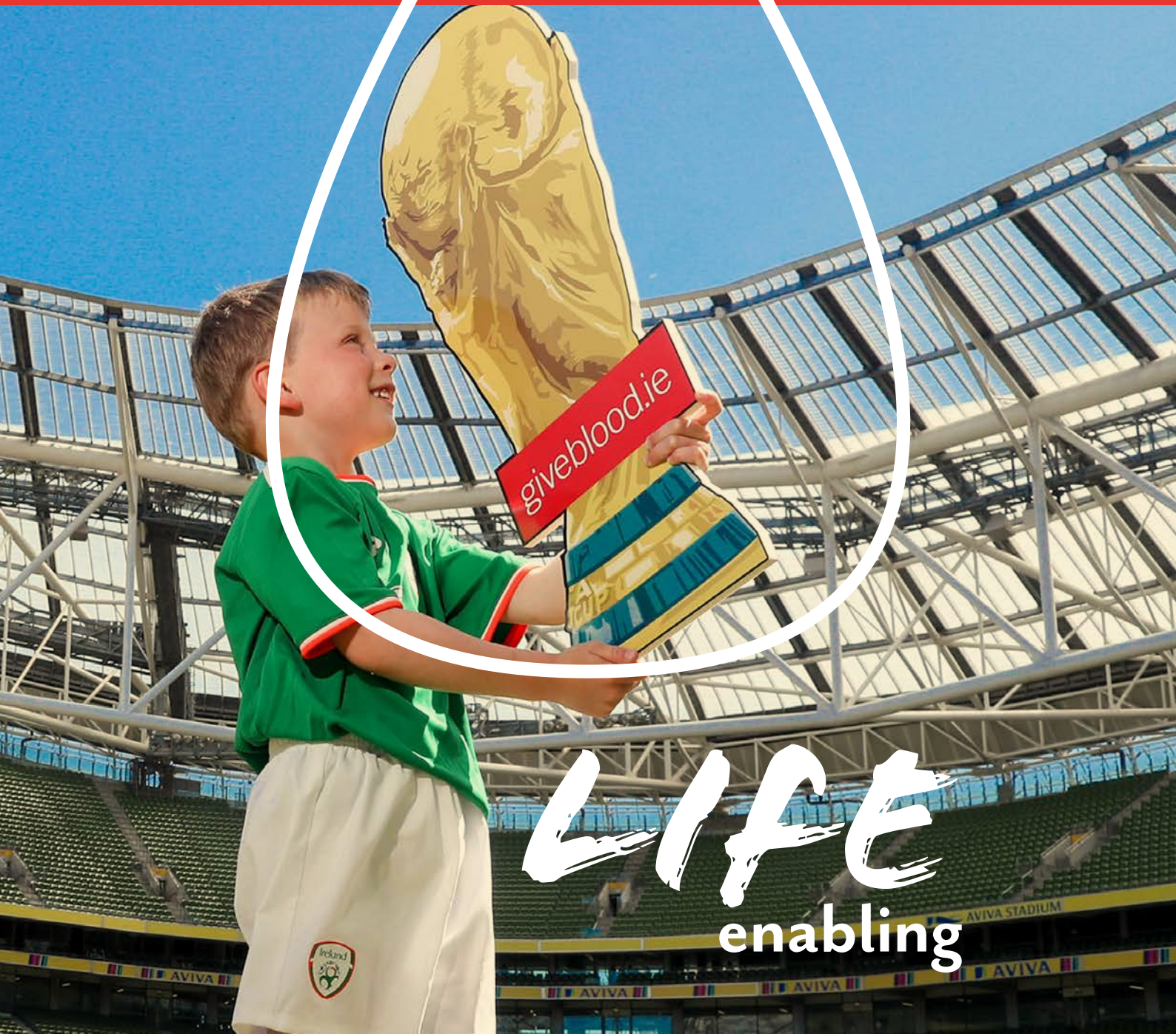




Irish Blood
Transfusion Service
Seirbhís Fuilaeistriúcháin na hÉireann

ANNUAL REPORT
2018



LIFE
enabling

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Foreword

Following the retirement of Professor Anthony Staines in July 2018 I was appointed Chair of the Board of the IBTS, having been a member of the Board for the previous five years. I would like to thank Anthony for his leadership of the organisation during his six years as Chair. He set a high bar for me, through his commitment, energy, and knowledge of public health. The Board and staff wish him well in his future endeavours.

The IBTS is a unique organisation. While we can control how we process and distribute blood products we do not control the supply and are entirely dependent on the community spirit of people all around the country to attend at our centres and mobile clinics. They turn up in their numbers, day-in and day-out, because they know that the need for blood is a constant through the year, and we are hugely grateful for their generosity.

When I took on the role, I knew that the most enjoyable part of the job would be presenting awards to donors who have reached a milestone of 50 or 100 donations. At these ceremonies,

donors sit together with other donors they may or may not know, and they are instantly connected by their shared commitment. I have also been struck at these events by the evident camaraderie between the IBTS staff and the long-term donors who have become friends after many years of meeting at clinics; it is very clear that it is more than 'just a job' for so many of our staff.

2018 was a busy year for the IBTS.

Key events included:

- In March, Storm Emma presented a real-world test of our preparedness for emergency, and staff and management worked tirelessly to ensure continuity of blood supply in challenging conditions. Due to the cancellation of 14 clinics, an appeal was launched in early March and our donors responded enthusiastically to restore supply to normal levels.
- We continued the roll out of our services for stable haemochromatosis patients across the country and completed this work in Q4. We are now able to offer regular venesection free of charge in all our clinics for haemochromatosis patients who would like to become blood donors.



“ I have also been struck by the evident camaraderie between the IBTS staff and the long-term donors who have become friends after many years of meeting at clinics; it is very clear that it is more than ‘just a job’ for so many of our staff.”

- Much time was spent ensuring that the organisation is as prepared as it can be for the UK’s exit from the EU. The UK Blood Transfusion Services have always been very co-operative neighbours and we have benefited from the sharing of information and joint procurement with a significantly larger service. Whilst procurement benefits will no longer be available to us post a UK exit, we know that the spirit of co-operation will continue beyond that point.

Many parts of the Irish health service are finding it difficult to recruit medical staff at Consultant level, and this organisation shares these challenges. The Board has recently approved a proposal from the Medical & Scientific Director to expand the research function of the IBTS to keep us at the forefront of research into transfusion medicine to ensure that we can continue to attract top talent into our organisation.

With the hospital groups now firmly established and with continuous improvements in the national transportation infrastructure, there are opportunities to drive greater efficiency and collaboration throughout the health service in general. We believe we can play a part in this goal by developing a more integrated offering of our services in Cork with those provided

by the major hospitals. In 2019, we will be moving ahead with our plans to build a new centre in Cork, and we look forward to working with our colleagues in the Cork hospitals, the HSE and the Department of Health to optimise transfusion services in Munster and ultimately to deliver a higher quality national service.

One of the key challenges for the Board in the next year will be to effectively manage the succession of a number of senior executives including the Chief Executive so that there is no disruption to the services we deliver to patients and donors.

On behalf of all our stakeholders I would like to thank the hard-working staff of the IBTS for their continued efforts in providing a world class service for donors and recipients in 2018. On a personal note I would like to thank the Executive Management Team, particularly Andrew Kelly, our Chief Executive, and the members of the Board who have supported me with wisdom and enthusiasm as I have transitioned to the Chair. I look forward to leading this organisation in the year ahead.

Linda Hickey
Chairperson

Chairperson's Report

Report of the Chairperson of the Irish Blood Transfusion Service regarding the assessment of internal financial controls of a State body for the year ended 31st December 2018 in accordance with Appendix 2 of the Code of Practice for the Governance of State Bodies 2016.

1. I, as Chairperson, acknowledge that the Board is responsible for the Body's system of internal financial control.
2. The IBTS system of internal control can provide only reasonable and not absolute assurance against material error, mis-statement or loss.
3. The Board confirms that there is an ongoing process for identifying, evaluating and managing significant risks faced by the IBTS. This process is regularly reviewed by the Board via reports from the Chief Executive.

i. Management are responsible for the identification and evaluation of significant risks applicable to their areas of business together with the design and operation of suitable controls. These risks are assessed on a continuing basis and may be associated with a variety of internal or external sources including control breakdowns, disruption in information systems, natural catastrophe and regulatory requirements.

ii. Management meets twice monthly on operational issues and risks and how they are managed. The Executive Management Team's role in this regard is to review, on behalf of the Board, the key risks inherent in the affairs of the IBTS and the system of actions necessary to manage such risks and to present their findings on significant matters via the Chief Executive to the Board.

iii. The Chief Executive reports to the Board on behalf of the executive management on significant changes in the work of the IBTS and on the external environment which affects significant risks. Where areas for improvement in the system are identified the Board considers the recommendations made by the Executive Management Team.

iv. The Director of Finance provides the Finance Committee, which is a sub-committee of the Board, with monthly financial information, which includes key performance indicators.

v. An appropriate control framework is in place with clearly defined matters which are reserved for Board approval only

or, as delegated by the Board for appropriate Executive approval. The Board has delegated the day-to-day management of the IBTS and established appropriate limits for expenditure authorisation to the Executive. The Chief Executive is responsible for implementation of internal controls, including internal financial controls.

vi. The system of internal financial control is monitored in general by the processes outlined above. In addition, the Audit, Risk and Compliance Committee of the Board reviews specific areas of internal control as part of its terms of reference.

The Audit, Risk and Compliance Committee of the Board have satisfactorily reviewed the effectiveness of the system of internal control on behalf of the Board. The Audit, Risk and Compliance Committee carried out a formal review of these systems in respect of 2018 at its meeting on the 5th February 2019.

Additional Reporting Requirements

Compliance with the Code of Practice for the Governance of State Bodies

The Board is committed to complying with the relevant provisions of the Code of Practice for the Governance of State Bodies, published by the Department of Public Expenditure and Reform in August 2016.

