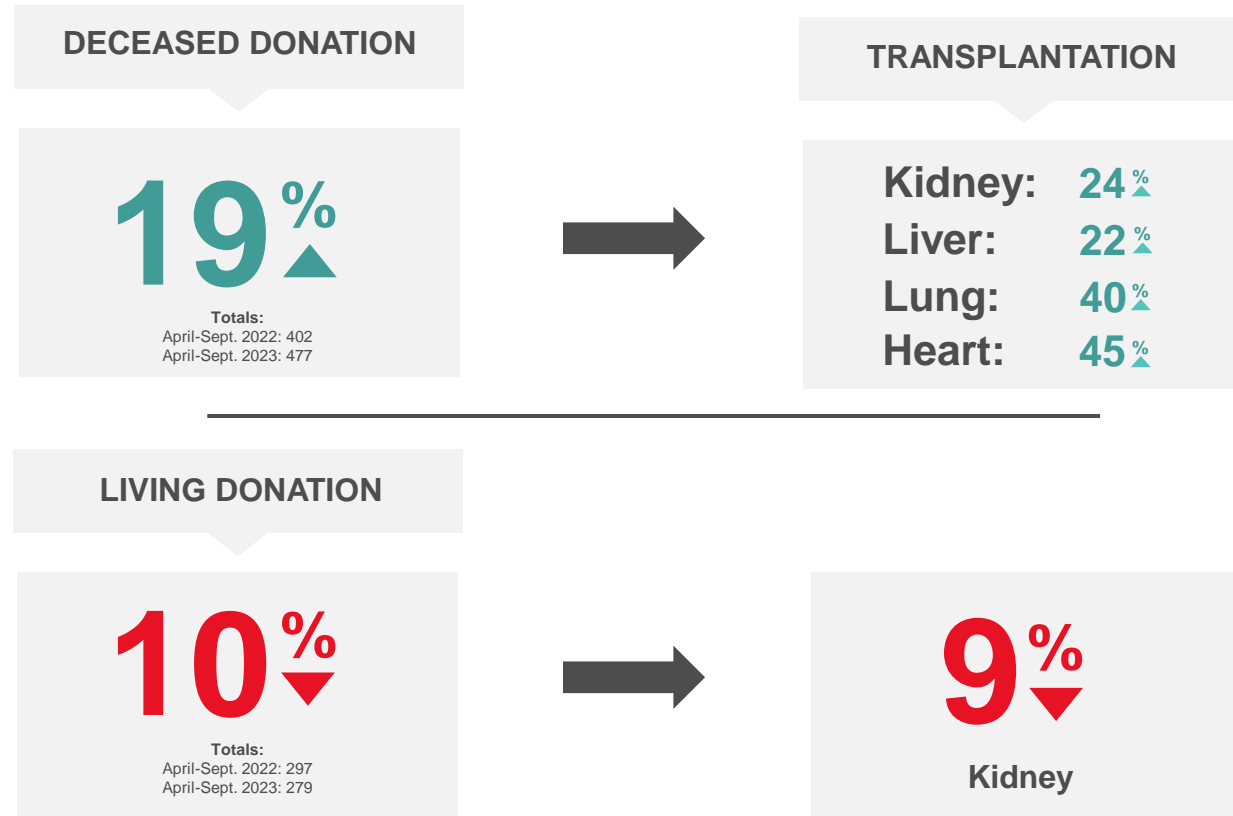


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# Comparison of donation and transplantation rates

