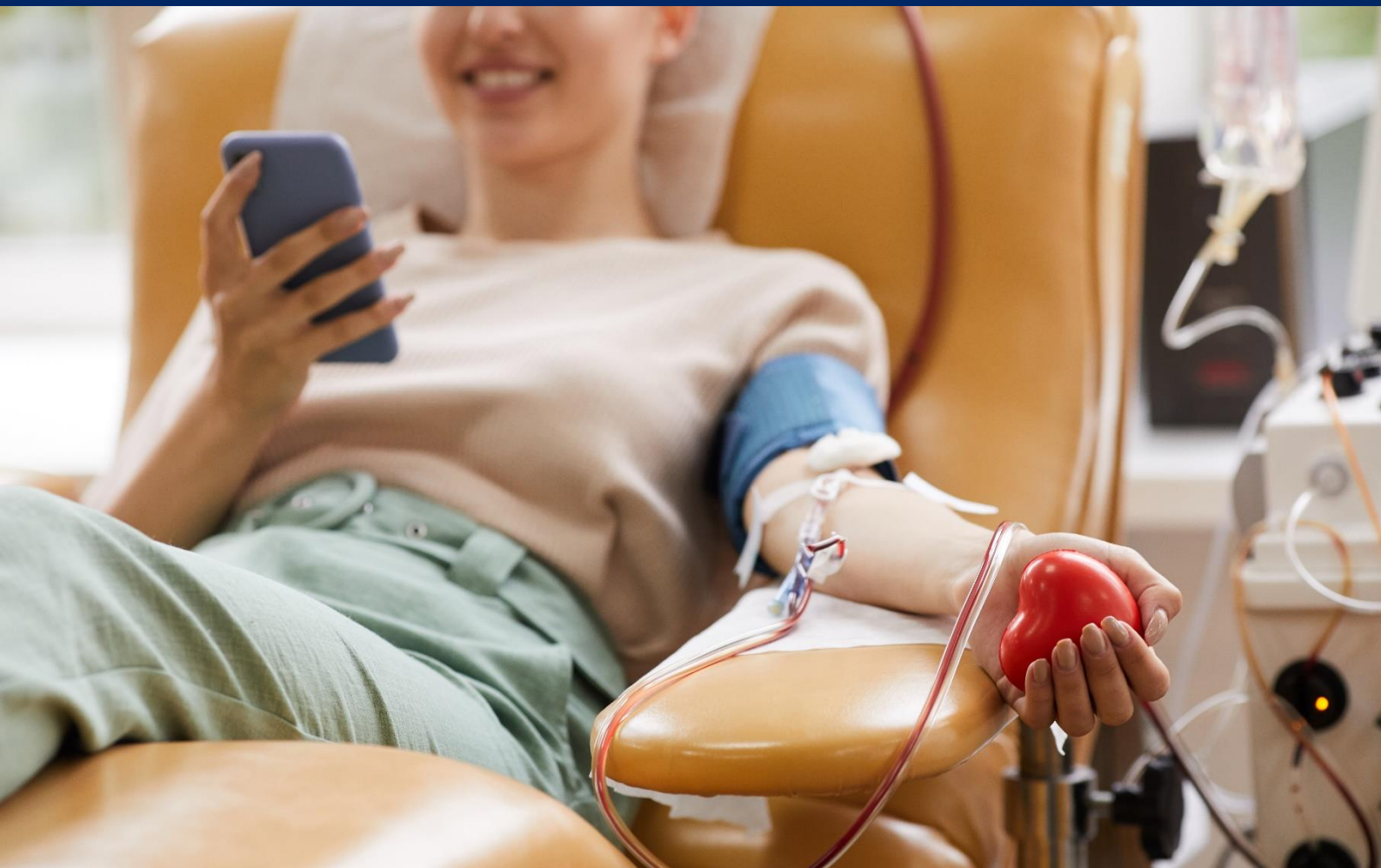


Supporting volunteer plasma donation in NSW

Market study

October 2025



Acknowledgement of Country

We acknowledge that Aboriginal and Torres Strait Islander peoples are the First Peoples and Traditional Custodians of Australia, and the oldest continuing culture in human history.

We pay respect to Elders past and present and commit to respecting the lands we walk on, and the communities we walk with.

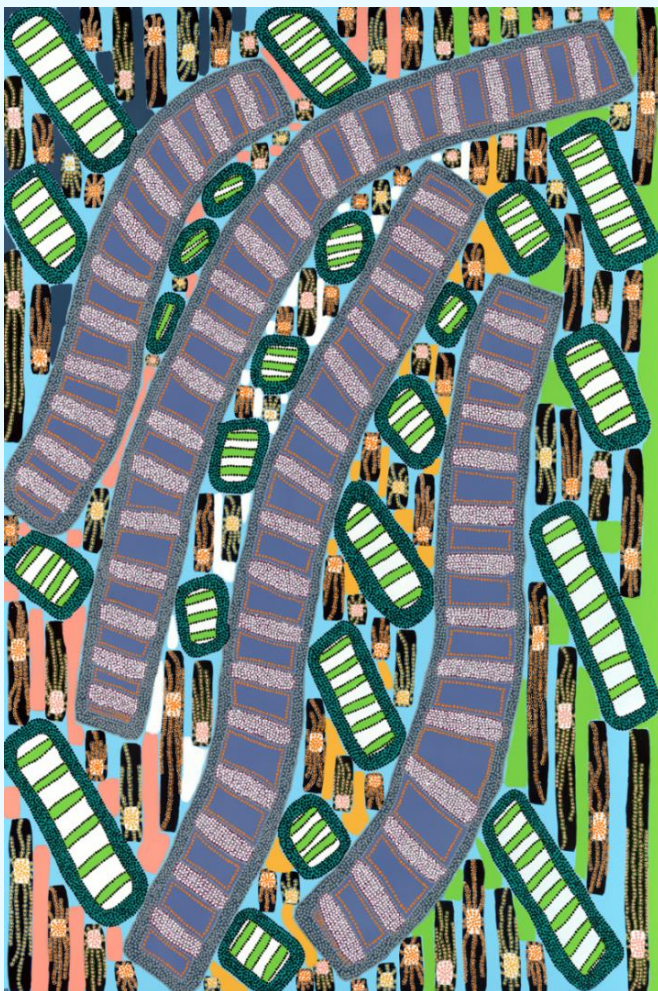
We celebrate the deep and enduring connection of Aboriginal and Torres Strait Islander peoples to Country and acknowledge their continuing custodianship of the land, seas and sky.

We acknowledge the ongoing stewardship of Aboriginal and Torres Strait Islander peoples, and the important contribution they make to our communities and economies.

We reflect on the continuing impact of government policies and practices, and recognise our responsibility to work together with and for Aboriginal and Torres Strait Islander peoples, families and communities, towards improved economic, social and cultural outcomes.

Artwork:

Regeneration by Josie Rose



About the NSW Productivity and Equality Commission

The NSW Productivity and Equality Commission (formerly the NSW Productivity Commission) was established by the NSW Government in 2018 under the leadership of its inaugural Commissioner, Peter Achterstraat AM.

Productivity growth is essential to ensure a sustained growth in living standards for the people of NSW, by fully utilising our knowledge and capabilities, technology and research, and physical assets. The Commission is tasked with identifying opportunities to boost productivity growth in both the private and public sectors across the state. The Commission seeks to continuously improve the NSW regulatory policy framework and identify levers that can increase competition to deliver better and more affordable goods and services for NSW residents.

The Commission's priorities include:

- productivity and innovation
- fit-for-purpose regulation
- efficient and competitive NSW industries
- climate resilient and adaptive economic development.

The Commission provides objective, evidence-based advice to the Government.

In 2024, Mr Achterstraat was reappointed for a further two years in the expanded role of Productivity and Equality Commissioner. In performing its functions, the Commission considers equity and how costs and benefits are distributed across the community and over time. For instance, the Commission's research on housing examines the equity and environmental benefits of policies and reforms to improve housing affordability, beyond the overall productivity and economic benefits.

The Commission regularly engages with stakeholders to ensure its research and recommendations are well-informed and to encourage a public conversation on productivity reform.

Disclaimer

The views expressed in this study are those of the NSW Productivity and Equality Commission alone, and do not necessarily represent the views of NSW Treasury or the NSW Government.

Regarding the recommendations in this study, NSW Productivity and Equality Commission recommendations only become NSW Government policy if they are explicitly adopted or actioned by the NSW Government. The NSW Government may adopt or implement recommendations wholly, in part, or in a modified form.

Commissioner's foreword

We are a nation of volunteers. From the cooks who wield the tongs at the iconic Bunnings sausage sizzles to the thousands who volunteered for the Olympics, Australians have always stepped up to help. That same spirit powers our blood and plasma supply.

Rolling up our sleeves to give blood and plasma can help save someone's life. This is more important than ever, as demand is growing quickly. Like other countries, our population is ageing, and improvements in how we diagnose chronic health issues means we need more donations to match demand.

In particular, we need more plasma. Plasma is a medical miracle. It is a vital ingredient in life-saving medicine, and can treat autoimmune diseases, cancer, haemophilia, and more.

But demand for plasma is growing quickly, and volunteer donations are not keeping up. At the moment, we are plugging the gap by importing more and more plasma products from overseas.

Already, imports make up half our supply for some plasma products. The amount we import and spend on those imports is growing. With demand from other countries also rising, import prices are on the rise.

While Australia has one of the highest rates of volunteering in the world, over the past few decades, volunteerism has been on the decline. It is a global trend, and it affects blood and plasma donation.

There are substantial benefits to this strong volunteer culture. There is evidence that volunteering improves wellbeing, self-confidence and feelings of connectedness. Society benefits as well. Volunteering can support better overall mental health and social integration.

However, if our rates of volunteering don't change, our reliance on imports could keep rising, leaving us more vulnerable to global shocks. This can affect those who need plasma, their families and Australian governments who are responsible for funding and managing our supply.

Our study explores ways that we can boost volunteer donations. We take an economic approach to the challenge, analysing supply and demand for these critical resources.

We can build on our strengths to do better. A lot of people want to donate but don't have the time or can't afford the time off work. Part of my goal in publishing this paper is to encourage more Australian governments and businesses to help to remove these barriers.

I have great faith in the volunteering spirit of Australians. By working together, we can go a long way towards meeting our plasma challenge.



A handwritten signature in blue ink that reads "Peter Achterstraat". The signature is written in a cursive, flowing style.

Peter Achterstraat AM
NSW Productivity and Equality Commissioner

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Executive summary

Demand for plasma is growing quickly, but Australian plasma donations are falling short

Blood is a life-saving resource. Blood, plasma and blood products are used in surgery, medical emergencies like childbirth, for organ transplants, and to treat cancer and burn patients. Unlike many other products, there are very few or no substitutes for blood. So the consequences of a supply shortage can be life-threatening.

Demand for plasma in particular has grown quickly in recent decades – both in Australia and around the world. Ageing populations, an increase in chronic health conditions, and more accurate diagnoses of health disorders, like autoimmune diseases, have all played a role.

