

Welsh Blood Service

Welsh Bone Marrow Donor Registry

Our Strategy 2028



Contents

Foreword	1
Who we are and what we do	2-3
Strategy Context	4-7
Our Vision	8
Our Strategic Themes	9
Strategic Theme 1 - Grow the registry of stem cell volunteers to represent the diverse communities we serve	10-11
Strategic Theme 2 - Expand Stem cell services to provide greatest benefits to donors and patients	12-13
Strategic Theme 3 - Quality, Safety and Value: Doing it right, first time	14-15
Looking to the future	16-17



Foreword

A very warm welcome to the Welsh Bone Marrow Donor Registry (WBMDR) Strategy. We are immensely proud of the life-saving difference the Registry makes for patients in Wales and around the world, and of the dedication shown by our volunteers, staff, and partners.

The WBMDR is an integral part of the Welsh Blood Service, and our work is driven by a deep commitment to improving outcomes for patients who need stem cell transplants. Every donor who joins the Registry, every member of our team, and every partner we work with plays a vital role in offering hope and a second chance at life to those facing serious illness.

Our strategy sets out a clear vision for the future: to save and improve lives through the provision of stem cells. We are determined to grow and diversify our panel of volunteer donors, expand our services, and ensure the highest standards of quality, safety, and value in everything we do. We recognise the importance of equity of access, and are committed to reaching all communities across Wales and beyond.

Looking ahead, we will continue to build on our strong foundations, modernise our digital systems, embrace innovation to advance scientific understanding and work collaboratively with our staff, donors, patients, and partners. Together, we will ensure the Registry remains at the forefront of stem cell transplantation and advanced therapies, supporting the health and well-being of our communities for years to come.



Who we are and what we do

The Welsh Bone Marrow Donor Registry is an integral part of the Welsh Blood Service, operating under Velindre University NHS Trust. The Registry delivers nationally mandated and internationally recognised services in the field of haematopoietic stem cell transplantation.

We are dedicated to the recruitment, testing, and coordination of volunteer stem cell donors to provide life-saving cellular therapies for patients in Wales and across the globe.

The Registry comprises over 75,000 volunteer donors, with more than 1,500 stem cell products supplied to UK and international transplant centres. Additionally, we have imported over 650 unrelated donor products from global registries to support Welsh patients undergoing transplantation at the University Hospital of Wales, Cardiff.



Who we are and what we do



Donor eligibility criteria are designed to optimise transplant outcomes while promoting equitable access.

Eligible volunteers can join the stem cell volunteer panel from the age of 16 to 30 or from 16 to 45 if they are from an ethnically diverse background, reflecting the critical need for greater donor diversity.

All donors remain active on the panel until their 61st birthday.

Stem cell collections are performed at Human Tissue Authority (HTA)-licensed and Joint Accreditation Committee of ISCT and EBMT (JACIE)-accredited clinical facilities within Velindre Cancer Services in North Cardiff. These accreditations ensure the highest standards of donor safety and clinical care.

Once collected, cellular products are dispatched through established international logistics networks, enabling timely delivery to patients worldwide in accordance with regulatory requirements and clinical urgency.

Strategy Context

Blood cancers represent the fifth most common cancer in the UK, and the third leading cause of cancer-related deaths. Stem Cell Transplantation remains a high effective and often curative therapy for inherited and acquired bone marrow disorders which is required by over 2000 patients in the UK each year and over 50,000 patients worldwide. Crucial to the success of stem cell transplantation is obtaining a genetic ‘tissue type’ match between the donor and patient, however, most patients will not have a suitably matched family donor and rely on an unrelated donor registries.

The Welsh Registry's core purpose is to save the lives of these patients through the provision of stem cells from unrelated adult donors and has been supplying stem cells for over 35 years. The demand for stem cells worldwide increases year on year in response to increased diagnostic capabilities, advanced treatments and changing indications for stem cell transplant. The indications for stem cell transplantation will continue to increase resulting in a likely increased demand on donor registries.