A Code of Business Conduct for the Board and an Employee Code of Conduct have been put in place. The Board has adopted a detailed travel and subsistence policy which complies with all aspects of Government travel policy.

The IBTS Board reviewed reports on internal controls during the year along with regular reviews of the reports of the Health Products Regulatory Authority (HPRA) on operational and compliance controls and risk management. The Board will continue to review these reports and to work closely with the HPRA to ensure the highest international standards.

The IBTS has complied with disposal of assets procedures, as outlined in the 'Code of Practice for the Governance of State Bodies 2016'. The IBTS complies with all relevant obligations as defined under Irish taxation law.

Corporate Governance

The Board's policy is to maintain the highest standards of corporate governance, in line with generally accepted policies and practices. The Board is accountable to the Minister for Health.

The Board has a manual for Board members. The Board carried out an effectiveness review in 2018.

Workings of the Board

The Board is comprised of twelve members including a non-executive Chairperson appointed by the Minister for Health.

The Board met on 6 occasions for ordinary meetings during the year. Attendance by Board members was as follows:

Board attendance 2018

Board Member	February	May	June	September	November	December
Prof Anthony Staines*	X	X	X			
Linda Hickey#	X	X	X	X	X	X
Kate Williams	X	X	X	X	X	X
Deirdre Cullivan		X	X	X	X	X
Dr Liz Kenny	X	X	X	X	X	X
Dr Satu Pastila		X	X	X	X	X
Dr Ronan Desmond			X	X		X
Brian O'Mahony	X	X	X	X		
Dr Sarah Doyle**						X
Simon Mills	X					
Yvonne Traynor	X	X	X		X	X
John Malone		X	X	X	X	X

*Term ended on 13th July 2018

** Appointed on 19th August 2018

#Appointed Chairperson 3rd October 2018

All members receive appropriate and timely information, to enable the Board to discharge its duties. The Board takes appropriate independent, professional advice as necessary. Guidelines for the payment of Board member fees and expenses are observed.

Members of the Board

Professor Anthony Staines (Chairperson)*

Ms Linda Hickey (Chairperson)**

Mr Brian O'Mahony

Ms Linda Hickey

Ms Kate Williams

Dr Elizabeth Kenny

Dr Ronan Desmond

Ms Deirdre Cullivan

Dr Yvonne Traynor

Mr Simon Mills

Mr John Malone

Dr Satu Pastila

Dr Sarah Doyle***

*Term ended on 13th July 2018

**Appointed on 3rd October 2018

***Appointed on 21st August 2018

	Board	Medical Advisory Committee	Audit, Risk & Compliance Committee	Finance Committee	Performance Development Committee	Board Fees 2018 €	Expenses 2018 €
Number of Meetings	6	7	5	5	2		
Prof. Anthony Staines* (Chairperson)	3	-	-	-	2	-	329
Ms L Hickey** (Chairperson)	6	-	-	2	-	14,338	496
Mr B O'Mahony	4	-	-	-	-	-	-
Dr E Kenny	6	7	-	-	-	-	681
Ms K Williams	6	-	-	5	2	11,970	260
Dr R Desmond	3	3	-	-	-	-	-
Ms D Cullivan	5	-	-	5	-	11,970	513
Dr Y Traynor	6	-	4	-	-	11,970	-
Mr J Malone	5	-	4	-	-	11,970	-
Mr S Mills	1	-	2	-	-	11,970	-
Dr S Pastila	6	7	-	-	-	11,970	4,482
Dr S Doyle***	2	1	-	-	-	-	69
						86,158	6,830

*Term ended on 13th July 2018

**Appointed on 3rd October 2018

***Appointed on 21st August 2018

The Public Spending Code

The Board is committed to complying with the provisions of the Public Spending Code and Circulars 02/2016 – arrangements for Digital and ICT-related expenditure in the civil and public service.

The IBTS has also developed its own formal project management methodology, suitable for adaptation, depending on the size of the project in question.

The Board has activated a committee structure to assist in the effective discharge of its responsibilities.

Performance and Development Committee

The Board has established a sub-committee to deal specifically with matters regarding the performance and development of the Chief Executive, and the senior management team. The Board complies with Government policy on pay for the Chief Executive and employees. The Chief Executive's salary in 2018 was €155,187. The Performance and Development Committee met twice in 2018.

Medical Advisory Committee

The Medical Advisory Committee is comprised of the medically qualified members of the Board and the medical consultant staff of the IBTS and met 7 times in 2018. Its function is to monitor developments relevant to the field of transfusion medicine and related fields, to inform the Board of any such developments and to advise the Board on appropriate action.

Finance Committee

The Finance Committee met five times during the year and is comprised of three members of the Board. It is also attended by the Chief Executive, Director of Finance and Management Accountant. The Committee may review any matters relating to the financial affairs of the Board. It reviews the annual capital and operating budgets, external audits by the Comptroller and Auditor General, financial and management accounts, financial KPIs, capital expenditure, working capital and cash flow. It also reviews business planning, costing exercises, procurement, insurance arrangements, contracts, banking, financing arrangements and treasury policy. The Committee reports to the Board on management and financial reports and advises on relevant decision-making. The Finance Committee operates under formal terms of reference which are reviewed by the Board regularly.

MAC Attendance 2018

Name	Feb	Apr	June	Special Meeting re vCJD July	Sept	Nov	Dec	Total 7 Meetings
E Kenny	Y	Y	Y	Y (Via Tel)	Y	Y	Y	7
R Desmond	N	N	Y	N	Y	N	Y	3
S Pastila	Y	Y	Y	Y (Via Tel)	Y	Y	Y	7
Sarah Doyle*	—	—	—	—	—	N	Y	1
B O'Mahony	Y	Y	Y	Y	Y	N	N	5
S Field	Y	Y	N	Y	Y	Y	Y	6
D Ó Donghaile	Y	Y	N	Y	N	Y	Y	5
L Pomeroy	Y	N	Y	Y	N	Y	Y	5
E McSweeney	Y	Y	Y	Y	Y	Y	Y	7
J Power	N	Y (via Tel)	Y	Y	Y	Y	N	5
I Hann	Y (via Tel)	—	—	—	—	—	Y	2
N O'Flaherty	Y	Y	Y	Y	Y	Y	Y	4
N O'Connell	N	N	N	Y	Y	Y	Y	7
C DeGascun	Y	N	Y	N	Y	N	Y	4

*appointed to Board September 2018

Finance Committee Attendance	January	May	August	September	November
Ms Linda Hickey Chairperson*	X	X			
Ms Deirdre Cullivan	X	X	X	X	X
Ms Kate Williams**	X	X	X	X	X

* Appointed Chairperson designate of the organisation in August and confirmed Chairperson in October.

** Acting Chairperson of the Finance Committee for the August Meeting and Chairperson thereafter.

This monitoring ensures that the identified risks and controls are current and that new and emerging risks are identified and controlling measures put in place.

Audit, Risk & Compliance Committee

The Audit, Risk and Compliance Committee met five times during the year and is comprised of three members of the Board and two independent external members. It is also attended by the Chief Executive, the Medical & Scientific Director, the Director of Finance, the Operations Director, Director of Quality & Compliance, the Internal Auditor, Risk and Resilience Manager and the Assistant Accountant acts as Secretary to the Committee. The Committee may review any matters relating to the financial, risk, regulatory or compliance affairs of the Board. It reviews the annual financial statements, reports of the Internal Auditor, quality reports internal and from the HPRA, the accounting policies, compliance with accounting standards and the accounting implications of major transactions. The external auditors meet the Committee to review the results of the annual audit of the Board's statutory financial statements. The Audit, Risk & Compliance Committee operates under formal terms of reference, which are reviewed by the Board regularly.

Going Concern

After making reasonable enquiries, the Board Members have a reasonable expectation that the IBTS has adequate resources to continue in operational existence for the immediate future. For this reason, they continue to adopt the going concern basis in preparing financial statements. After evaluation by the Board of the pension scheme asset valuations, the current funding plan including agreed changes to scheme benefits, the scheme actuaries revised recommended funding rate and the Board's projected cash flows for the twelve months from the date of approval of the financial statements, the Board is satisfied that the organisation has sufficient reserves to allow the preparation of the financial statements on a going concern basis.

Internal Control

The Board is responsible for internal controls in the IBTS and for reviewing their effectiveness. The Board's system of internal financial control comprises those controls established in order to provide reasonable assurance of:

Audit, Risk & Compliance Committee Attendance	January	April	June	September	December
Dr Yvonne Traynor Chairperson	X	X		X	X
Mr John Malone		X	X	X	X
Mr Simon Mills	X		X		

Risk Register

The risk register identifies various types of risks including strategic, reputational, clinical, IT, financial and operational risks to the organisation and the existing controls and further actions necessary to minimise the impact on the organisation, in the event of the risk occurring. The Risk and Resilience Manager has responsibility for overseeing the risk register and contingency arrangements. A set of inherent risks have also been identified which are monitored by the Audit, Risk and Compliance Committee and the Board on a regular basis. At present the risk register is reviewed and updated by the Executive Management Team.

- The safeguarding of assets against unauthorised use or disposition; and
- The maintenance of proper accounting records and reliable financial information used within the organisation.

The key elements of the Board's system of internal financial control are as follows:

- A comprehensive system of financial reporting
- Annual Budget prepared and presented to both the Finance Committee and the Board
- Annual Business Plan
- Monthly monitoring of performance against budgets by Finance Committee and Board

- Sign off by budget holders on individual budgets
- Budget reviews with budget holders
- Clearly defined finance structure
- Appropriate segregation of duties
- Clear authorisation limits for capital and recurring expenditure approved by the Finance Committee
- Key financial processes are fully documented in written procedures
- Regular stock takes and reconciliations carried out by staff independent of stores staff
- Financial system possesses verification checks and password controls
- Issues of products are reconciled to ensure all of the Board's activities are fully billed
- Regular monitoring of credit control function
- Purchase orders signed by Purchasing Officer or authorised substitute
- Stock items are requisitioned by means of automatic ordering
- All non stock invoices signed and coded by budget managers or their authorised signatories
- All stock invoices are independently matched with stores GRN and purchase order
- Payment verification checks of supplier invoices by staff independent of accounts payable staff

The Board is aware that the system of internal control is designed to manage rather than eliminate the risk of failure to achieve business objectives. Internal control can only provide reasonable and not absolute assurance against material mis-statement or loss.