But the local production of plasma is not keeping up. Volunteers play an important role in meeting Australia’s supply. Unfortunately, volunteering appears to be on the decline. Busy lives and cost-of-living pressures are likely playing a part.

This study is about boosting plasma donations to keep up with demand

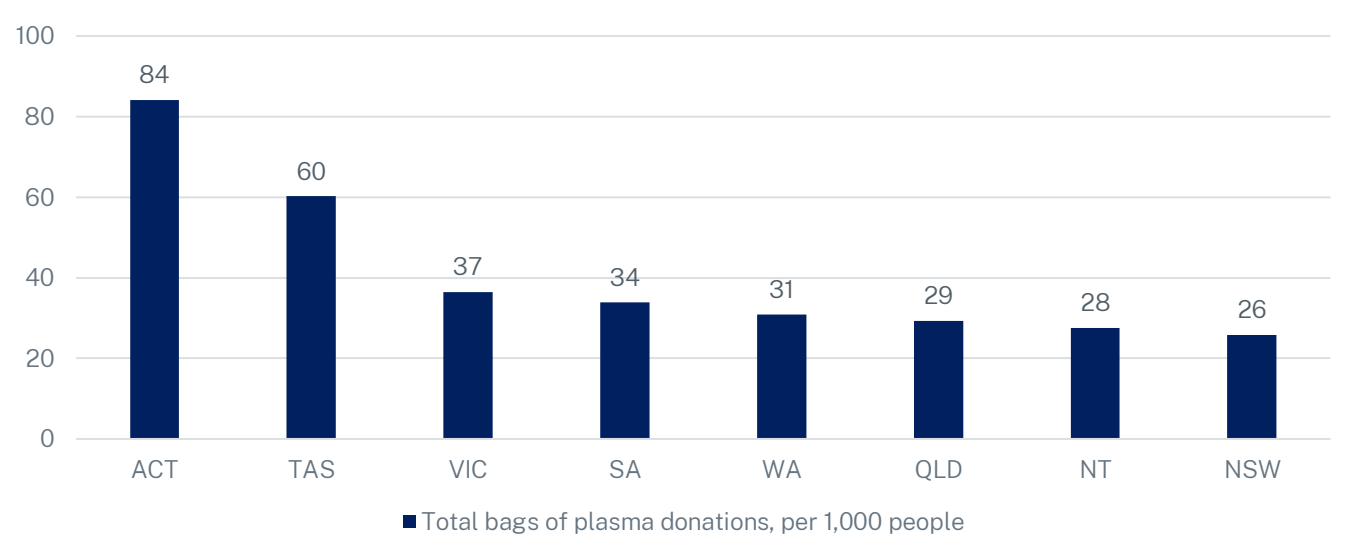
Boosting plasma donations is not just an important health issue, but an economic one too. Australian governments jointly fund the supply of blood and blood products in Australia. State and territory governments fund around 40% of total supply, with the Commonwealth government funding the remaining 60%. In 2023-24, about \$1.7 billion was spent on the national supply of blood products, up from \$1.2 billion in 2018-19.

In this market study, we examine the supply and demand for plasma in Australia, using economic analysis to draw out potential ways to boost the performance and resilience of the system. This is one of a series of market studies by the NSW Productivity and Equality Commission (the Commission), following the Commission’s market study on eConveyancing. The market for blood products is unique, because local production relies on volunteer donations rather than price signals.

This is a national challenge. Overall, Australians do not donate as much plasma as we consume, relying on imports to make up the difference. We focus on what NSW can do because the challenge is acute here. We have the lowest donation rate of any jurisdiction. In 2024–25, NSW donated only 26 bags of plasma per 1,000 people. This compares to 90 bags per 1,000 people in the ACT, which is Australia’s highest-donating jurisdiction, and 37 in Victoria (Figure 1). This means NSW relies more heavily on imported plasma than any other state.

Figure 1: NSW donates less plasma per capita than any other jurisdiction

Total bags of plasma collected per 1,000 people, by jurisdiction



	ACT	TAS	VIC	SA	WA	QLD	NT	NSW
Bags of plasma per 1,000 people	84	60	37	34	31	29	28	26
Bags of plasma donated	40,537	34,656	255,987	64,130	92,854	164,343	7,219	220,626
Population	481,677	575,756	7,011,123	1,891,670	3,008,697	5,618,765	262,191	8,545,140
Rank	1	2	3	4	5	6	7	8

Source: Lifeblood, 2024; ABS, 2024.

Notes: Refers to bags of plasma collected by Lifeblood in their donor centres in the financial year 2024-2025. The population figures are recorded by the ABS as of December 2024.

Imports play a vital role, but a growing reliance on imports carries risks and costs, with more work needed to understand the costs and benefits of different levels of reliance

With such strong demand for plasma and limited local donations, Australia has historically imported plasma products from other countries. Imported plasma products play an important role in supplementing local volunteer donations and matching supply with demand for this lifesaving product. Access to imports helps to diversify our sources of supply.

Immunoglobulin is a high-cost plasma-derived medicine that helps to treat chronic health conditions. If current trends continue, Australia could become reliant on imports for more than 65% of its immunoglobulin supply by 2030 – up from just 15% in 2010.

This reliance is costly. Our spending on imports of plasma products and immunoglobulin has more than doubled since 2013-14, from around \$240 million to more than \$600 million in 2023-24, and continues to rise.

Heavy reliance on imported plasma products can expose patients to the risk of sudden interruptions to complex international supply chains. During the COVID-19 pandemic, plasma collection in the United States (US) dropped substantially. This had ripple effects in many countries, as the US typically supplies around 70% of the world's plasma. In Australia, this meant that some existing patients using immunoglobulin had to be switched to other products. The full impact of pharmaceutical tariffs imposed by the US on international plasma supply chains is also yet to be understood. What we do know is that relying on imports has become more risky over time.

Further work is needed to understand the costs, risks and benefits of our growing reliance on imports. This could involve quantifying the risks and benefits of different levels of import reliance. It could also involve modelling the degree to which we can mitigate import risks through strategies like demand management and maintaining local reserves, and the costs and benefits of these mitigation strategies.

Australia's objective is to be self-sufficient using volunteer donations, but we are becoming increasingly reliant on imports from countries that pay donors

Under the National Blood Agreement, Australia aims to be self-sufficient and rely on unpaid, volunteer donations. However, about half of Australia's supply of immunoglobulin is now imported from countries where donors tend to be paid. Indeed, the only countries that produce enough plasma to meet their own needs and export products to other nations are those that pay their donors, like the US, Austria and Hungary.

Canada's experience shows how import reliance places pressure on a volunteer donor system. Canada has become reliant on the US for almost 80% of their immunoglobulin. This was a key concern for Canadian policymakers when they allowed paid donations at a large scale in the early 2020s. The impact of that change will take time to show itself.

If import reliance keeps growing, Australian policymakers may face pressure to allow paid plasma donation to boost supply, like Canada did. In 2023-24, Australia imported 62% of our immunoglobulin, the main plasma product we use. We project that Australia will be importing 66% of its immunoglobulin by 2030. We are not yet as import reliant as Canada, but our dependence is significant and growing steadily. There is a clear case to act now. Doing more to boost volunteer donations could help slow or reverse this trend. It could also complement our existing strength in plasma processing.

In the meantime, we can observe Canada's experience of allowing paid donations to understand its potential effects on plasma supply, voluntary donation rates and patient safety.

We can boost our system's resilience by exploring ways to support volunteering

There are many ways we might boost volunteer plasma donations. We can build on the strength of our volunteer system by trialling and evaluating to discover what works best. This could include enhancing the donor experience, lowering barriers to volunteering and improving awareness.

For example, more businesses and governments could offer paid donor leave to help remove time barriers to donations. NSW Government employees already have access to paid donor leave, but there are indications not all staff are aware of this. Initiatives to boost awareness and donor support for NSW public servants – around 10% of the state's workforce – could have a big impact on participation.

New approaches to supporting volunteer donations will require further work, including careful consideration of costs and benefits. Choice modelling, among other research, would help us to better understand how new initiatives might impact existing and potential blood donors, as well as patients needing plasma products. Trialling and evaluating a range of approaches can help us learn what works.

1 The supply and demand of plasma

Blood and blood products play a critical role in our health system. They extend and improve the quality of life for many patients, including cancer patients and car accident victims.

The demand for plasma is on the rise as the population ages and more people are diagnosed with chronic health conditions. At the same time, there are challenges in securing enough donations to ensure Australian plasma donations can meet this growing demand. We unpack the economic and social forces that drive the demand and supply of plasma in Australia.

1.1 Blood and blood products, like plasma, are critical resources with few substitutes

When donors give blood in Australia, they have the option of giving blood, platelets or plasma. A single donation can be turned into a range of different products.

- **Blood** can be taken straight from donors at collection centres in Australia (operated by Lifeblood). Once blood is collected, it can be separated into its component parts, including red blood cells, plasma and platelets.
- **Plasma** is a yellow liquid and can be donated in two ways:
 - A donor can give whole blood, as described above, which is separated into plasma and its other components (this is called recovered plasma).
 - A donor can give plasma directly. This involves drawing a donor's blood, separating plasma from blood, and then returning blood to the donor (this is called apheresis).
- **Blood products** include plasma-derived products, among others. The proteins within plasma can be isolated and turned into products that treat specific diseases. Immunoglobulin is an important plasma product used to treat immunodeficiency disorders and tetanus. These are manufactured in Australia or imported from overseas, rather than being collected directly from donors.

Lifeblood and the National Blood Authority (NBA) play an important role in managing this supply.¹

There are very few substitutes for blood and blood products, like plasma

Unlike other goods, there are generally no substitutes for blood and blood products. Blood can only be collected through donors. Table 1 outlines more details. A single donation can benefit several patients and save lives (Australian Government Department of Health and Aged Care, 2020).

Table 1: Overview of blood components

Component	Shelf life	Time to donate ²	How often you can donate	Key uses
Platelets	7 days	About 2 hours	Every 2 weeks, or 4 weeks after a blood donation	Cancer treatments, surgery
Red blood cells	42 days	About 1 hour	Every 12 weeks	Trauma, surgery, anaemia
Plasma	365 days	Up to 1.5 hours	Every 2 weeks	Burns, shock, bleeding disorders

Source: American Red Cross, 2024; Lifeblood, 2024a.

¹ The NBA manages and coordinates arrangements for the supply of blood products in Australia. This includes contracts for the supply of imported blood products. See appendix A for more.

² This represents the time for the whole appointment. For blood, platelets and plasma, the 'needle-in' time (that is, the time that the blood draw occurs) is approximately 10 minutes, 60 minutes and 45 minutes, respectively.

Blood and blood products are inherently tricky to produce

The nature of blood and blood products means they can be challenging to supply when needed.