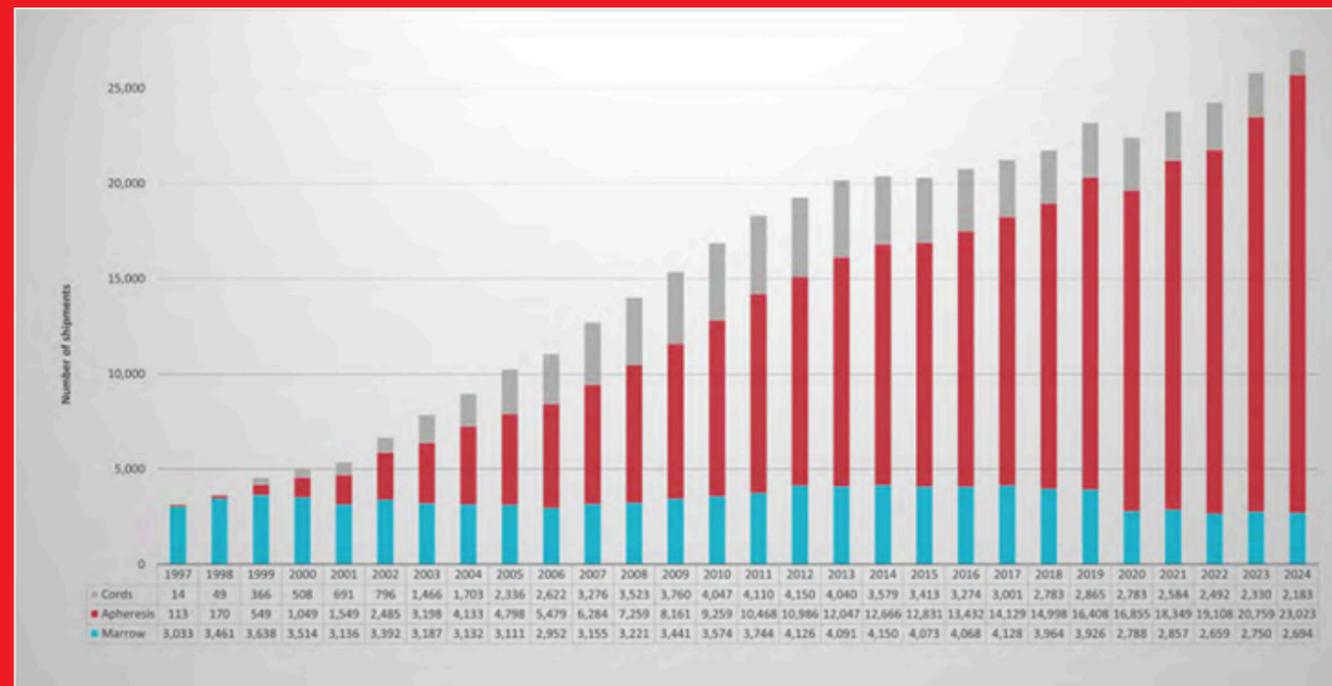


Figure 1: Global increase in transplantation stem cell demand by product type 1997-2024 (World Marrow Donor Association, Global Trends Report 2024)



Crucial to the success of stem cell transplantation is obtaining a ‘tissue type’ match between the donor and patient, however, other donor factors can also be used to optimise patient transplant outcomes which include for example, the age of the donor (younger donors preferred due to better outcomes for patients).

As tissue type is influenced by ethnic origin, an unrelated donor match is more likely to be found within the same ethnic community. However, as the global donor registry population is predominately (70%) white-background, for patients needing a stem cell transplantation there is only a 37% chance of a minority ethnic patient finding a matched donor, compared to 72% chance for a white patient, leading to inequity of access to stem cell transplantation.

The development of advanced therapeutic products positions cellular therapies (e.g. CAR-T cells) as one of the fastest growing areas of healthcare. Stem cells serve as the key starting material for advanced therapeutic medicinal products (ATMPs). With the emergence of these therapies, there is an opportunity to build on the Registry's success within unrelated donor transplantation to be contribute to the next-generation of innovative cellular therapies.



Strategy Context

UK Stem Cell Strategic Forum

The UK Stem Cell Strategic Forum is a multi-disciplinary expert group formed in 2010 at the request of the UK Government Department of Health and Social Care. The Forum was established to make recommendations on improving outcomes for stem cell transplant recipients across the UK. Since its establishment, the Forum has served as a highly effective group for key UK stem cell transplantation stakeholders - all united with the common aim of extending the curative benefit of stem cell transplant, and more recently, cellular therapies.

In 2022 the UK Stem Cell Strategic Forum published a 10 year vision for stem cell transplantation and cellular therapies. The 24 ambitious recommendations in the strategy set out the initiatives that are needed to realise significant improvements in patient outcomes, experience and quality of life after HSCT and cellular therapy treatment in the coming decade. The recommendations include increasing recruitment and diversity of volunteers, and increasing capacity for stem cell apheresis collection and stem cell processing in the UK.