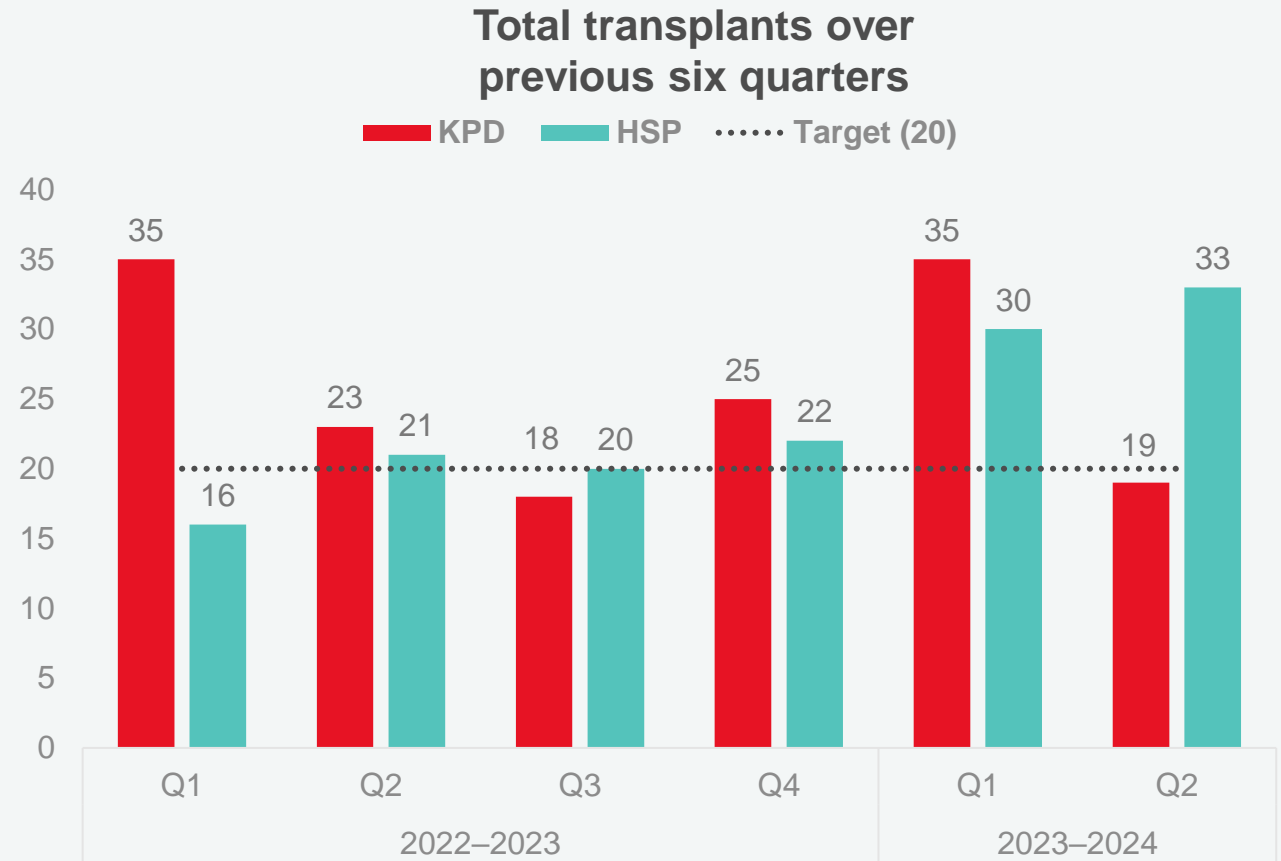
Q1 and Q2 of fiscal year 2023–2024 as compared to Q1 and Q2 of 2022–2023\*



# Canadian Blood Services' kidney transplant programs outperforming targets in 2023–2024

The Kidney Paired Donation (KPD) program's positive results can be attributed to an **increased availability of non-directed anonymous donors and an increased frequency of shipping kidneys** rather than asking donors to travel.

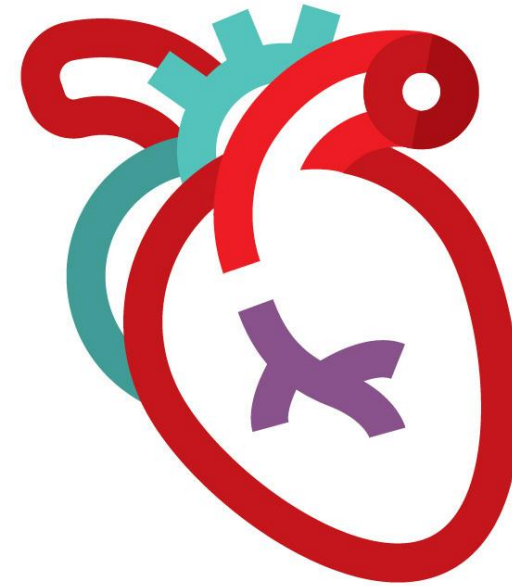
The Highly Sensitized Patient (HSP) program's **higher-than-normal results** in the first half of fiscal year 2023–2024 are within the bounds of historical variance. It's too soon to know if the result represents a new trend.



# Interprovincial organ sharing

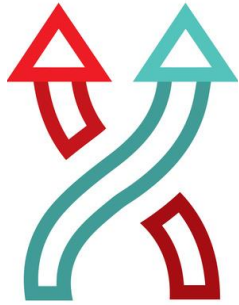
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- Launched the **Heart Program for sensitized and high-status patients**



# System development

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Published a significant update to a clinical guidance that **helps clinicians support patients pursuing organ donation after medical assistance in dying (MAID).**



Supported the production of a documentary that will raise **awareness among youth and underserved populations** about the importance of organ donation and transplantation.



Continued to develop public education and awareness resources and activities **focused on youth, students and teachers.**

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



# Mitigating the risk of climate change on the system

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- **Malaria:** A risk-based decision-making project to review options to manage the risk of transfusion-transmitted malaria is currently underway. Recommendations and next steps will be shared in Q4 2023–2024.
- **Tick-borne pathogens:** a surveillance strategy is in development for Babesia, Anaplasma and Powassan virus.