The Financial Statements for the year ended 31st December 2018 have been prepared under FRS102.

Statement of Board Members' Responsibilities

The Board is required by the Blood Transfusion Service Board (Establishment) Order 1965, to prepare financial statements for each financial year which, in accordance with applicable Irish law and accounting standards, give a true and fair view of the state of affairs of the Irish Blood Transfusion Service and of its income and expenditure for that year. In preparing those financial statements, the Board is required to:

- Select suitable accounting policies and then apply them consistently;
- Make judgements and estimates that are reasonable and prudent;
- Disclose and explain any material departure from applicable accounting standards;
- Prepare the financial statements on the going concern basis unless it is inappropriate to presume that the Irish Blood Transfusion Service will continue in business.

The Board is responsible for keeping proper books of account, which disclose with reasonable accuracy at any time, the financial position of the Irish Blood Transfusion Service and to enable it to ensure that the financial statements comply with the Order. It is also responsible for safeguarding the assets of the Irish Blood Transfusion Service and hence taking reasonable steps for the prevention and the detection of fraud and other irregularities.

Procurement

The IBTS is in compliance with current procurement rules and guidelines as set out by the Office of Government procurement.

Protected Disclosures

The IBTS complies with the requirements under the Protected Disclosures Act 2014 and confirms that procedures are in place for the making of protected disclosures in accordance with section 21(1) of the Protected Disclosures Act 2014. There were no protected disclosures in 2018.

Commercially significant developments

The IBTS introduced a new testing platform for the Virology laboratory in September 2018.

Linda Hickey

Chairperson



Chief Executive's Report

The Blood Transfusion Service, like all public bodies was challenged early on in 2018 with dealing with the effects of Storm Emma and the Beast from the East. The organisation managed very well and it tested our contingency arrangements and how risk was managed. The staff responded very effectively and ensured that hospitals and patients received blood and blood products when required. We also had the support of the Defence Forces and the Health Service Executive when required. During these periods the IBTS cancelled 14 donation clinics because of extreme weather conditions. When we asked donors to respond post the storms they responded magnificently and ensured that we could maintain a blood supply.

In my report for 2017 I raised the issue of the use of O negative blood. I am delighted to report that we have commenced a national dialogue on this issue and we are exploring ways in which the IBTS, prescribing clinicians and blood bank staff can collaborate on ensuring that O negative blood is used optimally. This is an issue that is causing concern for blood services worldwide and workable solutions need to be found to ensure that blood services do not call on O negative donors unnecessarily.

General Data Protection Regulations (GDPR) came into effect on 28th May 2018 across Europe. The IBTS did a significant amount of work in preparing for the coming into law the changes to how data was going to be managed. The IBTS holds very sensitive data on donors, patients and staff. There were a number of policies that had to be put in place and others that had to be amended. We appointed a full-time Data Protection Officer to ensure that IBTS will be compliant with the provisions of GDPR. She has worked with all the key stakeholders in ensuring that the IBTS is well positioned with regard to GDPR. She is also chairing a Working Group of European Blood



“The IBTS has, as its greatest resource, the dedication and professionalism of all staff. I would like to express my sincere appreciation to all staff who through their efforts ensured that we continue to supply blood and blood products to the highest standard.”

Services to examine the issue of the “right to be forgotten” under the GDPR legislation.

BREXIT has been a backdrop to much discussion between the blood services in UK and Ireland over the past nine months particularly. As we entered 2019 and the possibility of a no deal exit from the EU the IBTS had to engage more with our suppliers and look to having a contingency stock of our critical supplies on site. We were also engaged with the UK blood services in planning for a no deal but also what issues we would have to be mindful of post BREXIT. This issue looks set to continue well into 2019.

We are continuing to develop our approach to risk management and held a further desk top Business Continuity Plan (BCP) exercise in November 2018. This was a step up from our previous exercise and was designed to test different aspects of our BCP. It was a very worthwhile exercise and there was good learning from it. We amended our BCP accordingly.

The Chair of the Board Professor Anthony Staines finished his second term in July 2018. I would like to express my sincere appreciation to Anthony for his commitment and dedication to the work of the IBTS and to ensuring that proper corporate governance processes were in place and adhered to. I wish him well in his career. Ms Linda Hickey was appointed Chair in August 2018 and I look forward to working with her in the coming years.

In 2018 there were a lot of changes in key positions. The Director of Quality and Compliance, Head of Testing, Head of Processing and Hospital Services and Quality Assurance Manager either retired or moved position during 2018. I want to record my sincere appreciation to those staff members who have given loyal and dedicated to service to the IBTS. They all have made significant contributions to the work of IBTS in the interests of patients and donors. I wish them well for the future.

We welcomed Craig Spalding as the Director of Quality and Compliance who commenced in January 2018. He came from the Australian Red Cross Blood Service (ARCBS) and brought a fresh approach to the management of quality in the IBTS. He developed a new Vision for Quality and this was approved by the Executive Management Team and the Board. He was followed from the ARCBS in October by Karen Byrne who took up the post of Quality Assurance Manager. Karen has brought a wealth of experience also and I look forward to both of them making significant contributions over the coming years. We had also commenced the recruitment for the Head of Testing and Head of Manufacturing and Issue.

One of the key areas for the Board and the EMT is succession planning and this will take on greater importance in 2019. There will be open competitions for the HR Director, the Chief Executive and the Medical and Scientific Director at different stages in 2019. These appointments will be very important and will build on the work that has been achieved to date through the efforts of all staff in the IBTS.

The IBTS has, as its greatest resource, the dedication and professionalism of all staff. I would like to express my sincere appreciation to all staff who through their efforts ensured that we continue to supply blood and blood products to the highest standard. We must continue to innovate and to bring new ideas to our work in the interests of the patients and donors who we serve.

Andrew Kelly
Chief Executive



Medical & Scientific Director's Report

A major review of the IBTS components production facility was undertaken in 2018 to ensure that these laboratories were operating efficiently to best international standards. The review team visited blood services in the Netherlands, Belgium and the UK to observe how these centres had designed their laboratories in order to produce components in the most efficient manner.

The virology laboratory underwent an upgrade to the serology testing platform with the introduction of a new state-of-the-art testing system. The advantage of this change was to consolidate all the assays required to ensure the safety of the blood supply was on a single system which was the most efficient and cost-effective.

Surveillance of possible new microbiological threats to the blood supply continued throughout the year with reports being reviewed from international agencies such as the European Centre for Disease Prevention and Control as well as the weekly reports from the Irish Health Protection Surveillance Centre (HPRC). There was also participation in the monthly teleconference with the European blood Alliance infectious diseases monitor group. The IBTS also participates in the UK structures under the auspices of The Joint Professional Advisory Committee (JPAC). A short travel survey has been designed to

try and understand the travel destinations of donor population. This will inform as to the testing regimes that need to be in place to maintain the safety of the blood supply. Presently people that, for example, travel to tropical areas are deferred for periods of up to a year if there is a possible threat of Malaria. In order to reduce the time period of the deferral the IBTS has decided that malaria antibody testing will be introduced during 2019.

The Medical Advisory Committee (MAC) held two special workshop meetings during 2018. The first was to consider the measures in place to prevent the transmission of variant Creutzfeldt-Jakob disease and this meeting consisted of a review of all the scientific evidence relating to the disease and its relationship with Bovine Spongiform Encephalopathy in cattle. The committee did not come to any conclusions at this meeting and this will be considered again in early 2019. The other special workshop was to review the methods of pathogen reduction in platelets. Again, this was a review of the current science in this field and this too will be considered again in 2019 along with a health economic analysis looking at the benefits of introducing this technology.

During the year, I was invited to address the Blood Products Advisory Committee of the US FDA about microbiological monitoring of platelets. Along with another number of other experts I presented evidence to enable this committee to make recommendations to the FDA on how transfusion centres in the United States should ensure the bacteriological safety of their platelet products.

Stephen Field MA, MMed(Haem) FCPATH (SA)

Medical and Scientific Director
Consultant Haematologist

Operations





Donor Services

#EveryOneCounts Campaign

The IBTS continued the EveryOneCounts campaign in 2018 reaching out to donors on all key communication touch points, with the objective to educate and encourage donors from awareness to action throughout the year. This marketing campaign uses 10 real donor stories communicated via digital & social media; FB, Twitter, online advertising, Youtube, relevant social influencers, national and local radio advertising, and online editorial on Independent.ie, TheJournal.ie, Her.ie, Joe.ie, Video on Demand and for the first time in several years, National TV advertising.

The first Every One Counts TV ad run featured the 7 original Skerries donors and their blood donation stories on TV and Video on Demand during the Summer in June, around the World Cup time. A new TV advert featuring GAA coach and long-time donor Patrick Dunlea from Middleton in Cork, in August around the GAA season on popular channels such as RTE, RTE 2, TV3, TG4, SKY, and C4 was also launched. Adverts were also run on national radio stations and for the first time on Spotify.

Summer is a particularly challenging time of year for blood and platelet donation clinics, as people break from their normal routine by going away on holidays and children are on their break from school. It has been a number of years since the Irish Blood Transfusion Service advertised on television and the objective was to communicate to a large audience about the importance of blood donation throughout the year, as part of your everyday life, and inspire and encourage donors to go to their local clinics when they can.

“ The Every One Counts Campaign has proven to be successful and won an ADFX Award in the Public Service, Social Welfare and Education section in 2018.”

The IAPI ADFX Awards honour the most effective advertising campaigns that have appeared in the Irish market. The key criteria for an award win are a great strategic idea, an impactful creative execution and the measurable business effects that resulted.