1. **Short shelf life:** The shelf life of blood and blood products ranges from one week to a year. The high perishability of whole blood means that all fresh blood products (for example, red blood cells and platelets) in Australia are sourced locally and cannot be imported (Australian Government Department of Health and Aged Care, 2020).
2. **Limited eligible donors:** Not everyone can donate blood in Australia. Donors must be between 18-75 years of age, weigh at least 50 kilograms and not be suffering from a cold, flu or other illness. A person's medications, iron levels, travel history, sexual activity, recent tattoos, and piercings can also temporarily affect their eligibility (Lifeblood, 2024b). A recent estimate is that less than 60% of donors between 18 to 74 years of age are eligible to donate blood in Australia (Mowat, Hoad, Haire, & Masser, 2023). The donor pool is also especially restricted for platelets because in Australia only men can donate (Lifeblood, 2024c).³
3. **Frequency of donations:** While donors are restricted to 26 donations each year for plasma, only four donations of whole blood are allowed in any given year (Table 1). This limits the supply available from any given pool of donors.
4. **Seasonality of supply:** During certain seasons, particularly winter, fewer people are able to give blood due to higher rates of colds and flu (Slonim, Wang, & Garbarino, 2014). This results in more cancellations and rescheduled appointments. At the peak of the 2024 influenza season, Lifeblood reported that around one in five donors were cancelling or rescheduling appointments each week due to cold, flu and COVID-19 symptoms (Lifeblood, 2024d).
5. **Time commitment:** Many people report that time commitments make it difficult for them to donate blood, particularly given competing family and work priorities (Bednall & Bove, 2011). An appointment to donate blood can take between one and two hours, excluding travel time, depending on the type of blood product that is donated (Lifeblood, 2024a). Time is also a key barrier for existing donors to donate more regularly. Most donors only give blood once or twice a year (Romero-Domínguez, Martín-Santana, & Sánchez-Medina, 2022; Lifeblood, 2022). Craig et al., (2016) also found that adding an extra 20 minutes to the donation process caused a 7% reduction in subsequent annual donations.
6. **Demographics of donors:** Demographics can also create challenges for supply. Stakeholders report that while there is a stable cohort of donors over 50, these groups are at higher risk of chronic disease and can quickly become ineligible to donate. At the same time, attracting younger people to donate blood is challenging. This appears to be the case in Australia as well as overseas. Data from the US shows that older donors who lost eligibility to donate blood between 2011 to 2019 were not replaced by younger people replenishing the donor pool (Satyavarapu & Wagle, 2020). When younger people do donate, they also tend to donate less frequently than older donors.⁴

Supply and demand can fluctuate, especially for whole blood

In addition to being tricky to produce, the nature and use of blood and blood products means that demand can fluctuate. For example, holiday periods can coincide with an increase in blood demand, reflecting an increase in the number of road accidents and traumatic injuries (Hosseinfard, 2020).

Given the nature of blood – its perishability and reliance on donors on the supply side, and fluctuating and inelastic consumption on the demand side – coordinating the supply and demand of blood and blood products can be difficult. This can result in swings between shortages and surpluses of blood (Table 2).

³ The male-only requirement is because of a serious condition called transfusion-related acute lung injury (TRALI) that can affect recipients of blood transfusions. It is thought to be caused by antibodies found more commonly in the blood of women.

⁴ Note that data about trends in the demographics of blood donors in Australia are not publicly available.

These fluctuations are more likely to arise in the market for whole blood where demand and supply are more sensitive to temporary shocks. Shocks to the whole blood market, however, can eventually flow through to plasma. This is because some donors who may have planned to donate plasma could be encouraged to instead donate whole blood to address potential shortages in red blood cells.

Lifeblood provides real-time data about supply levels and their ability to meet demand for whole blood. When supply is ‘very low’ it can mean that some patients may have to wait to receive blood.

Table 2: Overview of seasonal fluctuations of supply and demand, particularly for whole blood

Temporary periods of excess demand	Temporary periods of excess supply
- Often occur during flu season and holiday periods. - As a result, hospitals must prioritise high-risk patients to receive blood and blood products. - Collection agencies can face high costs when running urgent appeal campaigns. - Urgent appeal campaigns might threaten the longer-term supply of blood products as it brings forward donors who may have otherwise donated later (these donors have to wait before they are allowed to donate again).	- Often occur after natural disasters and crises. - Excess donations are disposed of when storage capacity is full, leading to wastage.

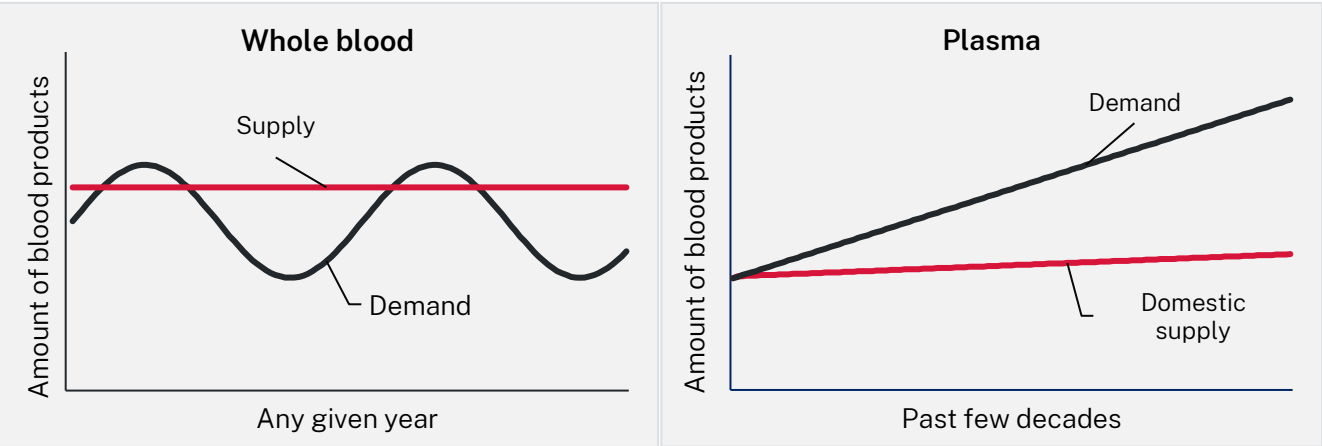
Source: Slonim et al., 2014; Hosseinifard, 2020.

This study focuses on the persistent and worsening undersupply of locally produced plasma

There are some critically important differences between the market for whole blood and the market for plasma. Whole blood has a shorter shelf life and is transported and stored at a higher cost compared to plasma. The other key difference is that there has been a persistent and growing undersupply of Australian plasma donations in the past few decades; whole blood generally does not suffer from ongoing undersupply. Figure 2 provides a stylised illustration of these differences. This study discusses trends in the market for plasma in Australia and ways to boost supply.

Figure 2: The markets for whole blood and plasma differ due to the nature of the good

Illustration of average demand and supply for whole blood and plasma



Notes: This is illustrative only. In practice, variations in demand can be unpredictable. Demand in this figure represents variable local demand and supply represents Australian donations (does not include imported products).

1.2 Plasma demand is growing quickly, overseas, across Australia, and in NSW

Population ageing and chronic health conditions are driving plasma demand

Plasma is used to treat more than 50 chronic health conditions, including immune deficiencies (Lifeblood, 2022a). Demand for plasma has been growing strongly compared to demand for other blood products, like platelets and red blood cells. This is occurring across the global plasma market. In the European Union (EU), the number of private plasma collection centres grew from less than 40 in 2005 to more than 100 in 2016. Moreover, despite increasing local collection, the EU continues to import plasma from the US to meet local demand (European Commission, 2019).

The ageing population is understood to be a key driver of rising demand in Australia and overseas. Older people, especially those over 50, are much more likely to need blood and plasma than younger groups (Ali, Auvinen, & Rautonen, 2010). The resumption of some elective surgeries after COVID-19 has also contributed to rising demand in Australia (NBA, 2023).

Demand for immunoglobulin, an important plasma-derived medication, is rising especially quickly

Immunoglobulin (also known as an antibody) is an important plasma-derived medicine used to treat many immune deficiency disorders, and is contributing substantially to growing demand for plasma both overseas and in Australia. For many patients, immunoglobulin is a life-saving product. According to Canadian Blood Services, about half of the patients who use immunoglobulin in Canada have no other treatments available for their life-threatening condition (Health Canada, 2018).

The use of immunoglobulin in Australia has outpaced population growth over the past decade. This reflects an ageing population, a growing number of chronic health conditions, and more accurate diagnoses of existing health disorders (Lifeblood, 2022b).

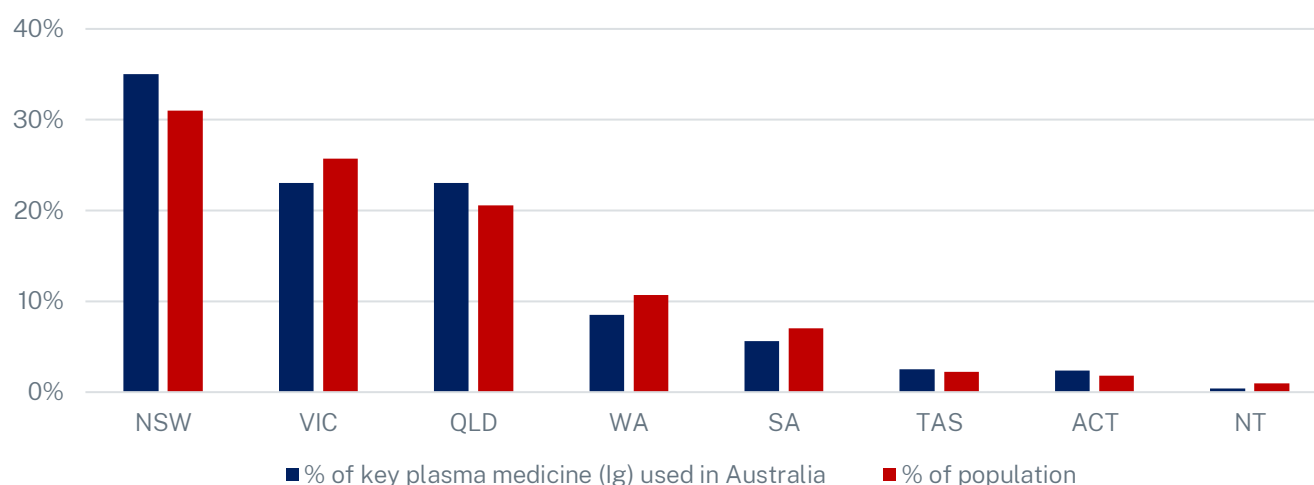
Australia is one of the biggest users of immunoglobulin per person, alongside Canada and the US (Australian Government Department of Health and Aged Care, 2023). Currently around one in every 1,000 people in NSW require the use of immunoglobulin, and meeting this demand requires many donors (NBA, 2022a). It can take up to 32 donations to provide a single intravenous immunoglobulin treatment, which patients often need every six weeks (Lifeblood, 2023).

NSW uses more than our population share of immunoglobulin

NSW, along with Queensland, Tasmania and the ACT, use a greater proportion of Australia's total supply than their population share. By contrast, Victoria, WA, SA and the NT use a lower proportion of Australia's total supply than their population share (Figure 3). NSW often relies on donations from other states when supply from local donors falls short of what is needed (McCaffrey, 2024).