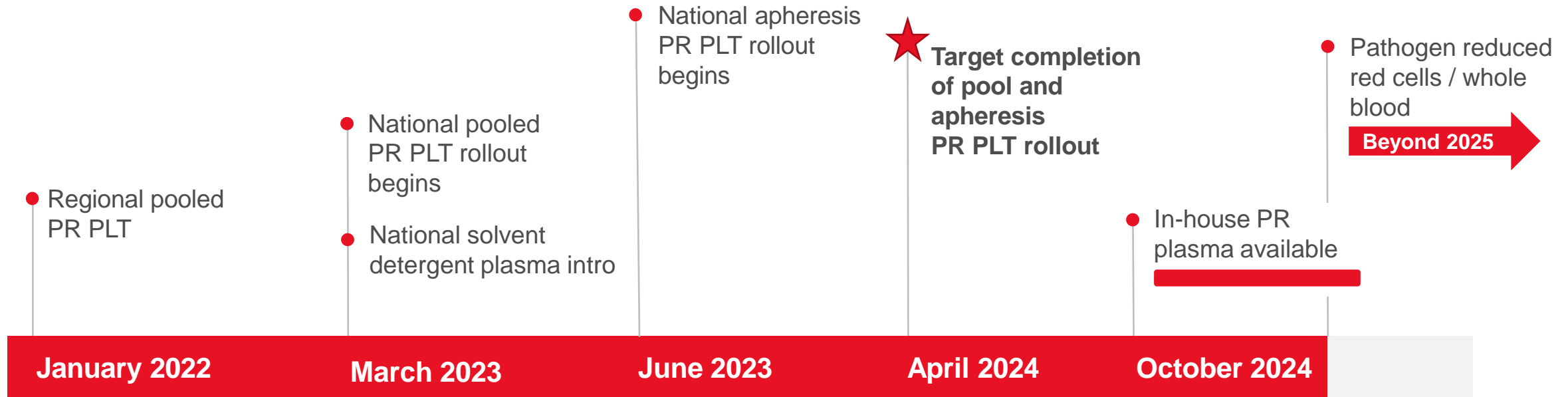
# Leveraging our capabilities to add value to the public health system

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- **Currently underway:**
  - Convalescent plasma clinical trial
  - COVID-19 seroprevalence testing
- **Public health-related activities moving forward:**
  - Immunity task force legacy planning
  - Hema-Net proposal of a pan-Canadian integrated lab-based public health surveillance network
  - Measles serosurvey with Canadian Immunization Research Network

# Pathogen inactivation roadmap

Following Brampton production facility implementation, 80 per cent of all platelets (PLT) will be pathogen-reduced (PR).



# 100 per cent of quality indicators are meeting target

Performance indicator	Target	Quarterly average
Number of fresh blood products recalled due to errors, accidents or post-donation information	≤ 300	246
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	11
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	84
Timely execution of supplier recalls	< 24 hours	None

# High-impact research and development

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- **Preparing for regulatory changes impacting our blood containers**
- **Introducing new products and services**
  - National non-invasive prenatal testing service
  - Advancing whole blood introduction for civilian use
- **Evolving the platelet and plasma portfolios to enhance resiliency**

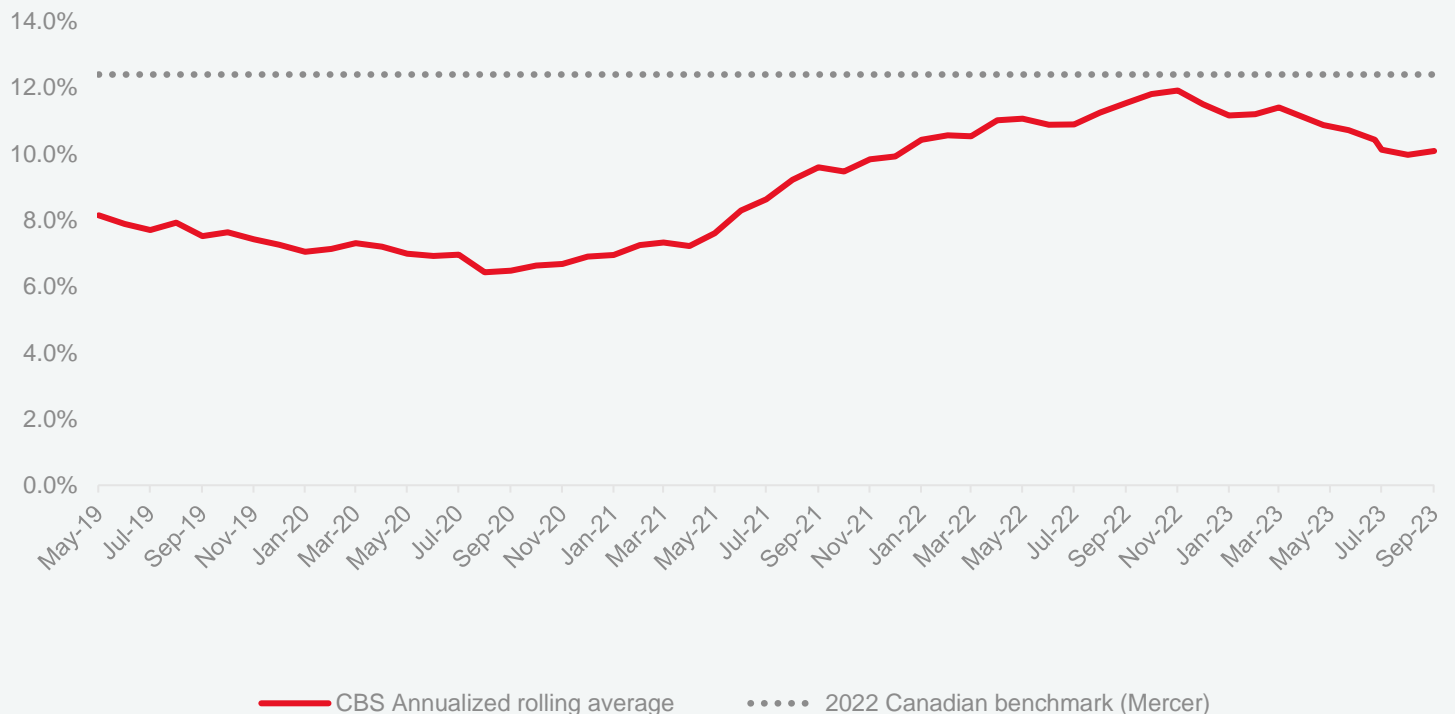
# Workforce and organizational highlights