The campaign is in its second year; all stories were retargeted online to audiences, moving donors from awareness to education to action in attending clinics. The return to TV advertising during Summer was successful and helped keep supply steady at a traditionally challenging time of year for collections. All stories surpassed their targets in terms of reach and impressions. There has been steady growth in our social media channels throughout the year, our Facebook page had 120k plus fans at the end of 2018, our Twitter page has 18.7k followers and is used to reply to many donor comments and queries daily, as well as reaching out to mass media outlets and special interest groups to amplify our message. We have had a high level of engagement on our social channels due to the emotive and inspiring stories from our Every One Counts donors, and this has in turn encouraged other people to share their own donor stories and promote the message and benefits of giving blood.

Seasonal Campaign – #DracsAtWork

Bank holidays and school mid-term break periods are a challenging time of year for IBTS to ensure that we have a steady blood supply to keep up with the demand from hospitals as people go away on holidays and break their regular routine. In the lead up to the October bank holiday and school mid-term break we ran a seasonal Halloween themed campaign called #DracsAtWork in order to remind and recruit donors. The campaign ran from Tuesday 23rd to Wednesday 31st October 2017 and was promoted on social media to target current fans of our page and recruit new followers.



The content featured pictures from locations around the National Blood Centre: Donor Services, Blood Vans of the mobile clinic, Platelets clinic, NBC labs and D'Olier St Blood Clinic. People were asked to answer related questions to the pictures featuring #DracsAtWork in the various departments in IBTS so as to educate followers about the work carried out by IBTS employees. The daily winners won a seasonal themed case of Monster Munch for the correct answer. The campaign linked back in to the clinic as on the last day of the competition Dracula was finally revealed to be in the D'Olier St Blood clinic. The campaign drove strong results for awareness and engagement before and after the mid-term break as clinic attendance was strong throughout this period.

World Blood Donor Day

Every year on the 14th of June we celebrate #WorldBloodDonorDay and thank our donors for giving blood and raise awareness of the importance of blood donation. In 2018 the World Cup was on during the Summer and so it was imperative to remind donors how important it is to attend their local clinics. We ran a story featuring young boy Tom Doyle and his story about receiving red cells transfusions coupled with a picture of Tom with our sponsored partners the FAI Referees in the Aviva Stadium holding a Giveblood.ie version of the World Cup. In addition to this we had World Blood Donor Day selfie boards on clinic and social media content featuring and celebrating our donors around the country.



“Bloody Foreigners” Campaign

The Immigrant Council of Ireland, Forum Polonia and IBTS worked together in 2018 to encourage Polish people living in Ireland, who are the largest immigrant group in the country to participate in actively becoming a blood donor in their local communities. The core campaign idea was: We want more “bloody foreigners” to give blood and we invite them to come to their local blood clinic and do a great thing for their local community

Blood donation is an integral part of being a community member in Poland. The campaign headline of “Bloody Foreigners” was intended to be a little provocative and fun and grab attention so as to help spread the message behind the campaign, but also to highlight the positive contribution Polish people can and do make to their Irish community through blood donation. The campaign was very successful and very well received in the media, there was coverage on both the 1pm and 6 o’clock news on RTE. The hashtag #bloodyforeigners became a number 1 trending topic in Ireland on the day of promotion, helped by multiple outlets tweeting and sharing tweets from the campaign.

Merchandise campaigns on clinic

The IBTS aim to make the experience for our donors as special as possible when they come in to clinic to give their donation so that they are looking forward to coming back soon to give blood and platelets again! This year we ran a number of mini

seasonal merchandise campaigns in addition to the regular items like pens and fridge magnets. Donors were delighted to find special Chocolate hearts and giveblood.ie jelly bean treats in clinics across the country on Valentine’s Day, over Easter and the Summer.

In December we launched the 2nd year of #BlingUpYoBauble campaign. Giveblood.ie baubles were displayed on IBTS Christmas trees in clinic, adding some additional festive cheer to the clinic surroundings and donors were encouraged to take home a giveblood.ie bauble, personalise it and share their designs with us on our social media pages bringing the experience from the clinic to the donor’s home.

Platelet Awareness Campaign

In September we placed an article in the Independent.ie online publication featuring Kyran O’Brien’s platelet donation story and the importance of being a donor, narrated by Dr. Cathy Gibbons, a consultant from Temple Street Children’s University Hospital. The article also launched a 60 second video showing Kyran’s donor journey and how a platelet is processed from the clinic, through the labs in IBTS and to a recipient in a hospital like Temple Street Children’s Hospital.

The activity showed a strong performance. The unique and overall page views were very close, showing the content was relevant for the target audience. The dwell time of 3.36 minutes was also very strong compared to benchmark figures. Social

Wednesday 1 August 2018 

'Bloody foreigners' - Dozens of Polish blood donors pledge to help the Irish Transfusion Board



The campaign, titled 'Bloody Foreigners,' is organised by the Irish Transfusion Board

Payu Tiwari
July 31 2018 3:17 PM



engagement on IBTS platforms was very positive. We saw a peak in page views on the Platelet donation landing page on giveblood.ie on the day the video and article went live on Independent.ie and on our own platforms. There was an increase immediately in the number of calls in to the Platelet Clinic from old lapsed donors and new donors to enquire about giving platelets and make appointments following the activity. We averaged 5 to 6 donors calling a day during the week of the activity. 15 second cut down versions of the videos were used from September to December promoting the message about the importance of platelet donation on our social media channels.

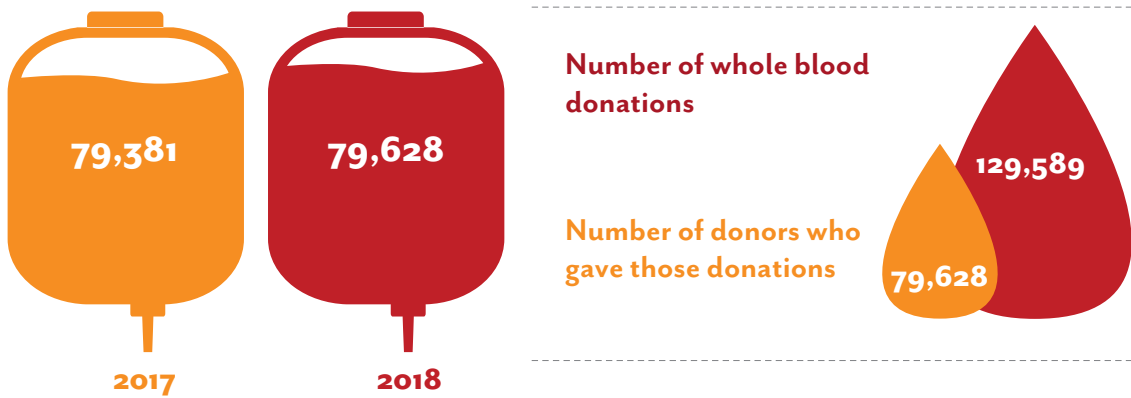
Donor Award Ceremony

Donor award ceremonies took place in Dublin, Limerick, Carlow, Cork, Tuam and Ardee. A total of 858 donors received recognition for giving over 50 and 100 donations. These awards are an important part of the IBTS calendar year as it serves to recognise donors and their continued commitment to giving blood or platelets. It is an opportunity for the IBTS to thank donors for their long-standing loyalty and commitment to saving lives. At each of these events a patient who has received blood tells their story and brings real meaning to each donor of what their life saving gift means to others.

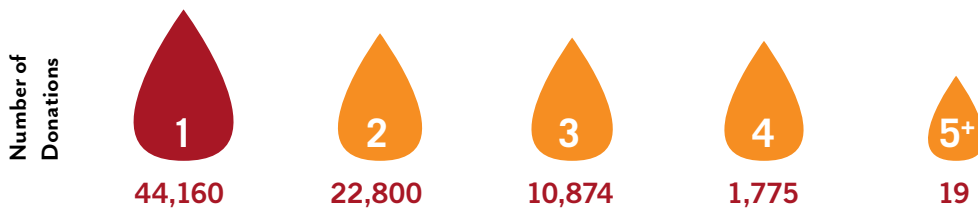
Donor Awards 2018			
	50s	100s	Ceremonies
Carlow	72	11	1
Limerick	162	10	1
Ardee	223	18	2
Dublin	205	80	2
Cork	152	26	1
Tuam	44	10	1
Total	858	137	6

Donor Statistics

Donors 2017 vs. 2018

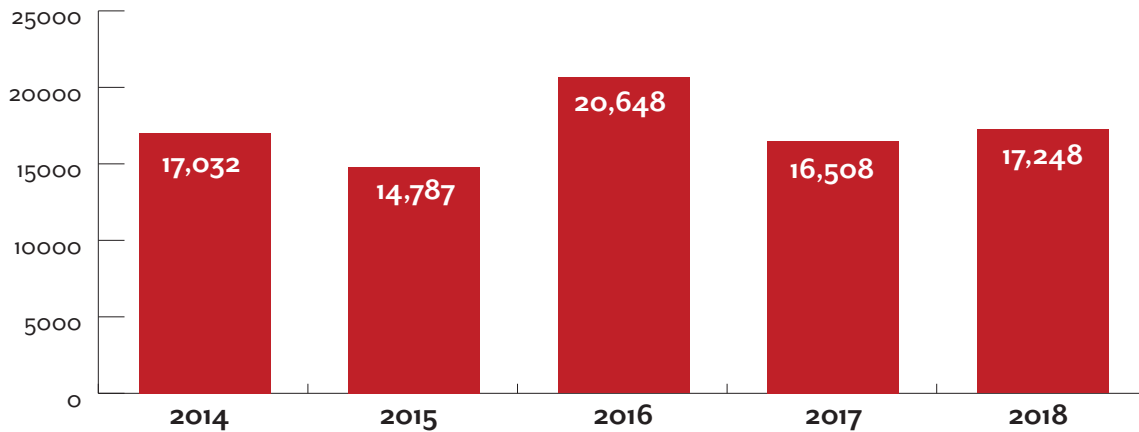


Whole Blood Donations by Donors 2018

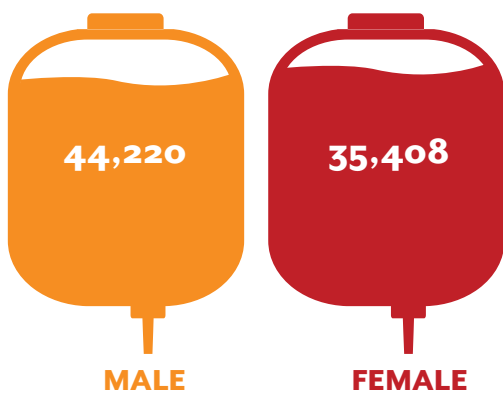


Number of Donors (Note: donors who gave 4+ times are on the HH panel)