Figure 3: NSW uses more immunoglobulin than any other jurisdiction

% of immunoglobulin (Ig) used in 2023-24, by jurisdiction



Source: Lifeblood, 2024.

Notes: Immunoglobulin (Ig) is a key plasma-derived medicine.

1.3 Our volunteer donor system hasn't been keeping up with demand

The supply of blood and blood products is supported by Australia's strong volunteer system

The supply of blood and blood products in Australia relies on volunteers. Australia is a world leader in volunteerism. We rank fourth among OECD countries in rates of volunteering, with around one in four Australians aged 15 and over participating in unpaid volunteer work (OECD, 2024; Australian Institute of Health and Welfare, 2023).

There are substantial benefits to this strong volunteer culture. Volunteering is associated with better psychological outcomes like personal wellbeing, self-confidence and feelings of connectedness (Kragt & Holtrop, 2019). These personal benefits translate to broader societal value too, like better overall mental health and social integration (Davies, Abrams, Horshan, & Lalot, 2024).

Growing demand for immunoglobulin is also expensive

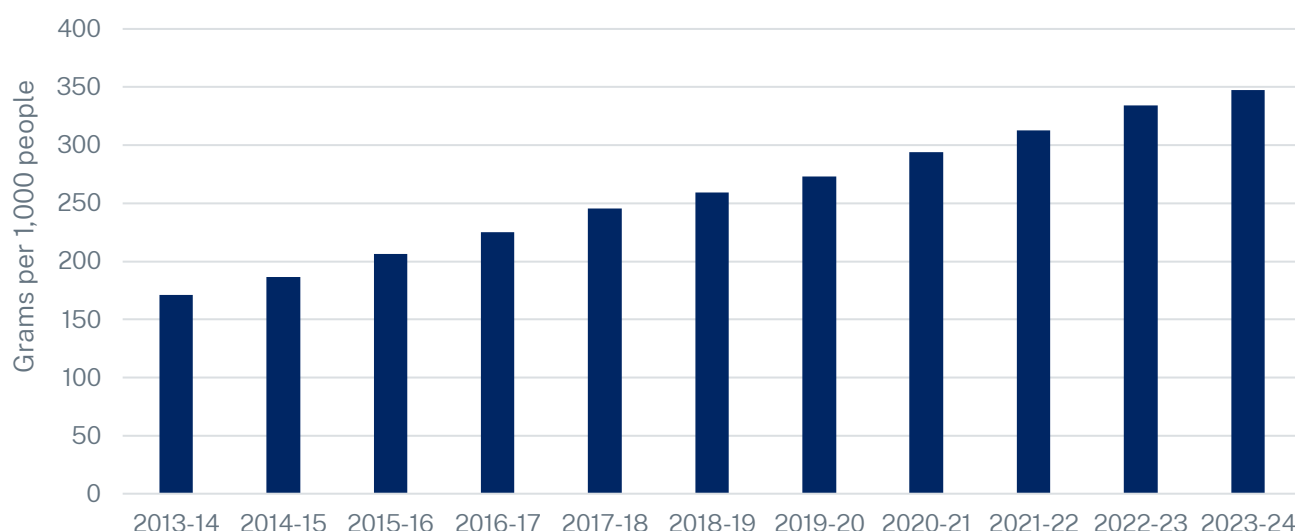
In addition to being a critical product, immunoglobulin is also expensive. Immunoglobulin made up 56% of Australia's total spending on blood-related products in 2022 (NBA, 2022a).⁵ Given the high cost and demand for immunoglobulin use in Australia, there are important governance arrangements in place to manage patient eligibility (NBA, 2024a).⁶ Costs, however, continue to rise alongside growing demand (Figure 4).

⁵ This figure includes expenditure on plasma for fractionation (that is, the process of separating plasma into its component parts). Without including this amount, immunoglobulin in 2021-22 was still the largest budget item at 35% of blood-related expenditure. Australian governments have agreed to conduct a Health Technology Assessment review to ensure government-funded immunoglobulin use in Australia is both clinically effective and cost-effective compared to other treatments.

⁶ The National Immunoglobulin Governance Program has supported slower growth of demand in recent years.

Figure 4: The use of immunoglobulin has been rising steadily over the past decade

Immunoglobulin products issued per 1,000 people in Australia



Source: National Blood Authority, 2018; National Blood Authority, 2024.

Australia aims to be self-sufficient through volunteer donations

The blood sector in Australia is governed by the National Blood Agreement, which sets out the national policy for blood and blood products. One of the policy's objectives is to rely on unpaid donations of blood and plasma (NBA, 2002). This objective is largely based on principles that were initially adopted in the 1970s (and reaffirmed in 2010).

In 1975, the World Health Organization urged all countries to achieve 100% unpaid volunteer donations. This was mostly due to concerns about how paid donations could affect the supply and safety of blood products and 'crowd out' voluntary donors (these issues are discussed further in Section 3.3).

Since then, this objective has been maintained in Australia, with the result that donations of blood and blood products are only permitted from unpaid volunteers.⁷

Another objective of the National Blood Agreement is to promote national self-sufficiency. Under this objective, Australia aims to source sufficient blood and plasma from local sources to meet the required level of clinical demand (AHMC, 2006).

But volunteerism in general appears to be declining

Formal volunteering has declined across Australia in general over the past two decades (Zhu, 2022). This is consistent with global trends and likely reflects broader changes in the time and opportunity that Australians have for recreation, leisure and community interaction (Australian Institute of Health and Welfare, 2023). As we get more productive, the opportunity cost of our time rises too.

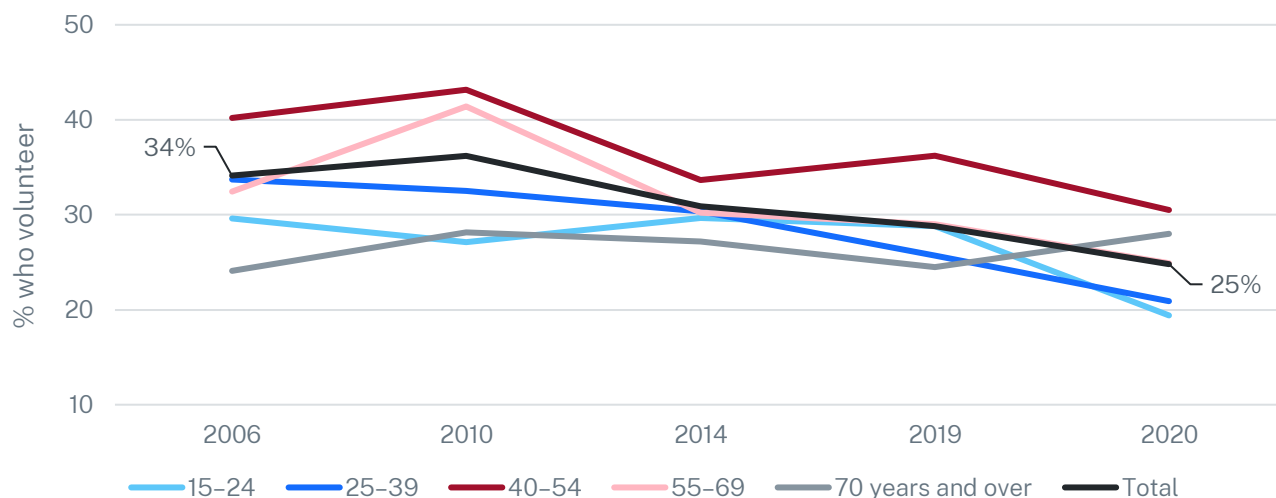
Notably, rates of volunteering appear to be declining more quickly among younger groups – who already tend to volunteer less than older people (Figure 5). Younger people report feeling more time stress compared with older cohorts, consistent with reports from stakeholders that attracting

⁷ This is also likely shaped by cultural attitudes to compensating donors. Roth (2007) outlines how repugnance can sometimes act as a constraint on transactions in markets. For example, lending money for interest was once widely seen as repugnant but is now commonplace.

younger groups to donate blood is challenging.⁸ Many people also report financial barriers to volunteering (Biddle, Boyer, Gray, & Jahromi, 2022).

Figure 5: Volunteerism has been declining

% population that volunteered with unpaid work through a formal organisation, by age



Source: ABS General Social Survey (GSS); NSW Productivity and Equality Commission analysis.

Notes: Age groupings were slightly different for the GSS in 2006, 2010 and 2014. We fit the data from these surveys into more recent age groupings, using population weighting.

NSW donates less plasma per capita than any other jurisdiction

While plasma self-sufficiency is a national issue, we have the lowest donation rate of any jurisdiction. In 2024-25, NSW donated only 26 bags of plasma per 1,000 people. This compares to 84 bags per 1,000 people in the ACT, which is Australia's highest donating jurisdiction, and 37 in Victoria (Figure 6). This means NSW relies more heavily on imported plasma than any other state, and highlights the need for improved volunteer collection strategies in NSW.

The difference in donation rates across jurisdictions is likely due to a combination of factors, such as demographics, accessibility and donation behaviour.

⁸ Around 40% of 15 to 34 year olds reported time stress (always or often feeling rushed or pressed for time) compared to only around 10% of people over 65 (ABS, 2022).

Figure 6: NSW donates less plasma per capita than any other jurisdiction

Total bags of plasma donated per 1,000 people, by jurisdiction



	ACT	TAS	VIC	SA	WA	QLD	NT	NSW
Bags of plasma per 1,000 people	84	60	37	34	31	29	28	26
Bags of plasma donated	40,537	34,656	255,987	64,130	92,854	164,343	7,219	220,626
Population	481,677	575,756	7,011,123	1,891,670	3,008,697	5,618,765	262,191	8,545,140
Rank	1	2	3	4	5	6	7	8

Source: Lifeblood, 2024; ABS, 2024.

Notes: Refers to bags of plasma collected by Lifeblood in their donor centres in the financial year 2024-2025. The population figures are recorded by ABS as of December 2024.

2 Growing import reliance comes with costs and risks

The risks of plasma demand outpacing supply are significant:

- Australia, like other countries, could become increasingly reliant on imports of plasma products to meet growing demand. Over-reliance could make our health system more vulnerable to shocks in the global supply chain and rising import prices.
- Supply shortfalls may require more frequent appeals for urgent callouts for donations, which are costly to administer.
- Patients may need to switch to alternative medicines. For example, the NBA reported in 2022-23 that plasma collection was significantly below targets and that some patients using immunoglobulin were switched to other plasma-derived products.⁹

Fortunately, the NBA plays an important role in ensuring appropriate preparation, mitigation and planning for the impact of a supply and demand crisis. The NBA's National Blood Supply Contingency Plan outlines the arrangements for managing a crisis, including for plasma. For example, key actions during a 'Red Activate' alert (that is, where inventory reports indicate stocking levels will continue to fall short of future demand) include prioritising product use for life-threatening conditions and imposing restrictions on elective surgery (NBA, 2024).

