OVERVIEW

NHS Blood and Transplant (NHSBT) is a major provider of Therapeutic Apheresis Services (TAS) in the NHS. At the end of each financial year, our TAS function provides an overview of achievements over the last 12 months and our ambition for the following year.

Therapeutic Apheresis Services has seven units in England

- Bristol
- Manchester
- Liverpool
- Oxford
- Leeds
- Sheffield
- London

TAS Services are provided from within NHS Trusts.

PROCEDURES COMPLETED IN 2015/16

It is our ambition to become the NHS preferred provider of high quality, cost effective therapeutic apheresis services. In 2015/16 our national team provided approximately 5,600 procedures:

- Photopheresis 28%
- Stem Cell Harvest 24%
- Plasma Exchange 38%
- Other Procedures 6%
- Low Density Lipid Removal 4%
- Neurology 18%
- Oncology 2%
- Dermatology 12%
- Cardiology 2%
- Haematology 62%
- Biochemistry 2%
KEY ACHIEVEMENTS IN 2015/16

IMPROVING PATIENT AND DONOR ACCESS TO SPECIALISED TREATMENTS

We are continually striving to improve access to the specialist treatments that we provide for patients and donors. In 2015/16 we completed a number of initiatives to support this:

1. NEW LONDON SERVICE
On the 1st October 2015, we launched a new service from Great Ormond Street Hospital. This marked a significant milestone in our ambition to become the preferred provider of high quality, cost effective apheresis services to the NHS.

This is our first therapeutic apheresis service in the London region and we are already working closely with other NHS Trusts in the region to identify where there is unmet patient need for treatment and how we might support this.

2. SERVICE EXPANSION TO THE BRITISH BONE MARROW REGISTRY
In October 2015, our Therapeutic Unit in Sheffield expanded its service provision to the British Bone Marrow Registry (BBMR). BBMR donors are now able to offer additional donor management services. BBMR donors are now able to attend our Sheffield unit for all aspects of their donation including medical consultation, stem cell and bone marrow harvest procedures. This service is provided in collaboration with our host Trust, Sheffield Teaching Hospitals NHS Foundation Trust.

In March 2016, our Bristol team also expanded service provision to BBMR offering medical consultations and stem cell collection services. This is supported by our host Trust, University Hospitals Bristol NHS Foundation Trust.

3. GLYCOREX SERVICE EVALUATION
In 2015, our Leeds team, in collaboration with Leeds Teaching Hospitals NHS Trust, completed a service evaluation of the Glycosorb® column technology supporting an ABO incompatible kidney transplant.

The Glycosorb®-ABO column is a bio specific affinity column that is connected to a plasma separator (Spectra Optia®). The column removes blood group-specific antibodies from the recipient in an extracorporeal blood treatment and reduces the patient’s titre levels.

The service evaluation was very successful and we are now considering provision of this treatment across each of our units.
SERVICE IMPROVEMENT

1. PATIENT EXPERIENCE SURVEY
In our annual survey of patient experience conducted in November 2015, we were delighted that 99% of patients surveyed scored their overall satisfaction of our service as 9 or 10 out of 10. To better understand where we can make further improvements, we have now introduced different ways of gaining feedback using snapshot tools to obtain more instantaneous feedback.

Our patient experience report can be downloaded from our webpages: http://hospital.blood.co.uk/patient-services/therapeutic-apheresis-services/patient-and-user-feedback/

2. USER SATISFACTION SURVEY
We undertake an annual survey of user satisfaction to gauge how our service users rate our service.

In our January 2016 survey, 65% of referring clinicians scored us as 9 or 10 out of 10 relating to their overall satisfaction of the service we provide. We will be working to implement recommendations from this survey in the coming months.

The survey report will be available shortly via the Therapeutic Apheresis Services webpages: http://hospital.blood.co.uk/patient-services/therapeutic-apheresis-services/patient-and-user-feedback/

3. OPENING OF NEW THERAPEUTIC UNITS
The Bristol Therapeutic unit based in the Bristol Haematology and Oncology Centre was officially opened on Monday 15th June 2015. Claudia Fragapane, four times Commonwealth Games Gold medallist, attended as the guest of honour supporting this event.

On Thursday 19th November, the newly refurbished Therapeutic unit in Oxford was officially opened. We were delighted that George Freeman, Parliamentary Undersecretary of State for Life Sciences, supported this opening.

These new clinical surroundings provide a more appropriate clinical environment for our patients and provides additional space to meet the growing demands for our services.

4. PATIENT EXPERIENCE NETWORK AWARD
In November 2014, in collaboration with the North West Regional Transfusion Committee, NHSBT launched an on-line road map of apheresis service provision in the North West of England and North Wales to provide clarity of referral processes.

To showcase the success of this collaborative, NHSBT and the Royal Liverpool and Broadgreen University Hospitals NHS Foundation Trust, submitted an entry to the Patient Experience Network Awards entitled ‘A Team Approach to Streamlining Therapeutic Apheresis Services in the North West’. The submission was successfully shortlisted for two categories and achieved runner up in ‘Partnership Working to Improve the Experience’ and finalists in the ‘Personalisation of Care’ categories.
PROCUREMENT

We are midway through a procurement tendering process relating to provision of multi-purpose apheresis and extracorporeal photopheresis machine technology and equipment.
Where appropriate, we are collaborating with other service providers to maximise value for money for the NHS.