# Workforce shifts post-pandemic

- Canadian Blood Services has **experienced workforce shifts** in the aftermath of the pandemic.
- Voluntary turnover remains above pre-pandemic levels, but we are witnessing a **gradual decline in overall turnover**.

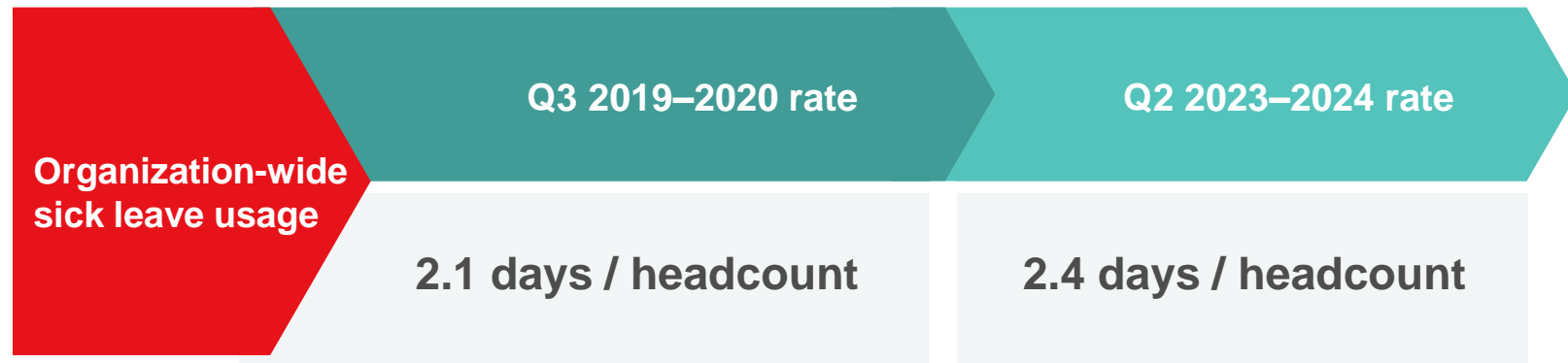
Voluntary turnover  
12-month rolling average



# Workforce shifts post-pandemic

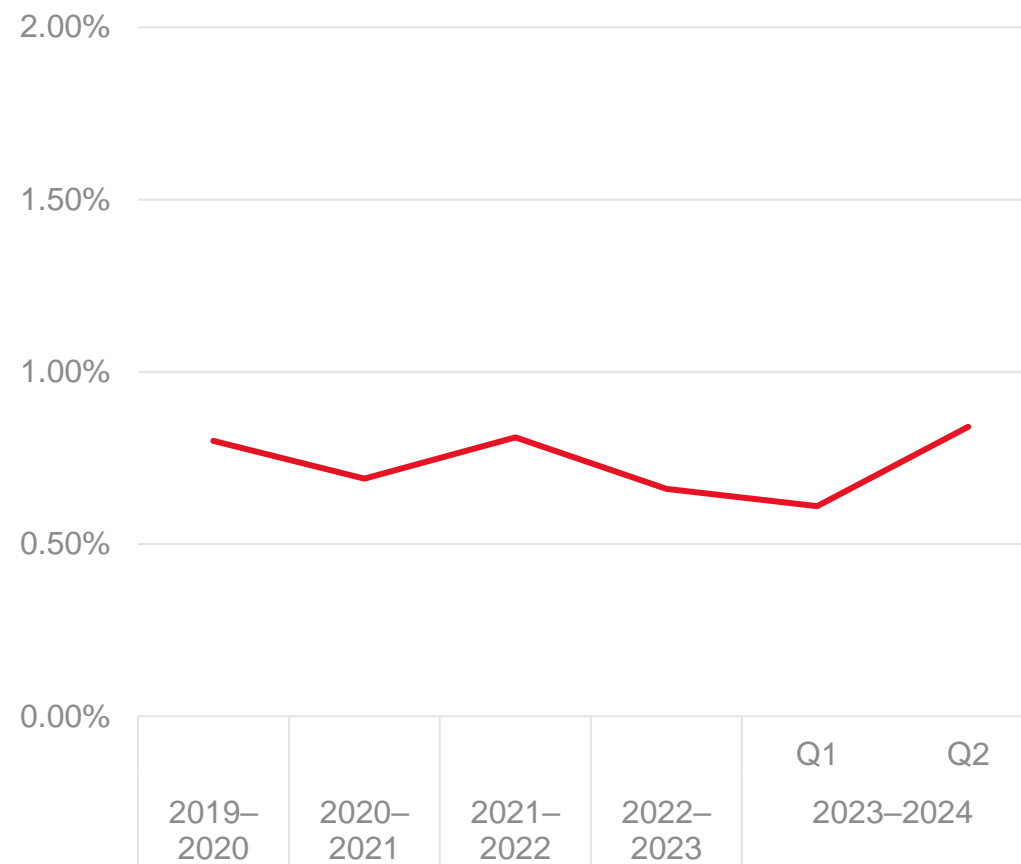
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- Canadian Blood Services **experienced increased leave usage** during the pandemic.
- Sick leave usage **remains elevated** from pre-pandemic norms, but not by much.