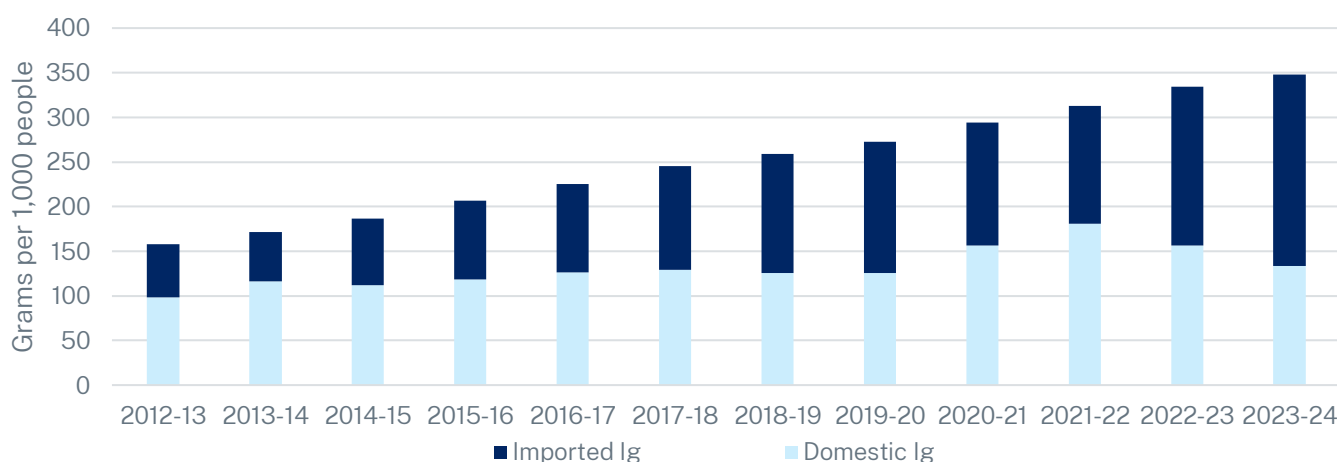
2.1 Australia is becoming more import reliant over time

Despite Australia's objective of self-sufficiency, for the past two decades, demand for plasma has outpaced the amount supplied by Australian volunteer donors. The difference has been made up from imported plasma products (Jaworski, 2023). In 2023-24, Australia imported more than 60% of its immunoglobulin supply from overseas (Figure 7). This was up from around 30% a decade ago.

The COVID-19 pandemic impacted plasma donations and disrupted international supply chains, as reflected in trends during 2020-22 in the chart. At the same time, Australian local donations (in terms of grams per 1,000 population) increased, which could offer lessons to boost plasma donations in the future.

Figure 7: The share of immunoglobulin that is imported has been increasing to meet demand

Local donations and imported supply of immunoglobulin in Australia, per 1,000 people



Source: National Blood Authority Australia Annual Reports; ABS 2024.

Notes: Grams issued are taken directly from the NBA Annual Reports.

⁹ If treatment alternatives are other blood products, this approach could have limited effectiveness in the long term if shortages persist.

2.2 While imports are essential to meet demand, growing reliance brings costs and risks to supply

Australia relies on imports of plasma products as an important top-up to supplement its local plasma donations, ensuring that demand for life-saving medicines can be met. By diversifying the sources of supply, imports can also help to minimise the risk that disruptions in the supply process lead to shortages of plasma.

On the other hand, because imported plasma products are vulnerable to international supply chain disruptions, an over-reliance on imports can pose risks to the resilience of the system for blood and blood products. The risks of import reliance for plasma products depend on factors like:

- how heavily we rely on imports as a proportion of our total supply
- how suddenly imports are disrupted, with sudden disruptions being harder to manage
- substitutes: there are currently very few substitutes for plasma products (see Section 1.1)
- demand management practices: the impacts of disruptions to imports can be mitigated by conserving local supplies and prioritising the highest clinical use cases
- local plasma stock: plasma has a 365-day shelf life so, depending on stock levels, reduced imports can be met with local stock for a limited time
- how quickly local production can ramp up: making a plasma-derived medicine such as immunoglobulin takes roughly 7-12 months following a donation, so increased donations take several months to boost local supply (Plasma Protein Therapeutics Association, 2022).

The risk of disruption to international supply was demonstrated during the COVID-19 pandemic.

At the onset of the pandemic in 2020, plasma collection in the US – a major supplier of plasma globally, and for Australia – decreased by roughly 20%, significantly reducing the availability of plasma treatments around the world. Australia's supply was impacted, with shortages also reported in France, Italy, Spain and Canada. In the United Kingdom, plasma supply was prioritised for patients with the highest clinical need (MHRA, 2021; Jaworski, 2023). An over-reliance on imports could also expose Australia to changes in collection policies overseas (for example, changes to testing), which could affect both the quality and supply of blood products.

The full impact of recent pharmaceutical tariffs imposed by the US and other countries on international plasma supply chains is also yet to be understood, leading to greater uncertainty and risk.

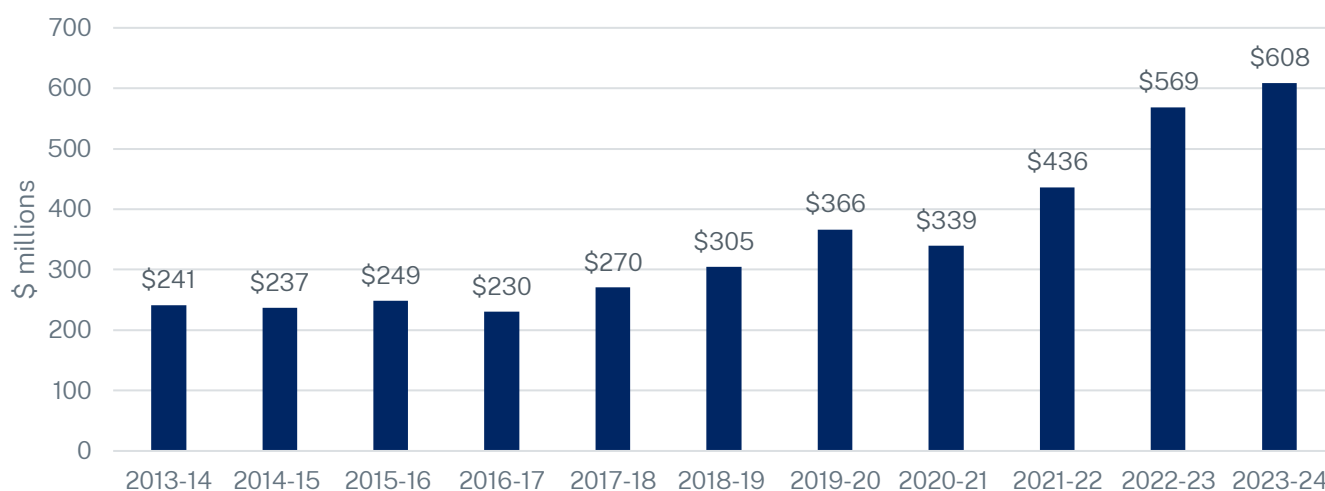
Growing reliance on imports can also come with higher costs

At the same time, the amount we are spending is increasing. Spending on imports of plasma products and immunoglobulin has more than doubled since 2013, from around \$240 million to over \$600 million (Figure 8). The increase in spending is also likely driven, in part, by rising prices of plasma on the global market (NBA, 2022a). The cost per litre of plasma has risen in Europe and the US in recent years, and with high global demand for plasma, the price of imports could continue to rise (Bolcato & Jommi, 2024). These costs are incurred by both state and federal governments which jointly fund the supply of blood products in Australia. The Australian Government provides 63% of funding for the national blood supply, with state and territory governments funding the remaining 37% (Australian National Audit Office, 2021).

In 2023-24, about \$1.7 billion was spent on the broader supply and management of blood products, up from about \$1.2 billion in 2018-19 (NBA, 2024).

Figure 8: Spending on imported plasma products is growing quickly

Spending on imported plasma products and immunoglobulin in Australia



Source: National Blood Authority Annual Reports.

Notes: For 2013-2020 and 2021-24, data are sourced from figures in NBA annual reports. For 2020-21 only, in the absence of complete published data due to COVID-19, the value is estimated from NSW PEC calculations on NBA's reported imported plasma and Ig products for that period. The calculations involved summing disaggregated data on amount spent on supplier contracts for imported products per financial year.

3 Growing import reliance conflicts with our goals of self-sufficiency and volunteer donations

Australia’s goal of being self-sufficient and relying only on volunteer donors is growing ever more distant when it comes to plasma. Australia’s reliance on internationally-sourced blood products has grown over the past decade (NBA, 2024). And these imports tend to come from countries where donors are paid.

3.1 Self-sufficient countries tend to allow paid donations

Currently, there are only five countries that have achieved self-sufficiency in plasma products. They are the US, Austria, Germany, the Czech Republic and Hungary, all of which offer monetary compensation to donors (Table 3).^{10 11} Australia tends to import from some of these countries, especially the US, where the vast majority of plasma comes from paid donors.

Table 3: Self-sufficiency in immunoglobulin – international comparisons

Self-sufficient?	Example countries	Paid compensation	Collection types
Yes - meets demand with local donations	Austria, the Czech Republic, Germany, Hungary and the US	Yes	Public, not-for-profit and private collection
No - meets demand with imports	Australia, the Netherlands, France	No ¹²	Public and not-for-profit

Payment for plasma varies across the US and Europe. Some private plasma centres offer over US\$500 during the first 35 days for new plasma donors if they donate a certain number of times (Octopharma Plasma, 2024). On average, donors will receive around \$US50 per donation in some centres, with bonuses for referrals and frequent donations (Hill, 2024; Octopharma Plasma, 2024a). Payments also increase in some jurisdictions during supply shortages. In Austria, Germany, the Czech Republic and Hungary, donors are often offered a flat fee of between €13-45 per donation (Southcott, Chell, & Dulleck, 2022; Bencharif, 2022).