QUALITY AND COMPLIANCE

We are proud of our longstanding history of providing services which meet high standards of safety and regulatory compliance.
Therapeutic Apheresis Services is the only area of NHSBT which provides treatments directly to NHS patients and therefore, our number one priority will always be the safety of our patients and the quality of the services we provide.
During 2015/16, all of our units retained their compliance with the Human Tissue Authority (HTA) and Joint Accreditation Committee – ISCT (Europe) and EMBT (JACIE).
In addition to compliance with external bodies, over the last 12 months we have undertaken a number of internal audits. Including:
- Audit of transfusion theory
- National audit of medicines management
- Audit of stem cell collection efficiency and effectiveness in the Yorkshire region

PRICING

There is no price increase this year for our Therapeutic Apheresis Services. This is the fourth consecutive year that there has been no generic or inflationary uplift in our prices. Our prices are approved annually by the Department of Health National Commissioning Group.
2016/17 PRIORITIES

1. STRATEGIC REVIEW
To ensure our strategic priorities continue to meet patient needs and are in line with changes in the wider NHS, we are completing a strategy refresh. Our revised strategy will be taken for approval to the NHSBT Board in early 2017.

2. EXPANSION OF SERVICES

Research and Clinical Trial Support
Therapeutic Apheresis Services recognise that there is an increasing demand for leucopheresis/apheresis in support of research and development. In response to this, we are expanding our service provision in this area aiming to offer a more efficient and cost effective service for users.

Review of Regional Services
We are aware that there is still significant un-met patient demand for therapeutic apheresis services in parts of England. To ensure that patients receive the optimal treatment in a geographically appropriate location, we plan to work with relevant Trust colleagues to scope regional therapeutic apheresis service provision. This will include opportunities to expand services into new/different clinical specialities.

3. NHSBT SYSTEMS UPGRADE
NHSBT are currently undertaking a major project to replace all core IT systems. As part of this work, a Customer Relationship Management system (CRM) is being considered for use in Therapeutic Apheresis Services. When implemented, we will have improved data on the services we provide and the clinical specialties in which they support.

4. RELOCATION OF THE LIVERPOOL THERAPEUTIC APERATURESIS UNIT
We are engaged in discussions regarding the new build Royal Liverpool Hospital. It is anticipated that the Liverpool Therapeutic Apheresis Services unit will be relocated in 2017/18.

5. IMPROVING OUR COMMUNICATIONS
A review of our clinical and patient facing webpages is planned to ensure that users are able to obtain the required information in an effective and efficient way. Patients and service users will be invited to participate in this review.

6. REVIEW OF OUR 24/7 ON CALL SERVICE
In January 2015, we introduced a 24/7 on call service for emergency treatments e.g. TTP. A review of our on call services will be undertaken later this year to better understand the level and appropriateness of use of the new system.
Therapeutic Apheresis Services

Procedure Portfolio

Extracorporeal Photopheresis
Integrated two-stage procedure involving the collection and removal of white cells, which are treated with a photo activated drug and exposed to ultraviolet light then returned to the patient. Used for the treatment of Cutaneous T cell Lymphoma and Chronic Graft versus Host Disease (a side effect in some bone marrow transplants).

Therapeutic Plasma Exchange
Removal of disease mediators or to substitute missing or defective constituents in the plasma for the treatment of a wide range of patients across a number of clinical specialities. The process removes the patient’s plasma and replaces it with either fresh frozen plasma components or refined plasma products.

Peripheral Blood Stem Cell Collection
Used in bone marrow transplantation for the treatment of some blood cancers and solid tumours. Stem cells are collected from either patients, for use in their own treatment, or from donors. The procedure separates the blood and removes only the specific white blood layer which contains the stem cells then returns the remainder of the blood back to the patient or donor.

Low Density Lipid Removal
Removal of low density lipid cholesterol molecules, using absorption technology, in patients with hereditary high levels of cholesterol who do not respond adequately to cholesterol lowering drugs and low fat diet.

Lymphocyte Collection
This collection process is very similar to the collection of stem cells. Lymphocytes (a type of white blood cell) are collected from donors who have previously donated stem cells to further support the patient in their treatment by helping to induce a beneficial graft vs. disease effect.

Red Cell Exchange
Performed in a procedure similar to plasma exchange in which red cells are removed and replaced. Red cell exchange is used for the treatment of red cell disorders or diseases such as sickle cell disease or some cases of malaria.

White Cell Depletion
Performed on patients newly diagnosed with leukaemia who have excessively high levels of white cells in their blood in a procedure similar to stem cell collection.

Red Cell Removal
This procedure removes excess red cells circulating in the blood as a result of a disease called polycythemia. It is similar to a red cell exchange but without the replacement of red cells.

Platelet Depletion
A rare procedure for the removal of large volumes of platelets in patients with very high platelet counts caused by an underlying disease. It is similar to the platelet component collection procedure undertaken on volunteer donors.
**NHS Blood and Transplant**

NHS Blood and Transplant (NHSBT) saves and improves lives by providing a safe and reliable supply of blood components, organs, stem cells, tissues and related services to the NHS, and other UK health services.

We manage the UK-wide voluntary donation system for blood, tissues, organs and stem cells, and turn these donations into products that can be used safely to save lives or radically improve the quality of people's lives.

We rely on thousands of members of the public who voluntarily donate their blood, organs, tissues and stem cells. Their generosity means each year we're able to supply around two million units of blood to hospitals in England and 7,500 organ and tissue donations, which save or improve thousands more people's lives.

**For more information about Therapeutic Apheresis Services**

Visit: [http://hospital.blood.co.uk/patient-services/therapeutic-apheresis-services/](http://hospital.blood.co.uk/patient-services/therapeutic-apheresis-services/)

Email: Therapeuticapheresisservices@nhsbt.nhs.uk