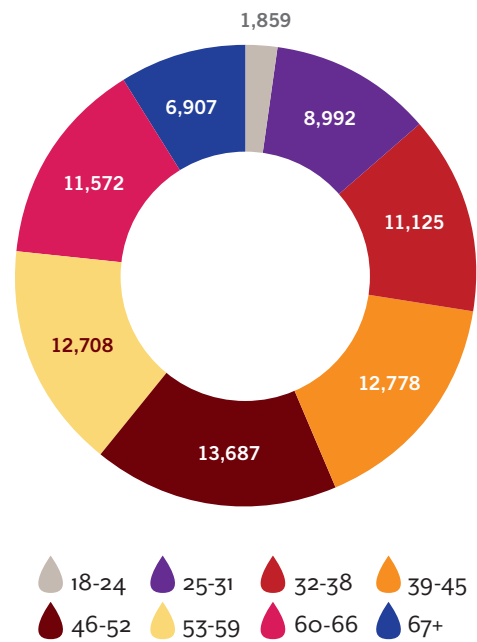
First time donors



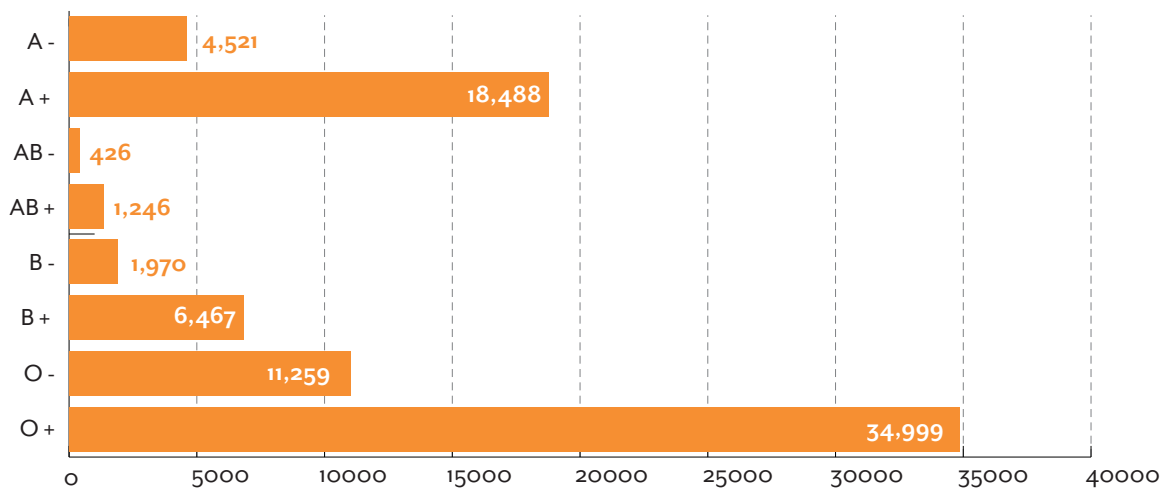
Whole Blood Donors by Gender



Whole Blood Donors by Age



Whole Blood Donors by Blood Group



Processing and Hospital Services

The Processing and Hospital Services section of the IBTS consists of the Components Laboratory, the Product Development Laboratory, and the Hospital Services Department. It is based in both the National Blood Centre (NBC) in Dublin and in the Cork Centre.

A project manager was appointed in October 2018 to oversee the changes identified in the Components Review conducted in 2017/2018.

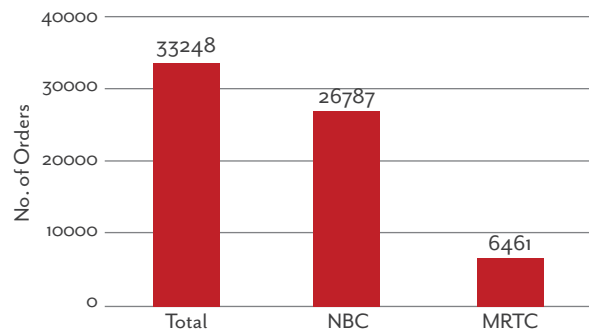
The NBC Components Laboratory is responsible for processing, labelling and banking all whole blood donations collected nationally and plateletapheresis donations collected in the apheresis clinic located in the NBC. In addition it is responsible for the preparation of pooled platelets and for the issuing of non-routine whole blood and red cell orders and all platelet orders received in the NBC. The Components Laboratory in Cork is responsible for processing, labelling, and banking the plateletapheresis donations collected in the Cork Centre and also manages the stock holding unit based in the Cork Centre. The Hospital Services Department in the NBC and Despatch Department in the Cork Centre are responsible for the receipt of electronic orders from the hospitals and for issuing products on foot of those orders.

Hospital Services/Despatch Department

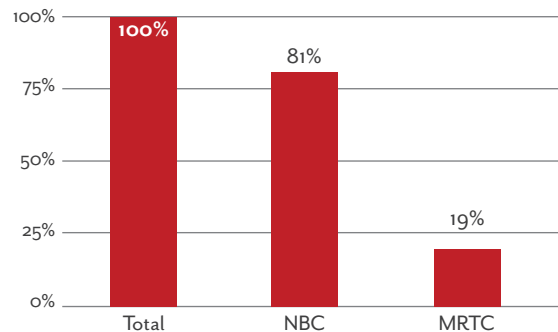
The Hospital Services Department (HSD) in the NBC is responsible for receiving all electronic orders from hospitals supplied from the NBC and for issuing all products from the NBC. HSD staff selects and issues all routine red cell products whilst the Components Laboratory Medical Scientists are responsible for selecting all platelet products and all non-routine whole blood and red cell products for issue by HSD NBC. In Cork, Despatch is responsible for selecting and issuing all routine red cell products while the Red Cell Immunohaematology Laboratory in the Cork Centre is responsible for selecting for issue by Despatch in Cork all platelet products and non-standard whole blood and red cell products.

A total of 33,248 product orders were received electronically in 2018. Of these, 26,787 were received in the NBC and 6,461 were received in the Cork Centre.

Electronic Orders Received - 2018



Percent Order Activity by Centre



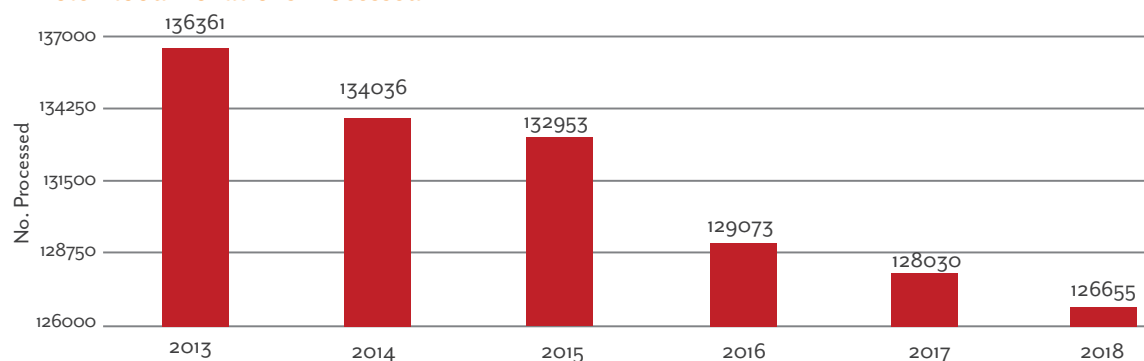
On-Line Orders Received			
	2017	2018	Change
NBC	26,360	26,787	+427 (+1.62%)
Cork Centre	6,575	6,461	-114 (-1.73%)
Total	32,935	33,248	+313 (+0.95%)

Components Laboratory

Whole Blood

A total of 126,655 productive whole blood donations were processed in the NBC in 2018. This represents a 1.07% reduction on the number processed in 2017.