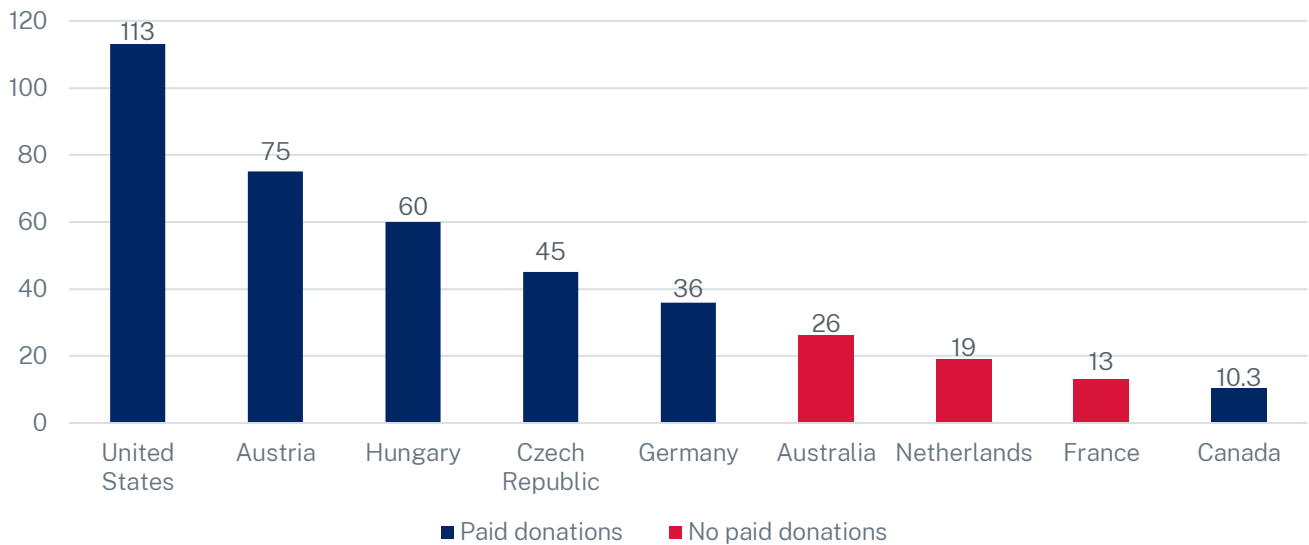
A combination of donor compensation, favourable regulatory conditions and private plasma collection centres have enabled all five countries that allow paid donations to produce more plasma products than they consume, achieving self-sufficiency (Hartmann & Klein, 2020).¹³

- Currently, the US contributes around 70% of global plasma supply. The US collects more than 100 litres of plasma per 1,000 people, compared with around 25 litres per 1,000 people in Australia (Figure 9).
- In Europe, about 50% of plasma supply comes from Austria, Germany, the Czech Republic and Hungary, which allow paid donations (Pant, Perras, & Manoharan, 2021).

¹⁰ Austria, Germany, the Czech Republic and Hungary are the only countries in the EU with both public and private sector collection of blood products (Bencharif, 2022).
¹¹ China allows for donor compensation. However, these products are retained within China and are not exported (Hartmann & Klein, 2020).
¹² Some countries provide in-kind compensation, such as t-shirts and mugs, to encourage people to donate.
¹³ The frequency of donations differs between countries. In the US, donors can donate whole blood every eight weeks, compared to every 12 weeks in Australia. Some private companies allow people in the US to donate plasma once every two days (compared to every two weeks in Australia).

Figure 9: Countries with paid donations collect plasma at higher rates

Litres of plasma collected per 1,000 people



Source: Pant, Perras, & Manoharan, 2021; Lifeblood, 2022; Jaworski, 2020; Plasma Protein Therapeutics Association, 2022a.

Notes: Collection rates for the US, Austria, the Czech Republic, Netherlands, France and Germany are based on 2017 figures. Collection rates for Australia and Canada are based on 2022 figures. Some parts of Canada only recently began offering paid donations for plasma.

In these countries, price signals ensure a strong supply of plasma

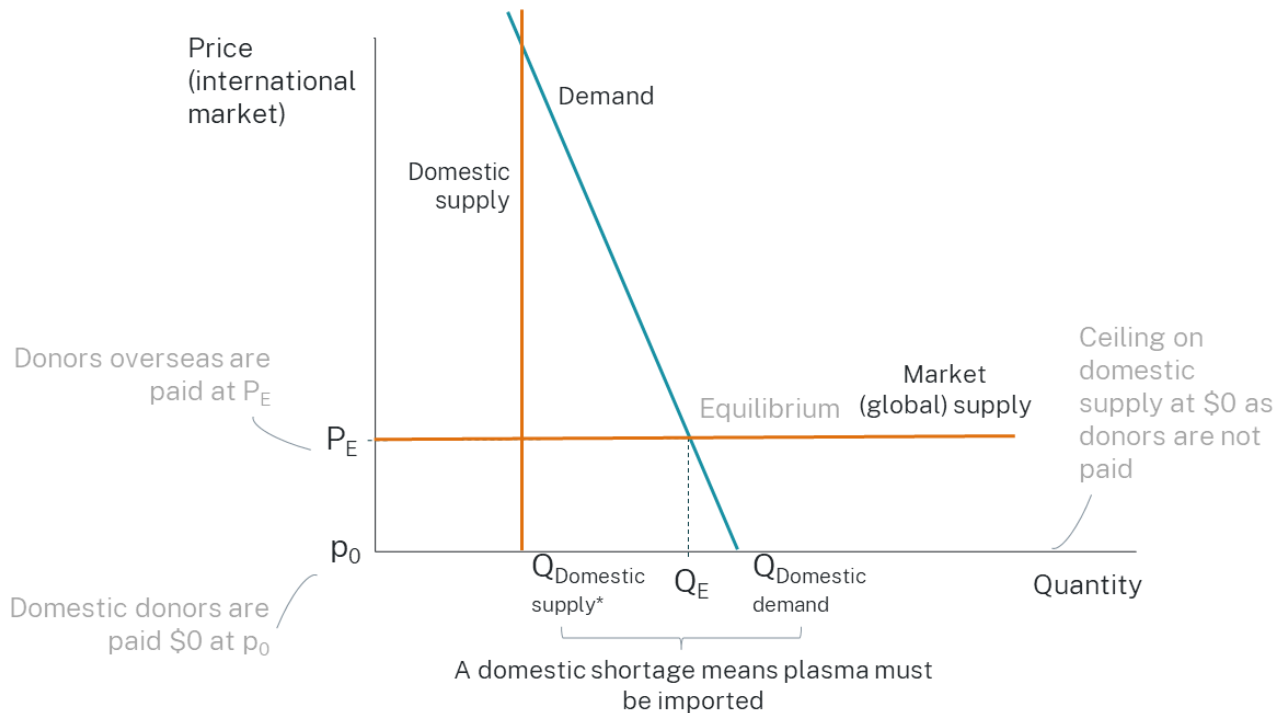
Only countries that pay their donors produce enough supply to meet their needs and can export their excess. Unlike Australia, these countries have price signals that help to coordinate supply and demand:

- For some people, volunteering is seen as attractive but costly. Paying volunteers can help to overcome these costs by ensuring the benefits from donating – both financial and non-financial – outweigh the time costs of donating and any discomfort from having their blood drawn.
- Prices can be adjusted to indicate higher or lower need for blood donations and allow donors to make more informed decisions about when (or if) they should donate.

We can illustrate this using supply and demand curves (Figure 10). When people are offered compensation for donating at a certain price (P_E in the chart), more donations are received, increasing the quantity supplied (from $Q_{\text{Domestic supply}}$ to Q_E). This brings the market into a new equilibrium at a higher level of demand. In practice, this appears to hold true: the only countries that produce enough plasma to meet local demand offer paid compensation to their donors.

Figure 10: A stylised model of supply and demand for plasma

Supply and demand for plasma in Australia



Notes: The demand curve represents the demand for plasma in Australia. The local supply curve represents plasma supply from donors in Australia. We illustrate this curve vertically, as per Becker (2022), where supply of unpaid kidneys is shown as inelastic. This aims to capture how the unpaid donations market in Australia limits supply, to the effect that it is fixed or effectively 'capped' at $Q_{\text{Domestic supply}}$, which is the quantity supplied by the local market. The global market supply curve is horizontal to capture how Australia is a price taker for imports of blood products. In other words, international prices for blood products are set by global market forces. $Q_{\text{Domestic supply}}$ is from local non-compensated donors.

3.2 If import reliance keeps growing, we may face pressure to allow paid donations, like Canada did

Faced with the risks of growing import reliance, policymakers overseas have faced pressure to consider alternative approaches to boosting local volunteer donations. In 2022, after local volunteer plasma donations dropped below 20% of total plasma supply, Canada started allowing private clinics to pay plasma donors on a large scale. This came three decades after a Commission of Inquiry on the Blood System in Canada in 1997 recommended against paying for plasma donations in response to safety issues (Krever, 1997).

In line with these changes, Canada is aiming to be self-sufficient for 50% of its plasma supply as soon as possible (Canadian Blood Services, 2023). This followed recommendations from a 2017 review which urged action on Canada's international plasma dependence. It found that more than 80% of Canada's blood products (namely immunoglobulin) came from overseas, almost all from paid donors in the US, costing Canada more than \$700 million a year (Government of Canada, 2017).

Like Australia, Canada is one of the biggest users of immunoglobulin in the world, second only to the US (Harmon et al., 2023). Under the Canadian reforms, paid plasma donors can donate up to twice per week, and earn up to \$80 per donation, meaning donors can earn over \$500 per month (Give Plasma Canada, 2024). While Canadian Blood Services (equivalent to Lifeblood in Australia) itself does not directly pay donors at its own sites, it supports the practice of paying plasma donors at private centres.

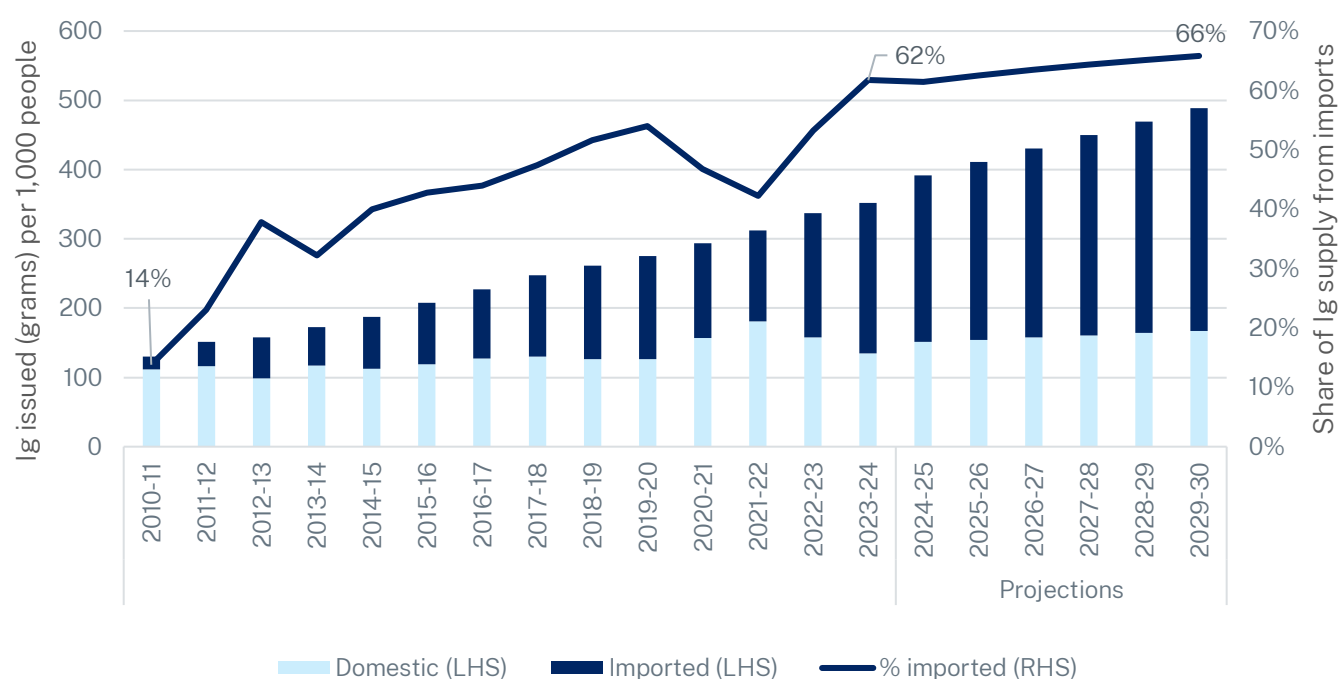
Early evidence suggests that these changes in Canada have contributed to increased local donations. In 2023-24, locally donated plasma made up 27% of Canada's total supply, almost doubling from 15% in 2021-22 (Canadian Blood Services, 2024; Canadian Blood Services, 2022).