Advanced Therapies Wales

The Welsh Registry is closely aligned with Advanced Therapies Wales (ATW) in delivering the future of cellular and gene therapies in Wales, with a shared focus on expanding apheresis capacity.

The lack of apheresis stem cell capacity in Wales has been highlighted by the Advanced Therapies Wales 'Therapeutic Apheresis Review' report.



Strategic Themes 2025-2028

The Welsh Bone Marrow Donor Registry's strategy is structured around three core priorities, each designed to address key national requirements, eliminate barriers to equitable access, and strengthen the Registry's contribution to patient healthcare.

The Registry's three-year strategy timeline aligns to the Welsh Blood Services', Blood and Transplant Services for the Future Strategy.



Grow the registry of stem cell volunteers to represent the diverse communities we serve.



Expand stem cell services to provide greatest benefits to donors and patients

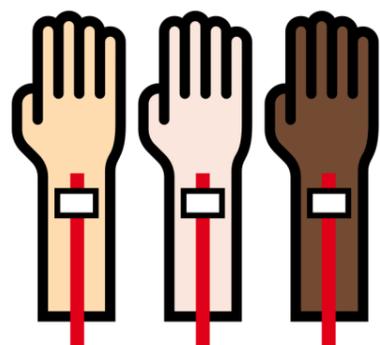


Quality, Safety and Value : Doing it right, first time.



Our Vision

**To save and improve
lives through cell
therapy**



Strategic Theme 1:

Grow the registry of stem cell volunteers to represent the diverse communities we serve

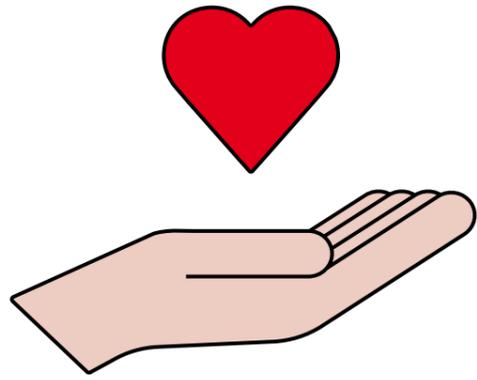


Our Objectives are to:

- Enable patients worldwide to benefit from stem cell transplantation, by increasing the number of volunteers on the registry
- Develop a donor base which represents the diverse communities we service improving the equity of access to transplantation for all communities
- Make it easy for the people of Wales to make an informed choice to join the stem cell Registry
- Improve engagement with volunteers already on the stem cell donor panel
- Increase knowledge and awareness of the stem cell registry within Wales.

We will:

- Expand and explore partnership opportunities to grow our donor base and improve the diversity of the stem cell panel
- Continue to work with a wide range of stakeholders to develop a plan to increase the amount of donors joining the registry
- Engage with communities of diverse ethnicity to improve the diversity of the donor panel and increase equity of access to treatment for all patients.
- Recruit highly informed volunteers, through provision of a comprehensive educational package on stem cell donation and transplantation.
- Ensure all eligible blood donors have a conversation about joining the stem cell registry
- Introduce new technology to identify, engage and motivate our donors more effectively
- Use behavioural insights to better understand our donors and tailor our engagement to meet their needs.
- Create a clear brand identity for stem cell registry that reflects the national status of the registry in Wales
- Work with stakeholders and partners to promote the work of the registry



Strategic Theme 2:

Expand Stem Cell Services to provide greatest benefits to donors and Patients

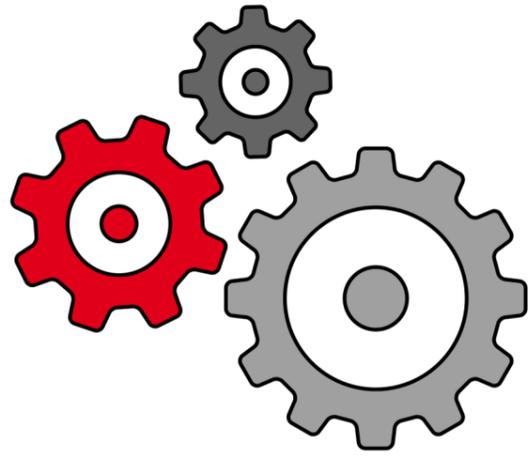


Our Objectives are to:

- Provide increased capacity for stem cell donation in Wales
- Work with partners to provide our specialist services for greatest clinical impact
- Explore our role in the delivery of advanced therapeutic medicinal products (ATMP) in Wales
- Utilise research, development and innovation to support the evolution of existing services and the development of new services.