Whole Blood Donations Processed



The whole blood donations were processed to produce the following primary and secondary products:

Primary Product	Number prepared	Distributed
Whole Blood and Red Cells		
Whole blood	31	0
Whole blood for neonatal use	1,340	2
Red Cell Concentrate	114,400	101,639
Red Cell Concentrate for neonatal use	10,982	4,015 ¹
Red Cells, Clotted	1	1
Whole Blood Clotted	8	7
Plasma Products		
Fresh Frozen Plasma, Filtered	27	0
Fresh Frozen Plasma for neonatal use	184	0
Fresh Frozen Plasma for Cryoprecipitate Production	0	N/A

Primary Product	Number prepared	Distributed
Fresh Frozen Plasma for Cryoprecipitate for neonatal use	214	N/A
Serum for Tears	1	1
Fresh Frozen Plasma for IVD use	124,964	67,297
Buffy Coats		
Leucocytes, Buffy Coat for pooled platelet production	42,077	N/A
Leucocytes, Buffy Coat	4,780	N/A

Secondary Product	Number prepared	Distributed
Red Cells		
Red Cell Resuspended	789	737
Red Cell Washed	27	8
Red Cells Thawed/Washed	0	0
Red Cells for IUT	19	19
Red Cells, Plasma Reduced	489	316
Red Cells Split for Neonatal Use	901	763
Red Cell, Irradiated	15,737	15,270
Whole Blood Reconstituted	1	1
Plasma Products		
Cryodepleted Plasma	181	0
Cryoprecipitate for neonatal use	181	142

Plateletapheresis		
Apheresis platelets	18,950 ²	9,240 ³
Platelet Products		
Platelets, Apheresis, Washed	18	18
Platelets, Paediatric Dose	18	17
Platelets, Hyperconcentrated	3	0
Platelets, Apheresis, Extended Life	7,898 ⁴	6,008
Platelets, Pooled	6,783	3,328 ⁵
Platelets, Pooled, Extended Life	2,684 ⁶	2,290 ⁵
Buffy Coats		
Leucocytes, Pooled	7	7
Leucocytes, Pooled, Red Cell Reduced	1	0

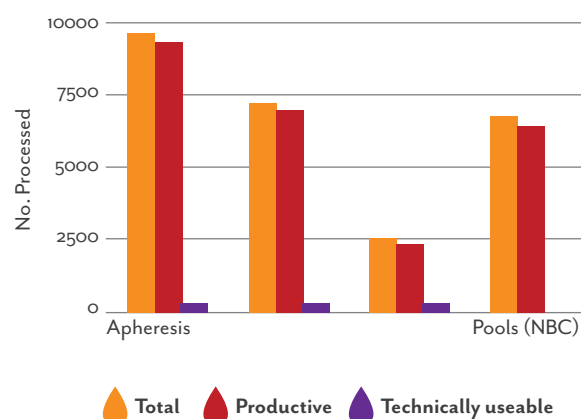
Footnotes:

- This is the number issued specifically for neonatal use, the remaining units prepared were transformed into adult use products.
- This is the total number of plateletapheresis doses prepared in 2018.
- This is the number of plateletapheresis doses, with a 5 day shelf life, issued for therapeutic use. The difference between prepared and distributed is validation work carried out.
- These are a subset of the total plateletapheresis doses prepared
- The total number of pooled platelets issued for therapeutic use is the sum of these figures (i.e. 3,328+2,290 = 5,618)
- These are a subset of the 6,783 pooled platelets prepared. Please note that produced will not necessarily match distributed due to incoming stock available from 2017 and issued in 2018.

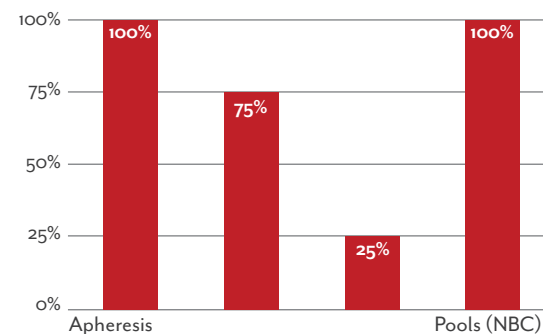
Platelets

Platelet production consisted of 9,657 apheresis donations collected nationally and 6,783 pooled platelets prepared in the NBC. The apheresis donations were collected and processed in the two centres, with 75% being processed in the NBC and 25% being processed in the Cork Centre.

Platelet Production



Platelet Production by Processing Centre



The total production of platelets suitable for issue was down slightly relative to that in 2017, with platelets via apheresis down by 528 doses (-2.76%), and platelets via pooling down by 167 doses (-2.54%).

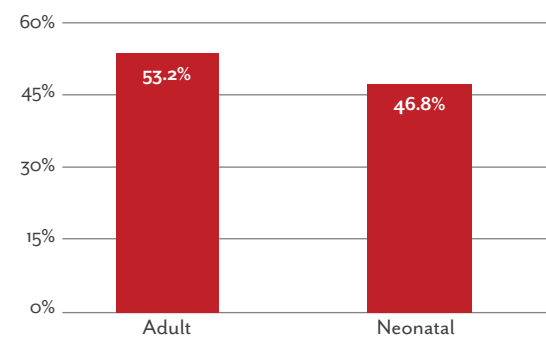
	Apheresis (Issuable doses)	Pooled (Issuable doses)	Total (doses)
2017	19,148	6,578	25,726
2018	18,620	6,411	25,031
Difference	-528	-167	-695
% Change	-2.76%	-2.54%	-2.70%

Platelets, Apheresis

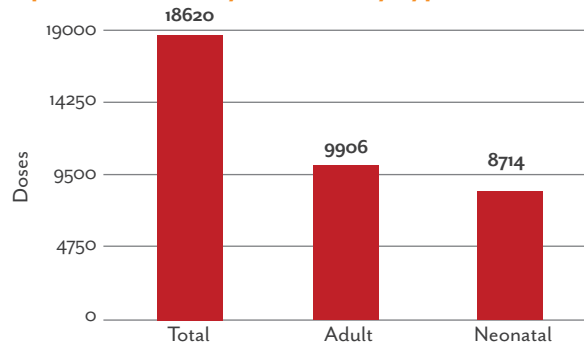
The 9,657 plateletapheresis donations yielded a total of 18,620 issuable doses. This is a dose per donation rate of 1.93, increasing to 2.00 when technically unusable donations (330 donations) are excluded. The equivalent 2017 figures are 10,025 plateletapheresis donations collected, yielding a total of 19,148 issuable doses. This was a dose per donation rate of 1.91, increasing to 1.97 when technically unusable donations (320 donations) are excluded.

Of the total productive plateletapheresis doses collected in 2018, 9,906 (53.20%) were suitable for adult use only and 8,714 (46.80%) were suitable for both adult and neonatal use.

Apheresis Donations by Phlebotomy Type

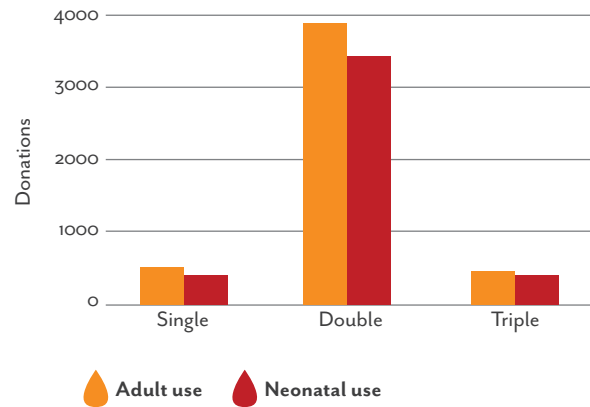


Apheresis Doses by Phlebotomy Type



Plateletapheresis donations were collected as single dose, double dose, or triple dose donations

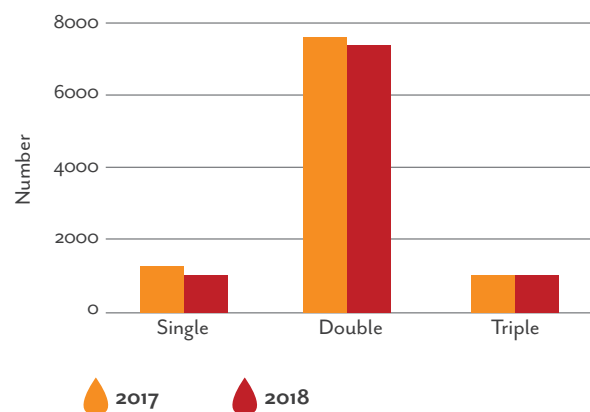
Apheresis Donations by Donation Type



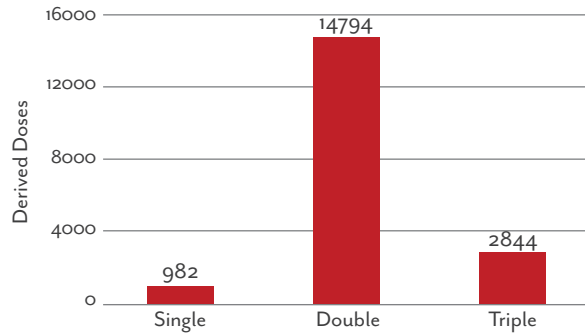
The proportion of single and double-dose donations decreased and the proportion of triple dose donations increased relative to 2017.

		Single	Double	Triple
2017	Adult Use	643	4000	431
	Neonatal Use	528	3625	478
	Total	1171	7,625	909
2018	Adult Use	555 (-13.7%)	3921 (-2.0%)	503 (+16.7%)
	Neonatal Use	427 (-19.1%)	3476 (-4.1%)	445 (-6.9%)
	Total	982 (-16.1%)	7,397 (-3.0%)	948 (+4.3%)

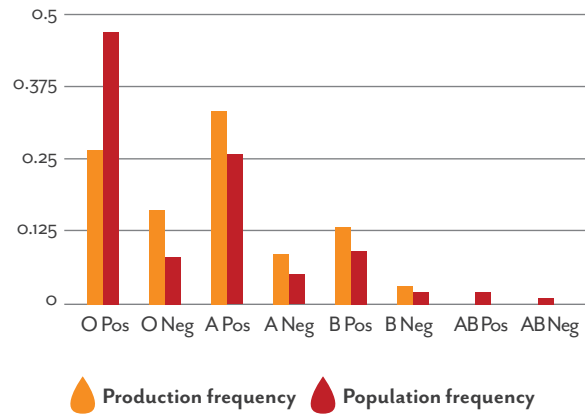
2017/2018 Comparison by Donation Type



Doses Derived from Various Donation Types (2018)



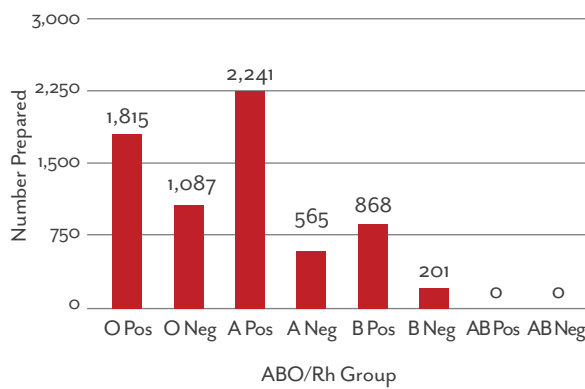
Pooled Platelet Production by ABO Rh



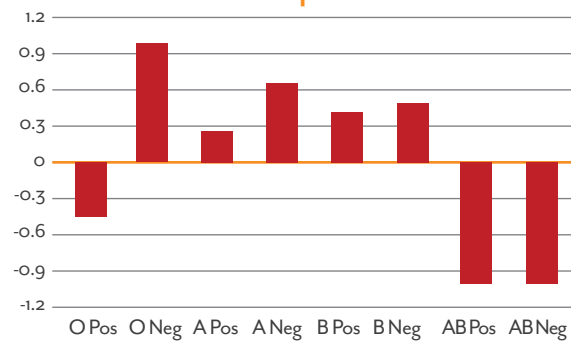
Platelets, Pooled

A total of 6,783 pooled platelets were produced in the NBC in 2018. This represents a 1.8% reduction on the amount prepared in 2017 (6,909). All ABO/Rh groups, except for AB Negative, were produced. The breakdown by group was:

Pooled Platelets by ABO/Rh Group



ABO Rh Incidence in Population



The production level by ABO/Rh group was adjusted relative to the incidence of those groups in the population in order to address the order pattern for platelets.