Australian policymakers may face pressure to allow paid donations

Australia's reliance on imported plasma products – and for immunoglobulin in particular – has also grown rapidly over the last few decades. On current trends, Australia could be reliant on imports of immunoglobulin for around 66% of supply by 2030, up from around 15% in 2010 (Figure 11). If import reliance keeps growing, Australian policymakers may also face pressure to consider allowing paid donations to boost local supply, as Canadian policymakers did. More work is needed to understand the impacts of allowing paid donations in an Australian context (see Box 1).

Figure 11: By 2030, more than 65% of immunoglobulin could come from overseas

Projected growth in imports of immunoglobulin assuming a linear trend



Source: National Blood Authority Australia, 2024; ABS, 2024; NSW PEC analysis.

Notes: Projections of total immunoglobulin issued are based on trends from 2010-11 to 2023-24 excluding pandemic years (2020 to 2022 inclusive). Projections are illustrative only. Other factors, like changes in use and demand for immunoglobulin, will also affect imports over time.

3.3 Boosting local donations would complement Australia's strength in plasma processing

Despite our growing dependence on overseas plasma, Australia plays a key role in the global plasma supply chain. Mainly through CSL Plasma, Australia imports large volumes of raw plasma donations from paid US donors. Much of this plasma is processed at CSL Behring's Broadmeadows facility – the world's largest plasma fractionation plant. This facility processes over 10 million litres annually to produce plasma products such as immunoglobulin, much of which is exported back to the US.

Boosting local plasma donations could complement this strength in plasma processing, providing opportunities to improve the resilience of our local supply chains.

Box 1: Historically, the prospect of paid donations has raised concerns about safety and potentially the ‘crowding out’ of volunteer donations

Safety concerns

Safety has long been a central concern with paid blood and plasma donation. In the 1970s, concerns emerged that financial incentives might attract high-risk donors who could misreport health information (Slonim, Wang, & Garbarino, 2014). Although international evidence suggests paid plasma donation can be safe with proper screening, its long-term safety, cost and supply impacts in an Australian context remain underexplored in research (Bruers, 2021).

Advances in testing and donor pre-screening since the 1970s have improved safety, and both Australia and the US require rigorous testing for infectious diseases (Centers for Disease Control and Prevention, 2023; Lifeblood, 2023a). Notably, research in America (Slonim, Wang, & Garbarino, 2014) has found no evidence that countries with higher volunteer donation rates have less safe blood, challenging earlier concerns (World Health Organization, 2010). Canada’s recent move to paid plasma in private clinics was supported by enhanced safety protocols.

Crowding out volunteer donations

Crowding out refers to the risk that paid plasma donations could reduce unpaid whole-blood donations. If donors shift from unpaid to paid plasma, overall supply gains may be limited. However, evidence on this is mixed. A small Swedish study found reduced donations among women when payment was introduced (Mellstrom & Johannesson, 2008), but larger studies show that financial incentives increase donations, with stronger incentives yielding greater effects (Lacetera, Macis & Slonim, 2013).

International evidence also points to diminishing concerns on crowding out. When Canadian Blood Services asked its counterparts in Germany, Austria, Hungary and the Czech Republic if they had observed any evidence of crowding out following the introduction of paid donations, the conclusion was that there was ‘no evidence of VNRBD [Voluntary Non-Remunerated Blood Donation] being tangibly impacted by remunerated source plasma operations’ (Bedard, 2020).

There is also limited evidence of crowding out in countries that have started to allow paid plasma donations at private collection centres. One study that analysed the effect of offering payment for plasma in Canada found no evidence that compensating donors for plasma decreased the overall supply of whole blood. In fact, the introduction of paid plasma collection facilities resulted in a small increase in the overall number of whole-blood donations (English & Jaworski, 2020). As such, Canada’s recent policy change points to diminishing concerns that paying donors for plasma will crowd out donations from unpaid volunteers.

Australian attitudes

Australia has maintained a policy of unpaid plasma donations for decades. There is some evidence to suggest that attitudes in Australia are against remuneration for blood donations (Bambrick & Gallego, 2013). Concerns and attitudes towards paying donors could continue to evolve in the long term; however, given existing policies and attitudes towards paid donations, offering monetary incentives remains an unlikely option in Australia in the short term.

4 We can reduce import reliance by trialling new ways to support volunteers

We have seen that growing reliance on imported plasma products comes with growing costs and risks. Australia officially aims for ‘national self-sufficiency’ based on sourcing ‘sufficient blood and plasma from local sources to meet the required level of clinical demand’ (AHMC, 2006). This aim is slipping out of reach and clearly requires reversing our growing reliance on imports. We cannot be self-sufficient if we are increasingly exposed to shocks in international supply chains and prices. For many patients, immunoglobulin is a life-saving product, with very few substitutes.

Further work is needed to understand the risks and benefits of our growing reliance on imports. This could involve quantifying the risks and benefits of different levels of import reliance. It could involve modelling the degree to which we can mitigate import risks through strategies like demand management and maintaining local reserves, and the costs and benefits of these mitigation strategies. It would also require consideration of Australia’s unique demographics and geographical separation from major international suppliers.

But we need not wait for this analysis. Today, only 38% of our plasma products come from Australian donors. We are not yet as import reliant as Canada, but our dependence is significant and growing steadily. Doing more to boost volunteer donations could help slow or reverse this trend.

4.1 We should trial new ways to support volunteerism

Volunteering offers a range of benefits. It’s associated with better mental health outcomes for donors themselves, as well as broader benefits for the community.

Importantly, volunteers receive a ‘warm glow’ of satisfaction from doing their part. This warm glow is separate to the benefit the volunteer gives to charitable organisations and the people they help, as it is the personal or private benefit that volunteers get. This warm glow has been found to increase overall charitable donations.¹⁴

As discussed in Section 1.3, there are a number of barriers to increasing volunteerism in Australia. Table 4 provides an overview of potential interventions to overcome these barriers and support volunteer donations of plasma, including by reimbursing donors for the travel cost of donating, increasing awareness of supports in place and enhancing the donor experience.

And these new ways are not necessarily only within the remit of Lifeblood or the National Blood Authority. They could instead be considered by policymakers and other leaders, such as encouraging the use of paid leave to donate blood.

In the EU, legislation has been proposed allowing donors to receive compensation or reimbursement for donating, but not financial incentives. This would cover the costs incurred when donating, but not to the extent that donors receive an overall financial benefit. Box 2 provides further examples of initiatives from government and businesses that have been successful in supporting volunteer blood donations.

¹⁴ Slonim & Lilley (2014) find that when volunteers complete a task with a ‘pure frame’ (highlighting the amount the charity receives) compared with the ‘impure frame’ or ‘warm glow’ (highlighting to the donor their personal contributions of time and money), the impure frame motivated more overall charitable giving.

Table 4: Considerations of potential interventions to support volunteerism to boost plasma supply

Potential approaches	Advantages	Disadvantages	Implementation considerations
Reimbursing donors for costs incurred relating to lost time, earnings or travel expenses	- Donors do not experience a net loss from donation. - Evidence in Italy showed that one paid day off work each year for donating blood induced one extra blood donation each year on average among existing donors. This translated to a 40% boost to the total number of donations each year (Lacetera & Macis, 2013).	- While benefits like paid leave are in place in some workplaces, there may be cultural barriers, a lack of awareness and other barriers to uptake. - Costs are variable depending on the donor, for example, wages and travel costs could vary. - Coverage would be limited to workplaces that offer this incentive (rather than all potential donors) and would exclude self-employed people.	- Could be delivered by Australian governments and businesses (for example, paid leave for public servants working for the NSW Government). - Could be offered for different types of blood products, depending on need. - Optimal levels of paid leave would need to be determined. - Whether non-government employers bear all the costs associated with paid leave entitlements, if offered.
Enhancing the donor experience , for example, reducing wait times, adopting a registry	- Minimising wait times for donors can improve donor satisfaction and return behaviour. - Australian evidence found that if average wait times exceeded 20 minutes, donations decreased by 10% and donor satisfaction fell (Craig, Garbarino, Heger, & Slonim, 2017). - The use of a centralised registry that matches donor preferences and blood type with actual supply needs during critical shortage periods (Heger, Slonim, Garbarino, Wang, & Waller, 2020).¹⁵	It could be costly to reduce wait times or implement a registry system – but this would depend on the efficiency of employees, the number of staff on every shift, and the ability to manage workflows.	- Opportunities to test a range of approaches to enhance the donor experience in Australia, for example, blood drives and other approaches that enable convenient ways to donate. - The cost-effectiveness of ways to improve the donor experience. - Potential efficiencies and opportunities to enhance the donor experience could be considered by Lifeblood.

¹⁵ This is likely more applicable to blood donations, rather than plasma. Heger et al. (2020) tested a ‘registry’ that collects individual preferences for making a blood donation so that a central organiser can coordinate potential donors’ actions based on their preferences, instead of donors acting on their own. Registry members were 100% more responsive to critical shortages than individuals who were not on the registry.

Box 2: Governments and businesses can support and inspire a sense of purpose and culture of volunteering

Organisations with high donation rates show that three factors make a real difference: a strong sense of social purpose; a culture of volunteering; and visible support from senior leaders.

At the Australian Prudential Regulation Authority (APRA), a strong sense of social purpose organically sparked a grassroots volunteer Lifeblood community. Over 100 employees – more than 10% of staff – volunteer their time to donate blood and plasma. This staff initiative is supported by internal buy-in with wellbeing intranet pages, corporate induction material, and a Microsoft Teams channel that builds visibility of and connection to the community. In addition, two senior leaders in the organisation actively endorse the program, showing how leadership visibility can legitimise informal efforts.

This model highlights how purpose-driven engagement, when supported through informal networks and leadership endorsement, can lead to meaningful outcomes. In the past year, APRA employees Australia-wide have donated 216 blood and plasma products.

In another example, Mastercard formally supports donation through inclusion in their five-day annual volunteering program. Internal champions coordinate with Lifeblood to run team competitions, events and educational sessions, like morning teas that highlight the 17 use cases for plasma. Employees can also donate on their own schedule, including weekends, and their efforts are formally recognised. Executive presence, through attending Lifeblood-run events, signals top-down support. Lifeblood also provides taxi vouchers to Mastercard for group donations, removing logistical barriers. In the past year, Mastercard employees Australia-wide have donated 160 blood and plasma products.

Together, these examples show that when purpose is clear, volunteering is encouraged and leadership is engaged, donation programs can thrive. Whether informal or structured, these cultural and structural enablers are key levers governments and organisations can use to increase volunteer plasma donations.