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

- **Less than one per cent** of employees experience WCB-reportable incidents each quarter.
- **The most common category of incidents are manual material handling injuries**, including sprains and strains.





# Supporting the well-being of employees

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- Launched **Bright Breaks** resource suite to help employees integrate short-duration, self-care opportunities throughout their days.
- Launch of **Caregiver Wellness Series** to provide support and resources to individuals who care for others (e.g. children, elders).
- **Focused on improving support** for unwell employees to optimize recovery and enhance the return-to-work journey.
- Bolstered employee resource group strategy to **provide greater funding, supports and opportunities for members** (2SLGBTQIA+, BIPOC, employees with disabilities, women and non-binary employees).

# Diversity, Equity, Inclusion and Reconciliation



# Measuring what matters in diversity, equity and inclusion (DEI)

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- **Launched** the second employee demographic and inclusion survey
  - Data will be used to inform and prioritize high-impact DEI initiatives and actions across Canadian Blood Services.



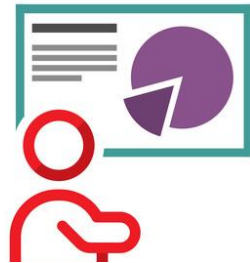
- Building a **roadmap to operationalize** our organizational commitments to the 50-30 Challenge.

# Supporting employees and leaders in their DEI journey

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Setting up our **employee resource groups (ERGs)** for success.



Embedding DEI in **employee and leader training.**



Creating on-demand **DEI learning workshops** for frontline staff and leaders.



Creating moments of **learning and connection** throughout the year.



# Continuing our Truth and Reconciliation journey

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- **Building relationships with Indigenous scholars and leaders**
  - First in-person gathering of Indigenous Council
  - Sponsoring and attending First Nations Health Managers Association conference
- **Supporting employees and leaders in deepening knowledge**
  - Curated resources developed by Indigenous communities to support learning in commemoration of National Day of Truth and Reconciliation

“**Hope Paddle**” artwork by the late Temosen-THUT (Charles Elliott), who was an Elder, Traditional Knowledge Holder and Coast Salish artist from the Tsartlip First Nation on Southern Vancouver Island. This artwork has been gifted to Canadian Blood Services, with the “paddles up” imagery signifying that we are ready to begin our truth and reconciliation journey.





# Rebuilding relationships with 2SLGBTQIA+ communities



- Implementing inclusion and engagement strategy
- Continued engagement with 2SLGBTQIA+ Advisory Committee
- Pride 2023
  - Pride statement to express support to community
  - Participated in London, Ottawa and Calgary Pride festivals
  - Planning expanded Pride plan for 2024

# Strategy and governance



What we do matters



# Strategy 2024 — new strategic plan

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- In January we will launch our **refreshed strategic plan**.
- There is **a need to refocus our work** based on learnings from the pandemic and the needs of the health system and the changing environment around us.
- The **refreshed plan will outline where we can add value** to the challenged Canadian health-care environment by leveraging the trust, capabilities and scale we established over the last 25 years.