	O+	O-	A+	A-	B+	B-	AB+	AB-
Population Frequency	47%	8%	26%	5%	9%	2%	0%	0%
Production Frequency	27%	16%	33%	8%	13%	3%	0%	0%
Difference	-43%	+100%	+27%	+67%	+42%	+48%	-100%	-100%

The manufactured products distributed nationally in 2018 are shown in the table below:

Product	Distributed
Riastap 1g	7,154
Octaplex 500	12 ¹
LG Octaplas O	9,366
LG Octaplas A	5,657
LG Octaplas B	2,135
LG Octaplas AB	1,010

¹ For stock management purposes

Product Development Laboratory

The Product Development Laboratory worked on a range of projects during 2018:

1. Preparing the tender documentation to replace the blood separators, reviewing the tenders received, and starting the validation process. The first phase of the validation (performing and reviewing a design qualification on the blood separators offered for the tender) was completed in late 2018.
2. Validation of blood packs offered via the EuroBloodPack II tender. This was completed in 2018.
3. Validation of red cells and platelets products washed and resuspended in additive solutions. This was completed in 2018.
4. Validation of increasing the volume of additive solution during the automated production of pooled platelets. This was completed in 2018.

Testing

Nucleic Acid Testing (NAT) Laboratory

The Nucleic Acid Test or NAT laboratory is located at the NBC and provides molecular testing of samples from all IBTS blood donations. The assays used in the NAT laboratory screen for the viral nucleic acid (RNA/DNA) of blood-borne pathogens such as Human Immunodeficiency Virus type 1 and 2 (HIV-1/2), Hepatitis C virus (HCV), Hepatitis B virus (HBV) Hepatitis E (HEV) and West Nile Virus (WNV).

The NAT laboratory performs Individual Donation (ID)-NAT using the Panther platform in conjunction with the Ultrio Elite (UE) and Hepatitis E virus (HEV) assays. The Panther instrument is a fully automated closed system for NAT testing.

The Procleix UE assay is a multiplex Transcription Mediated Amplification (TMA) assay for the detection of Human Immunodeficiency Virus type 1 and 2 (HIV-1/2) RNA, Hepatitis C virus (HCV) RNA and Hepatitis B virus (HBV) DNA in human plasma. The Procleix HEV assay detects HEV RNA (implemented 4th January 2016) with funding approved by the Department of Health until 2021. During 2018 140,984 samples were ID- NAT tested for HIV-1/2, HCV, HCV, HBV and HEV.

The Procleix West Nile Virus (WNV) assay reliably detects low level WNV RNA (lineage 1 & 2) in blood donations using the Panther platform. Prior to its introduction, donors travelling to a WNV at risk area within the past 28 days were deferred from donating. Selective testing of blood donations for WNV was introduced as an alternative to the 28 day geographical donor deferral from 14th May 2018 to 28th December 2018. During this timeframe 3,047 donations (3.36%) were tested for WNV RNA.

Quality Control of NAT testing ensures accurate monitoring of the analytical sensitivity and reproducibility of NAT blood

“ In the last 10 years the IUBMR has facilitated 467 unrelated donor transplants for Irish patients. In 2018 a total of 62 unrelated donor transplants were performed .”

screening assays. External Quality Control samples (EQCs) are also used to monitor technical proficiency and consistency in the sensitivity of reagent batches with the NAT Panther platform. The Grifols Procleix assays include Calibrators and Internal Control (IC). The IC is used to control sample processing, amplification and detection steps and is used to ensure all manufacturer testing processes are operating correctly. Calibrator results must meet assay specifications. The NAT laboratory participated in multiple External Quality Assessment Schemes (EQAS) in 2018 with no discrepancies to report. Inter laboratory comparisons using EDCNet software (National Reference & Serology Laboratory, NRL, Australia, www.nrlqa.net) allow us to perform peer review with other Panther/ Ultrio Elite and WNV users worldwide. The NAT laboratory is committed to continuous improvement of the NAT process. NAT personnel attend relevant National and International conferences and participate in Continuous Professional Development (CPD).

NHIRL

National Histocompatibility and Immunogenetics Reference Laboratory (NHIRL)

The National Histocompatibility and Immunogenetics Reference Laboratory (NHIRL) provides a comprehensive range of clinical testing services designed to support the allogeneic haematopoietic stem cell transplantation (HSCT) programmes at St. James's Hospital and Our Lady's Children's Hospital, Crumlin. HSCT can be used in the treatment of leukaemias, bone marrow failure syndromes and inherited metabolic disorders.

The laboratory determines the human leucocyte antigen (HLA) type of all patients and donors (related or unrelated) prior to transplantation to aid donor selection. The laboratory uses exclusively molecular methods based on the polymerase chain reaction (PCR) to define the genes that encode the HLA molecules. This technology can achieve a high level of resolution that distinguishes between individual alleles of the HLA genes.

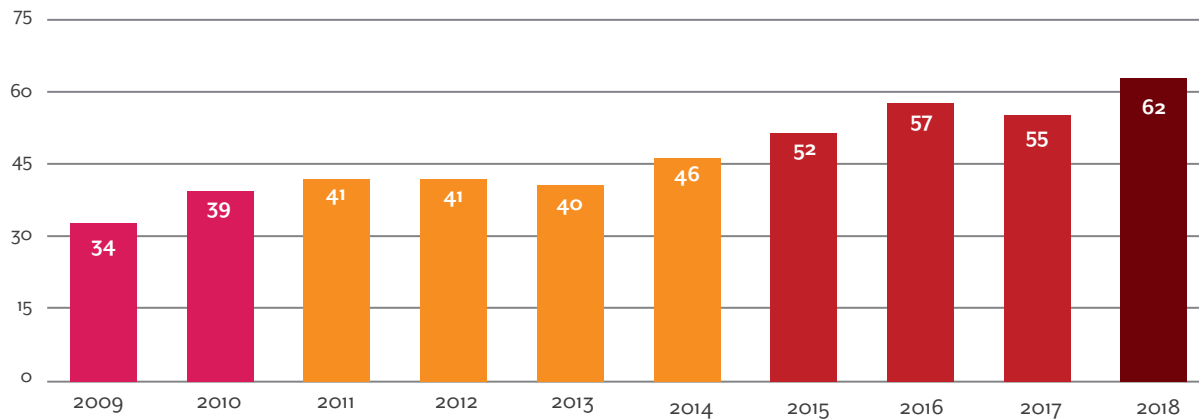
The laboratory has an extensive quality assurance programme including participation in both internal and external proficiency testing programmes for HLA typing, human platelet antigen (HPA) genotyping and HLA antibody investigations. The NHIRL has been accredited by the European Federation for Immunogenetics (EFI) since 2001.

In 2018 samples from 214 Irish patients for potential haematopoietic stem cell transplants and their relatives were HLA typed by the NHIRL. For those patients without a suitable family donor, an unrelated donor may be identified from the registry of volunteer donors. The NHIRL provides an immunogenetics support service for the Irish Unrelated Bone Marrow Registry (IUBMR) and in 2018 the laboratory HLA typed 360 new volunteer donors to add to the registry.

In the last 10 years the IUBMR has facilitated 467 unrelated donor transplants for Irish patients. In 2018 a total of 62 unrelated donor transplants were performed (Figure 1). Fifty-two by St. James's Hospital and 10 by Our Lady's Children's Hospital, Crumlin.

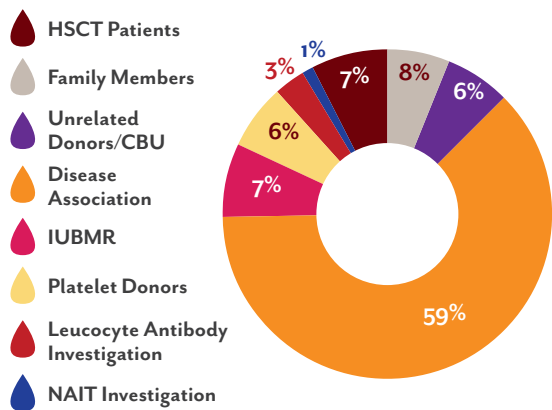
A total of 295 platelet donors were HLA-A, -B typed and included on the panel of platelet donors in order to support the provision of an optimal platelet product to the hospitals.

Number of Irish Patients receiving a HSCT from an Unrelated Donor 2009-2018



The NHIRL also provides a routine disease association HLA typing service. This service represented 59% of the investigations performed in 2018 (Figure 2). The majority of samples are referred for determining the presence or absence of HLA-B27 which is associated with Ankylosing Spondylitis; a painful, progressive rheumatic disease mainly affecting the spine and sacroiliac joints.