4.2 More governments and businesses could consider paid leave to promote more plasma donations

Inconvenience is a key deterrent for many potential donors (Bedhall & Bove, 2011). Offering employees flexible working arrangements to donate plasma is one way to address the time barriers people face when considering whether to donate. As outlined in Table 4, evidence in Italy showed that access to one paid day off work each year, with wage costs reimbursed by the state, led to a 40% boost to the total number of donations (Lacetera & Macis, 2013).

This leave is already available in some workplaces in Australia and overseas:

- In NSW, public sector employees can be granted special leave to give blood (NSW Government, 2019). Australian Government public service employees and Victorian Government staff can also access this leave (Fair Work Commission, 2024; Department of Economic Development, Jobs, Transport and Resources, 2018).
- Telstra provides paid leave to employees donating to Lifeblood (Telstra, 2024). In Queensland, some enterprise agreements with major companies like Coles, Woolworths, Bunnings and Kmart allow employees to take a maximum of two hours' paid leave to donate blood for up to four separate absences a year (SDA Queensland, 2022).
- The UK's National Health Service recently began encouraging businesses to organise 'Donate Breaks' where employees receive dedicated time off work to donate blood and plasma. Major UK companies like The Cooperative Bank have pledged to participate (HR News, 2024).

- Across the EU, including in Poland and Italy, people can access paid leave to donate blood and plasma, in both the public and private sectors. Depending on the country, donors are entitled to up to two days of leave (Plasma Protein Therapeutics Association, 2021).

Other Australian governments and businesses could consider providing paid leave to support the local donation of plasma. Promotion to support uptake could be timed to match the lead-up to periods when shortages are common, like the end of year or during the flu season.

Donor eligibility can also affect whether organisations are inclined to offer paid leave to support their staff to donate blood and plasma. Stakeholders have suggested that some businesses may not have wanted to be associated with Lifeblood due to eligibility restrictions on gay and bisexual men, which can be perceived as discriminatory.

In June 2025, Lifeblood announced changes to gender-based sexual activity rules for plasma donations. The change will mean all donors will be asked the same question about their sexual activity, regardless of their gender or sexuality. This is estimated to directly expand the donor pool by 24,000 donors and 95,000 extra donations of plasma each year (Lifeblood, 2025). More inclusive criteria may also indirectly encourage a new cohort of businesses and individuals to support donating blood and plasma.

Further changes to blood and plasma donation rules for cancer survivors have also recently been introduced. As of July 2025, Lifeblood reduced the deferral period for blood donation from cancer survivors of non-blood cancers from five years to just one year post-treatment. This change is expected to boost the eligible donor pool and increase donations, as over 5,000 potential donors were previously deferred each year due to cancer diagnoses (Lifeblood, 2025).

4.3 We could raise awareness about the importance of plasma donations and the supports in place to donate

Even though NSW public sector employees can access paid leave for blood and plasma donation, uptake of this benefit is likely low. Stakeholders across government report:

- there is limited awareness that it exists and of the need to donate
- there are additional barriers to donating for frontline workers, like teachers, firefighters and nurses, who may not be able to take leave to donate due to the nature of their jobs
- it is unclear what the scope of the leave entitlement is and whether it includes plasma donation (it is currently framed as leave for ‘blood donation’).

Generating awareness about the supports available to donate and encouraging uptake, among other initiatives, could strengthen the donor culture across the state’s public sector.

Our back-of-the-envelope calculations suggest that if even one in 10 staff took up the paid leave, it would be enough to make a significant difference, resulting in more than 26,000 new donors in one year. By comparison, around 31,000 people donated blood and plasma for the first time in NSW in 2022 (Lifeblood, 2022).¹⁶

Under more conservative assumptions – specifically, that the paid leave was only used by existing donors to make one additional donation each year – it could induce 10,000 extra donations in a year. This too could make a meaningful difference. In 2022, NSW needed 550 additional donations of blood every day over the Christmas holiday period, or around 8,000 donations over two weeks to avoid a critical shortage (Lifeblood, 2022c).

¹⁶ Note that this includes all donors of blood, plasma and other components.

Encouraging use of leave during the lead-up to holiday periods could help the state avoid critical shortages. We estimate that this kind of incentive could be cost-effective provided that the social benefits of one donation exceed around \$200 (see Table 5).¹⁷

Table 5: Back-of-the-envelope calculations of the potential impact of paid-leave uptake

	Number	Assumptions
Eligible donors	38,000 each year	In 2022, there were around 380,000 NSW public sector employees (NSW Public Service Commission, 2023). We assume, for illustrative purposes, that 10% of these employees take up the benefit and are eligible to donate.
Number of new donors	26,600 each year	We assume that 3% of these employees are existing donors (that is, 11,400 donors), in line with the broader population (Australian Government Department of Health and Aged Care, 2020a).
Cost	\$200 per donation	This captures the cost of work time lost, assuming that donors take half a day off to donate. We assume costs of around \$190, using a \$95,000 average NSW public sector salary (NSW Public Service Commission, 2022). We add travel costs, assuming a daily cost of \$10 (as the maximum NSW Opal fare is \$50 per week, assuming travel to work on all weekdays).

Stakeholders across the NSW public sector have suggested various ways to promote plasma donation and support uptake of leave benefits for donation. For example:

- Sector-wide communications from senior leaders to encourage blood and plasma donations and use of paid leave, particularly during periods of shortage (like annual influenza vaccination drives implemented each year).
- Fostering competition between different donation teams and recognising those with high participation rates.
- Regular manager-led group donations with scheduled time off for employees to donate.
- Organising on-site mobile blood drives for sites that do not have donation centres close by.

We could look overseas for lessons about promotion. A study of high-performing donor centres in Canada showed that strong communication and engagement with the community attracted new donors. Community Development Coordinators (CDCs), who acted as ‘ambassadors’ of blood donation in the community, would regularly visit local organisations and businesses to promote awareness and encourage employees to donate as a group. They also created a reward system to foster competition among organisations. Groups that donated the most blood would be recognised publicly. 50% of donors cited the program as the most important reason for donating (Smith, Matthews, & Fidler, 2011).

4.4 Testing and evaluating various approaches to the new donor gift program could help to inform ongoing efforts to boost local plasma donations

Offering gifts to donors has been proven to boost supply without affecting future donations. Higher value gifts generate larger responses in a cost-effective and safe way (Slonim, Wang, & Garbarino, 2014).

¹⁷ Estimating the benefit of extra blood donations is beyond this paper’s scope. The benefits of one donation would likely include the expected impact of the blood on the life expectancy of patients multiplied by the value of those extra years of life. Lifeblood and the World Health Organization report that one blood donation could save up to three lives.

Lifeblood officially launched its Lifeblood Gifts loyalty program in 2024 to encourage new and existing members to donate. Donors who opt in to the program receive a gift of their choice on every third donation. They can choose from a variety of gifts, like water bottles, beanies and blankets, as well as special limited-edition items (Lifeblood, 2024).

In the UK, the National Health Service is trialling a similar program called Plasma Perks, specifically for plasma donors (NHS Blood and Transplant, 2024). In the US, the American Red Cross offers t-shirts or umbrellas to donors, with some gifts available on certain dates (American Red Cross, 2024).

Future trials and experimentation could explore different ways to encourage more plasma donation through the gift program. For example, some studies suggest that a tiered loyalty program (with greater rewards at higher levels), or partnerships with other vendors to increase the breadth of rewards, could improve loyalty (Southcott, Chell, & Dulleck, 2022). Trialling changes to the timing of incentives (for example, offering them during acute shortages and not at other times) could work too (Lacetera, Macis, & Slonim, 2013).

Recognition, rather than gifts, could also be an effective incentive – especially given the importance of the warm glow among volunteers. For example, an Australian study found that the use of social media recognition played a role in encouraging people's intentions to donate. Donors were invited to complete an online survey and responded to questions about intentions to donate, in response to specific tokens of recognition on social media like Facebook or Twitter. Measures of social and emotional value were key drivers of intentions to donate (Chell & Mortimer, 2014).

4.5 There are other options to explore

Given the strain being imposed on the system for plasma, there is an opportunity for Australian governments to work together to support donations, including by drawing on lessons from overseas. For example:

- Build on existing Lifeblood initiatives (for example, Lifeblood Teams competitions and mobile units) and expand the evidence base for improving participation. This could include evaluating the efficacy of workplace competitions and blood drives. Initiatives could also be explored in other community settings, like universities and churches.
- Work with NSW public service delivery agencies such as Service NSW and NSW Health to promote existing Lifeblood initiatives.
- Continue to build the evidence base to improve the market for plasma products, including better data collection about changing demand across states and territories.
- Explore avenues to grow the pool of donors and investigate the effectiveness of targeted strategies to recruit different cohorts of new donors, such as younger people and those from culturally diverse backgrounds.
- Consider setting local targets and timeframes to focus effort. Canada, for example, set a national target to achieve 50% plasma self-sufficiency over seven years. Setting appropriate Australia-wide or state-based targets would require analysis of our unique circumstances, like current donation rates and local processing and storage capacity.
- Conduct further research to understand people's motivations for charitable giving and the barriers holding them back.

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Appendix A: About the National Blood Authority and the Australian Red Cross' Lifeblood

The National Blood Authority

The National Blood Authority (NBA) is a statutory agency within the Australian Government's health portfolio. It manages and coordinates arrangements for the supply of blood and blood products and services on behalf of the Australian Government and state and territory governments.

It was established in 2003 following the signing of the National Blood Agreement by the Australian, state and territory governments. The NBA emerged following the 2001 Review of the Australian Blood Banking and Plasma Product Sector undertaken by Sir Ninian Stephen. The Stephen Review noted the need for changes to fragmented arrangements that applied to the blood sector at the time. Supply costs had tripled between 1991 and 1999. The review recommended the strengthening of the arrangements for the coordination and oversight of Australia's blood supply.

As the central purchasing agency for blood and blood products, the NBA establishes contracts with suppliers to meet the needs of patients, within the resources and policy parameters set by Australian, state and territory governments.

The National Blood Agreement's primary policy objectives are:

1. to provide an adequate, safe, secure and affordable supply of blood products, blood-related products and blood-related services in Australia
2. to promote safe, high-quality management and use of blood products, blood-related products and blood-related services in Australia.

Australian Red Cross' Lifeblood

A Deed of Agreement is in place between the NBA (representing all Australian governments) and the Australian Red Cross Society. Lifeblood is a division of the Australian Red Cross Society. The collection, processing and supply of fresh blood products and services and plasma are performed by Lifeblood (NBA, 2021). Lifeblood also conducts a broader range of activities nationally like running human milk banks, tissue typing and testing.

Funding and expenditure

The NBA is funded by the Australian Government (63%) and by the states and territories (37%), with the funding provided by each state and territory determined by the quantity of product provided to each particular state and territory (NBA, 2022b). In 2023-24, the budget for the supply and management of blood products was \$1.7 billion, which included:

- \$765.2 million for fresh blood products and plasma collection
- \$919.5 million for plasma-derived and recombinant products
- \$22.5 million for activities supporting the use and management of blood products and blood-related services.

Further information and contacts

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