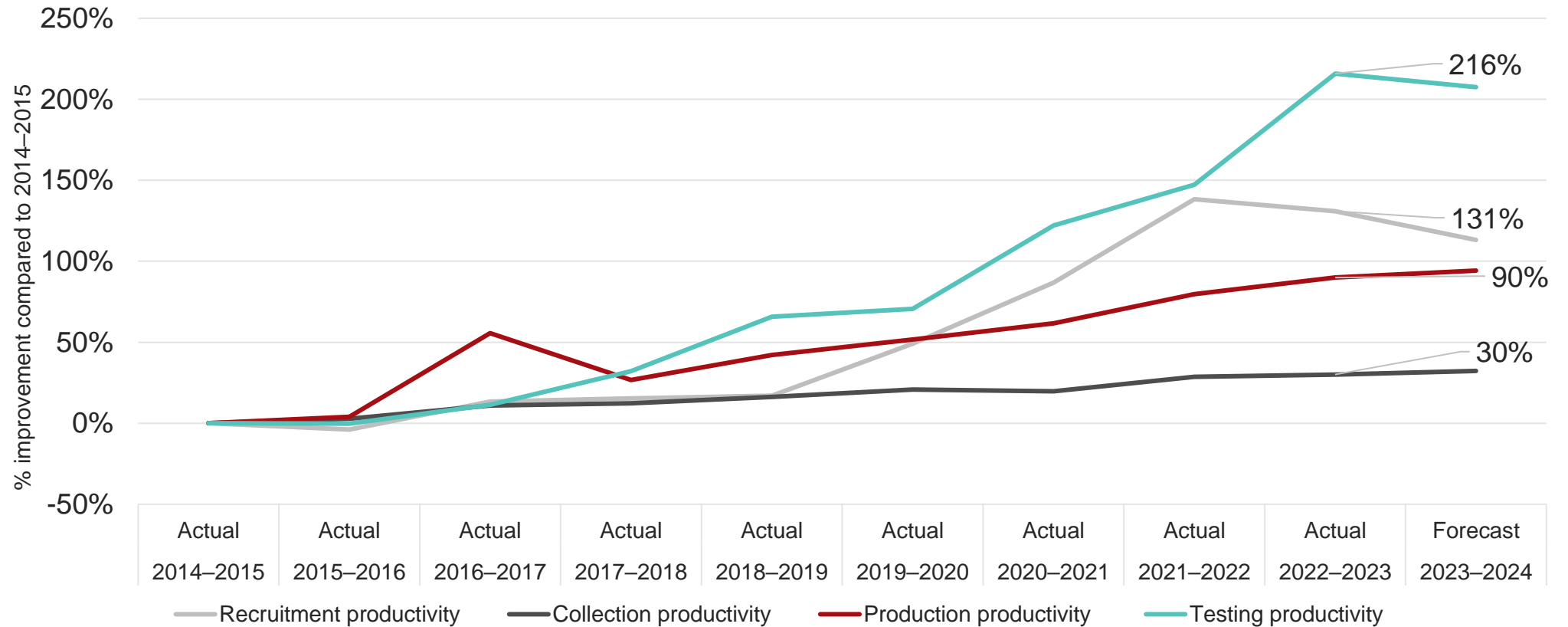


# Financial results



# Cost model productivity improvements

The productivity improvements over the last decade have been significant and have outpaced our Alliance of Blood Operator (ABO) comparators.



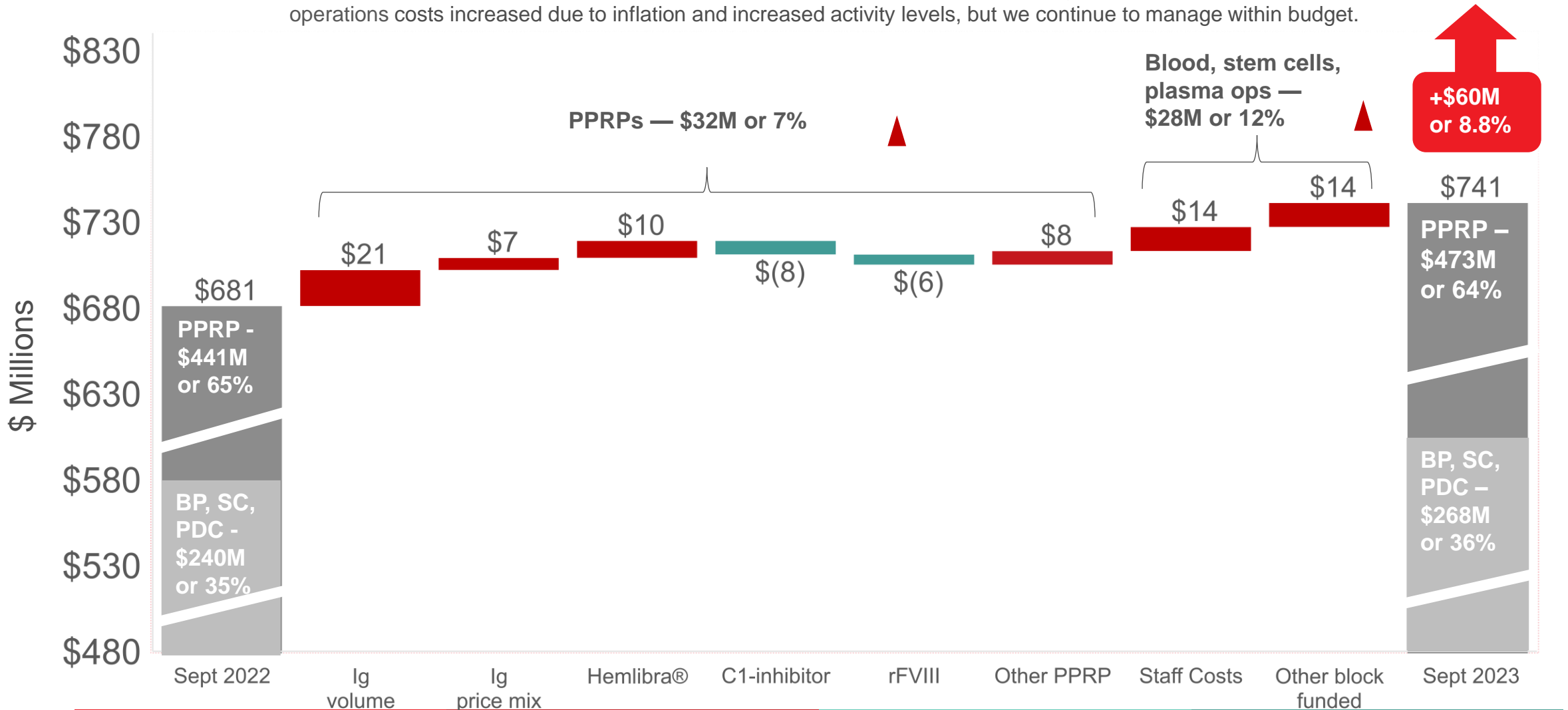
# Financial position

**Key takeaway:** Financial targets are met except for PPRP and Ig inventory WoH, which are anticipated to decrease to target by end of Q3.