We will:

- Introduce a service for donors to donate bone Marrow in Wales
- Increase stem cell apheresis facilities within the Trust
- Create partnerships to provide cell collection services to other organisations
- Work with stakeholders and partners to plan a robust infrastructure for advanced therapeutic medicinal products (ATMP) to meet expected future patient needs
- Develop plans for stem cell processing laboratory facilities to enable uptake of advanced therapy opportunities
- Develop our research capacity by increasing the number of staff actively involved in research, development and innovation.



Strategic Theme 3:

Quality, Safety and Value : Doing it right, First Time



Our Objectives are to:

- Provide high quality donor clinical services in line with anticipated future service demand
- Maximise the use of technology to deliver efficient services and no avoidable waste
- Implement innovative service improvement opportunities to improve the quality and safety of the services we provide.

We will:

- Introduce a new digital system for the registry that fully supports our strategy.
- Implement a clinical service model utilising the skills of our multidisciplinary workforce to deliver a robust service in line with future service demand.

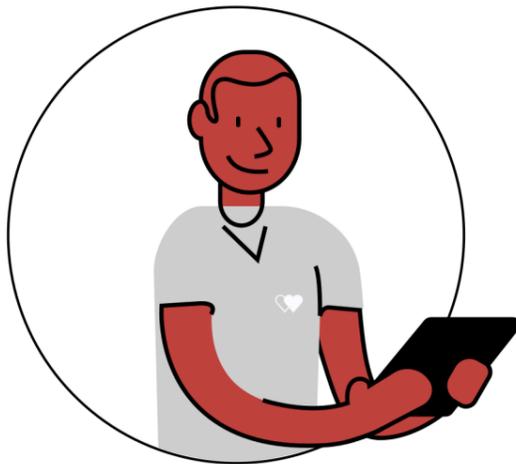
Looking to the Future

The future for stem cell collection and transplant services in Wales is an exciting one. We need to develop a sustainable and resilient infrastructure to support stem cell delivery, expand equity of access and improve patient outcomes.

The Welsh Bone Marrow Donor Registry can play a key role in the delivery of Welsh Government ambitions in Advanced Therapies through its expertise in the stem cell supply chain.

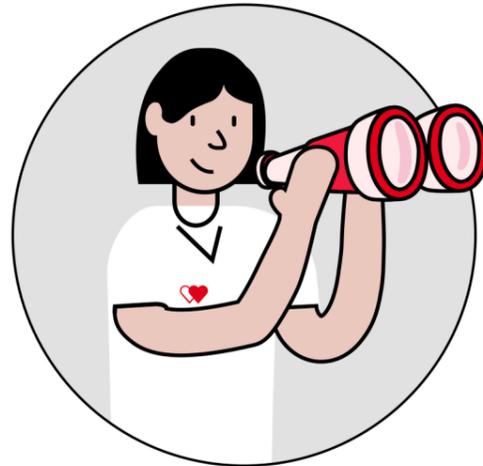
We therefore seek to:

- Build upon our existing services and capabilities to improve what we do currently and
- Develop a new range of services and expertise to support the development of healthcare and well-being across Wales. Our areas of focus will include advanced therapies and supporting national resilience in apheresis stem cell collection



The WBS Futures initiative is the vehicle to deliver our aspirations and shape our services for the future. WBS Futures will enable us to:

- Drive a culture of excellence
- Put scientific and clinical leadership at the forefront of future service provision
- Work in partnership and collaboration with our staff, our donors and the public
- Develop the service model and future service configuration



This aligns with the Velindre University NHS Trust strategy 'Destination 2033' and Welsh Blood Services 'Blood and Transplant Services for the Future' that sets out a clear direction for the organisation over the coming years. The strategy for the Registry is also closely aligned with the Trust Clinical & Scientific Strategy (2025-2030), Workforce Strategy, Digital Strategy and the Welsh Blood Services Research, Development and Innovation Strategy.





**Welsh Bone Marrow Donor Registry
Blood and Transplant Services of the Future**

Welsh Blood Service