Financial target	Trend	Current status	Insights												
<b>Working capital</b> 3.0:1 > 1:1 target	<table border="1"> <tr><th>Month</th><td>Sep-22</td><td>Dec-22</td><td>Mar-23</td><td>June-23</td><td>Sep-23</td></tr> <tr><th>Value</th><td>4.6</td><td>4.5</td><td>3.4</td><td>3.8</td><td>3.0</td></tr> </table>	Month	Sep-22	Dec-22	Mar-23	June-23	Sep-23	Value	4.6	4.5	3.4	3.8	3.0	●	<ul style="list-style-type: none"> <li>• Healthy current working capital has been driven by timely members payments which have resulted in cash remaining within target</li> </ul>
Month	Sep-22	Dec-22	Mar-23	June-23	Sep-23										
Value	4.6	4.5	3.4	3.8	3.0										
<b>Liquidity ratio</b> 1:1 >1:1 target	<table border="1"> <tr><th>Month</th><td>Sep-22</td><td>Dec-22</td><td>Mar-23</td><td>June-23</td><td>Sep-23</td></tr> <tr><th>Value</th><td>1.5</td><td>1.6</td><td>0.8</td><td>1.1</td><td>1.0</td></tr> </table>	Month	Sep-22	Dec-22	Mar-23	June-23	Sep-23	Value	1.5	1.6	0.8	1.1	1.0	●	
Month	Sep-22	Dec-22	Mar-23	June-23	Sep-23										
Value	1.5	1.6	0.8	1.1	1.0										
<b>Days unreserved cash</b> 16 at Sept. 14 to 45 days target	<table border="1"> <tr><th>Month</th><td>Sep-22</td><td>Dec-22</td><td>Mar-23</td><td>June-23</td><td>Sep-23</td></tr> <tr><th>Value</th><td>23</td><td>29</td><td>13</td><td>18</td><td>16</td></tr> </table>	Month	Sep-22	Dec-22	Mar-23	June-23	Sep-23	Value	23	29	13	18	16	●	
Month	Sep-22	Dec-22	Mar-23	June-23	Sep-23										
Value	23	29	13	18	16										
<b>PPRP inventory weeks on hand</b> 11.0 at Sept. 10.3 target	<table border="1"> <tr><th>Month</th><td>Sept 2022</td><td>Dec 2022</td><td>Mar 2023</td><td>June 2023</td><td>Sept 2023</td></tr> <tr><th>Value</th><td>11.0</td><td>12.3</td><td>10.6</td><td>10.6</td><td>11.0</td></tr> </table>	Month	Sept 2022	Dec 2022	Mar 2023	June 2023	Sept 2023	Value	11.0	12.3	10.6	10.6	11.0	●	<ul style="list-style-type: none"> <li>• Total PPRP inventory WoH targets is still above target with an aim of reaching target by end of Q3</li> </ul>
Month	Sept 2022	Dec 2022	Mar 2023	June 2023	Sept 2023										
Value	11.0	12.3	10.6	10.6	11.0										

# Statement of operations — year-over-year actuals

**Key takeaway:** PPRP costs increase mainly a result of PPRP utilization and pricing. Blood, stem cells and plasma operations costs increased due to inflation and increased activity levels, but we continue to manage within budget.

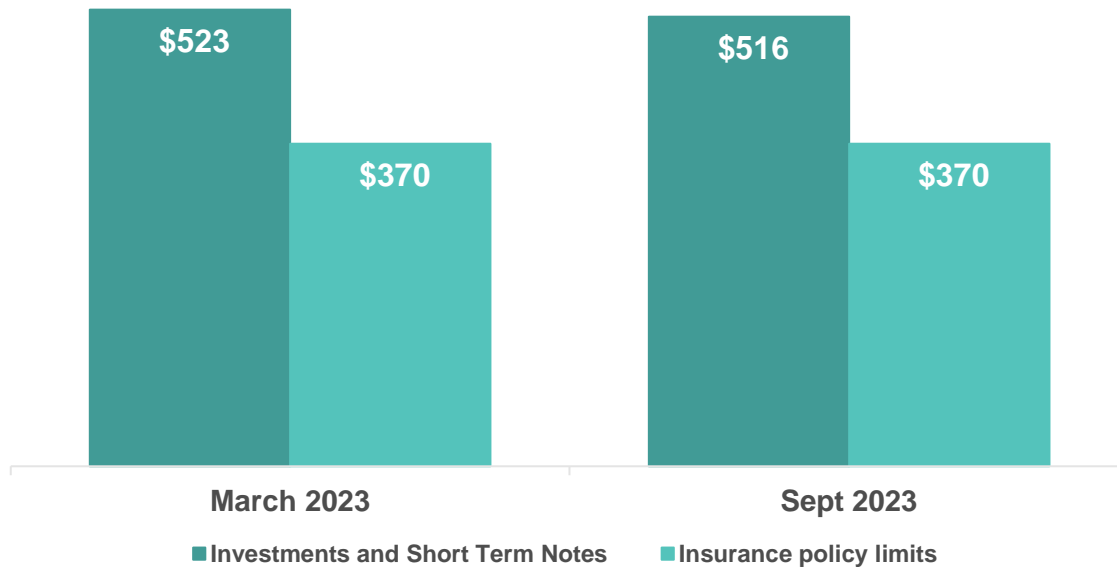


# Captives

**Key takeaway:** Although returns are negative and slightly below benchmark, investments continue to be sufficient to cover insurance policy limits, and financial ratios are well within the statutory requirements. Captives continue to be in a healthy position.

## INVESTMENTS, CAPTIVE INSURANCE OPERATIONS

\$ Millions



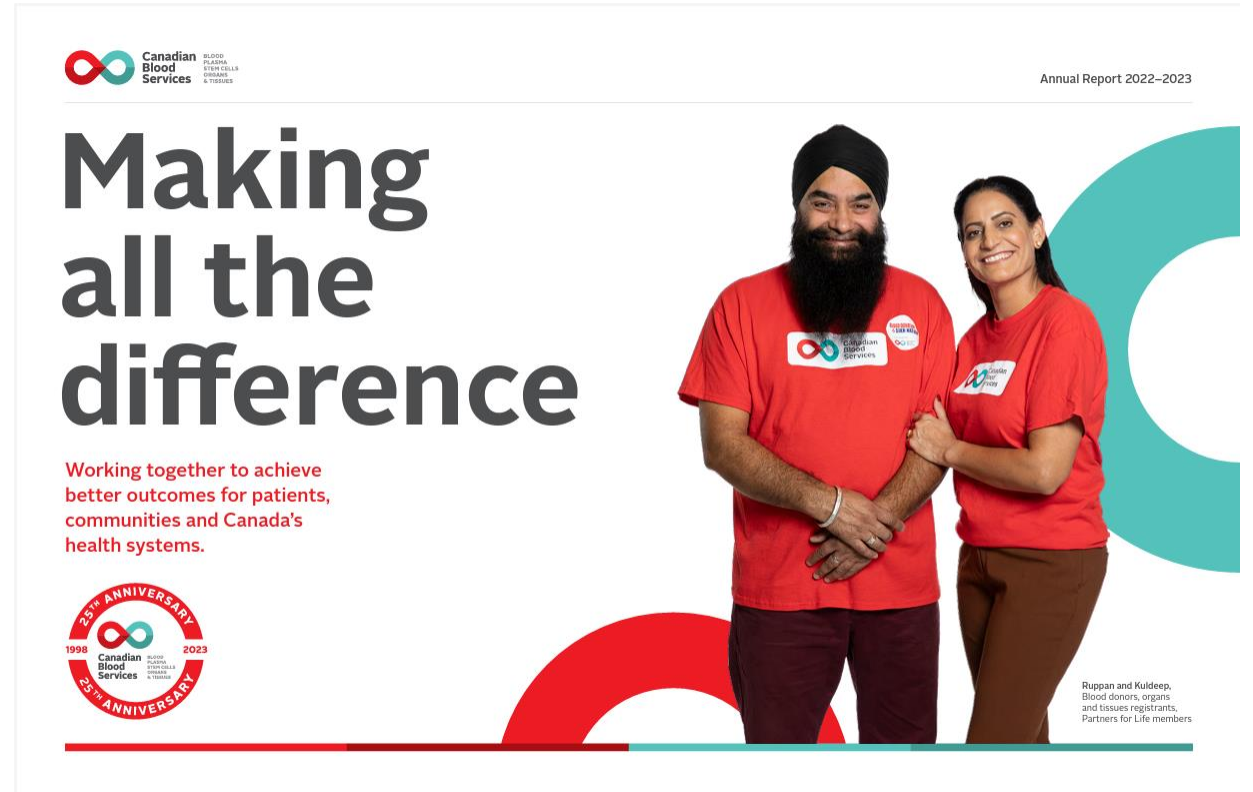
## INVESTMENT RETURNS

- 3.42 %  
- 3.38 (benchmark)

Figures reported on market value basis (measured at fair value). This differs from Canadian Blood Services not-for-profit accounting standards (securities measured at fair value, except for fixed income measured at amortized cost).

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

- In the first half of 2023–2024, we continued to deliver safe, high-quality products.
- We work relentlessly to prepare for the next changes on the horizon and innovate to meet the future needs of Canadian health care.

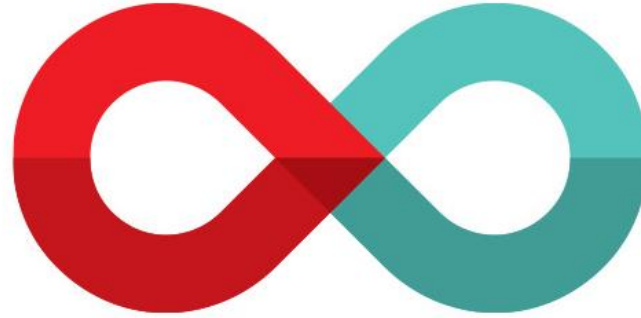




# Together, we are Canada's Lifeline



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



**Kim,**  
*blood recipient*