NHIRL Investigation Distribution



In addition, a platelet immunology service for the serological investigation of neonatal alloimmune thrombocytopenia (NAIT), post transfusion purpura (PTP), platelet refractoriness, alloimmune thrombocytopenias and adverse transfusion reactions is provided.

Virology Laboratory

The function of the IBTS Virology Laboratory is the mandatory screening of all blood donations for the presence of antibody to Human Immunodeficiency viruses (anti-HIV 1 / 2), antibody to Hepatitis C virus (anti-HCV), antibody to Human T-Lymphotropic virus type I and II (anti-HTLV-I / II), antibody to Hepatitis B core (anti-HBc), Hepatitis B surface Antigen (HBsAg), antibody to Treponema Pallidum (Syphilis). Selected donations are tested for Cytomegalovirus (CMV) (approx. 80% of donations) in order to have a supply of CMV negative donations for those patients who are at risk of the complications of CMV infection e.g. immunocompromised patients.

The Virology laboratory receives a clotted serum sample from each donor taken at the time of donation which is identified with a unique bar code identifier. All samples from the blood donor clinics are transported to the NBC overnight and tested the following day. 139,236 donation samples and 1,746 sample only new donor samples were tested in 2018.

The blood components from the donor are labelled for issue provided the test results for each and every donor are negative and satisfactory results can be issued by all the IBTS testing laboratories.

In 2018 the Virology laboratory validated and introduced the Abbott Alinity s System a high-throughput, fully-automated immunoassay analyser designed to determine the presence of specific antigens and antibodies using chemiluminescent

immunoassay (CMIA) technology to replace the Abbott Prism and DiaSorin Etimax testing systems. Since October 2018, the Abbott Alinity s System is in routine use to test Irish blood donors and can simultaneously process seven assays which include HIV Ag/Ab Combo, HTLV I/II, Anti-HCV, HBsAg, Anti-HBc, CMV IgG and Syphilis. All assays are CE marked. The system processes up to 500 CMIA tests per hour. Results generated from the Abbott Alinity s System are managed using the Abbott AlinIQ AMS software.

The laboratory also performs screening tests for viral markers for various departments within the IBTS, including stem cell donors, heart valve tissue donors and samples from recipient tracing testing programmes.

The Virology laboratory is also responsible for the referral and reporting of repeat reactive samples (including NAT) from the donor and non-donor programmes to the National Virus Reference Laboratory (NVRL) and the Central Pathology Laboratory (CPL) St James Hospital for confirmatory/ supplementary testing. Occasionally samples from the Virology laboratory are shipped for additional Virology testing abroad to agencies such as the SNBTS Scotland and the National Transfusion Microbiology Laboratory (NTMRL) in Collindale UK (eg. Malaria testing).

The Virology Laboratory must ensure that the expected performance of assays is achieved by using appropriate batch pre-acceptance testing and by using standards from the 'National Institute of Biological Standards and Controls U.K.', and a multimer control from the National Serology Reference Laboratory Australia (NRL, Australia) "Acrometrix Q Connect Blue" as 'go/no go' controls on all testing runs. These quality control standards are used to monitor the consistency of test performance using statistical process control on a daily basis and, over a period of time, as a retrospective monitor of batch performance. The laboratory participates in a monitoring programme which allows IBTS to compare results to Blood Centres in the UK.

The laboratory also participates in the surveillance programme run by National Health Service Blood and Transplant (NHSBT) Epidemiology Unit/Health Protection Agency UK. The repeat reactive rates and the confirmed positive rates for testing kits using various lot numbers of reagents with the NHSBT are monitored. A notifying report is generated which details assay performance and trends in reactive rates.

The Virology laboratory participates in three proficiency programmes, one circulated by the United Kingdom National External Quality Assessment Service (UK NEQAS) for Microbiology, the second by the NRL, Australia and the third by the European Directorate for the Quality of Medicines & HealthCare (EDQM).

The Laboratory also participates in a number of Internal and External Audit programmes to ensure compliance within the Virology Quality Management System (QMS). This auditing of the Virology Laboratory processes and procedures are undertaken by the Health Products Regulatory Authority (HPRA), the IBTS Quality Assurance (QA) department and the Virology Laboratory.

The IBTS has an External Contingency testing plan with the Scottish National Blood Transfusion Service (SNBTS). This process is tested four times each year by sending a small number of samples to the SNBTS for Virology testing. There was no requirement to invoke the SNBTS External Contingency testing plan in 2018.

The Virology laboratory would like to thank the former Head of Testing, Joe Donellan, who retired from the IBTS in 2018. Joe provided the IBTS with over 40 years of outstanding service. We also want to wish the Virology Chief Medical Scientist, Pdraig Williams, the best of luck in his new role as Head of Testing in the IBTS and thank him for all his service in the Virology Laboratory.

RCI Dublin

The RCI Laboratory provides extensive pre-transfusion and antenatal referral services for hospitals nationwide.

The services provided by the RCI Laboratory include;

- Provision of crossmatched blood for patients with complex antibodies.
- Investigation of red cell antibodies including serologically complex cases.
- Investigation of haemolytic transfusion reactions.
- ABO/Rh typing, including the investigation of blood group anomalies.
- Investigation of patients with positive direct antiglobulin tests.
- Investigation of autoimmune haemolytic anaemia.
- Investigation of haemolytic disease of the fetus & newborn (HDFN).
- Antenatal screening for red cell antibodies to identify at risk pregnancies. (antibody quantitation or titration as appropriate).
- Provision of suitable blood at delivery for at risk pregnancies.
- Phenotyping of donor red cells.
- Clinical and scientific advice to hospital colleagues.
- Extended phenotyping for transfusion dependent patients and for patients with complex red cell antibodies.
- Importation of rare blood for named patients
- Out of hours emergency on-call service
- Investigation of monoclonal antibody interference

The RCI also provides hospital blood bank services for Our Lady's Hospice and Care Services and the Royal Victoria Eye and Ear hospital.

Laboratory Activity

In 2018 a total of 2403 samples were referred to the RCI Laboratory, a 13.6% decrease from 2017. A notable reduction (-98.9%) of samples previously referred for RhD workup are

now referred to the Blood Group Genetics Laboratory at the IBTS for molecular testing.

Even though 2018 marked a reduction in overall sample numbers, compatibility testing has notably increased. Total compatibility testing increased by 34.1%, of these, complex compatibility testing increased by 33.9% compared to 2017. Along with this, the total number of 'out of hours' referrals significantly increased from 107 in 2017 to 185 in 2018 (72.9% increase).

As in previous years, there was a continued high level of serologically difficult or rare samples received. In 2018 the following complex samples some with rare allo-antibodies were identified by the RCI Laboratory:

Antibody	Patients	Referrals
Anti-Chido/Rogers	5	12
Anti-f	1	1
Anti-Dob	1	2
Anti-H	1	1
Anti-HI	4	5
Anti-P1	5	7
Anti-Lub	1	1
Anti-Wra	4	4
Cr1-related	1	5
Immune anti-B	1	5
Other HTLA-type	6	11
Anti- Ce	7	25
Anti-cE	1	3
Anti-JMH	1	1
System specific	15	17
Daratumumab Interference	54	200
Total	108	300

Comparison of 2017 and 2018 Sample numbers

	Total No. Samples tested	RhD Type Workup	Antibody ID	Quantitation anti-D	Quantitation anti-c	Total Compatibility Test	Complex Compatibility Test	Total No. of Out of Hours
2017	2780	379	2322	607	229	645	625	107
2018	2403	4	2244	503	144	865	837	185
(%)	-13.6%	-98.9%	-3.4%	-17.1%	-37.1%	34.1%	33.9%	72.9%

Many of these patients were antenatal. In conjunction with identification of the red cell antibody, the risk of HDFN and possible blood requirements for both mother and baby were managed. Outcomes have all been successful to date.

2018 saw a continuing increase in referrals from patients receiving the drug Daratumumab to treat multiple myeloma. This drug was licenced for use in Ireland in April 2018.

The laboratory continued to develop its inventory of Rare Reference Cells and Antisera (through membership of the International Serum, Cell and Rare Fluid (SCARF) Exchange network and the UK Cell Exchange) and optimised its testing methodologies to adapt to the changing demographics of the Irish population.

The RCI laboratory actively contributes literature to the field of blood transfusion science. The following posters were presented at either national or international conferences as listed below:

- **HAI Cork:** Multiple red cell antibodies and an unexpected RhD variant in a pregnant woman. Tomasz Tomkiewicz, Edel Scally, Barry Doyle, Mark Lambert, Fergus Guilfoyle, Michael O'Connell, Stephen Field.
- **BBTS Brighton:** Analysis of potential interference in antibody quantification assay utilised in antenatal testing. Cait Geaney, Barry Doyle, Christina Ryan, Stephen Field.
- **AABB Boston:** Evaluation of recombinant blood group proteins in pre-transfusion and antenatal testing in a RCI laboratory. Aisling Costelloe, Edel Scally, Barry Doyle, Diarmaid O'Donghaile.
- **Biomedica Dublin:** T Polyagglutination detected in a neonate. Edel Scally, June Bowens, Barry Doyle, Diarmaid O'Donghaile, Beatrice Nolan.

Importation of rare blood/products

A total of 2 red cell units of rare phenotype were imported from abroad in 2018.

Participation in External Quality Assurance Schemes

The RCI laboratory participates in 3 different quality assurance schemes; 4 exercises in IEQAS, 4 exercises in AQQAS and 10 exercises in NEQAS along with pilot NEQAS schemes in red cell phenotyping, DAT and antibody titration. In addition to this, the RCI laboratory is involved in Interlaboratory comparison schemes for elution techniques and antibody titrations.

Diagnostics/ Crossmatch Cork

The diagnostics laboratory at the Cork Centre provides both routine and reference immunohaematology and laboratory services. The former to South Infirmary University Hospital (SIVUH), St. Finbarrs', Mater Private Cork and Marymount University Hospital & Hospice, and reference immunohaematology and laboratory Services to the Munster region. Medical Scientists and Despatch Officers are on-site 24/7 supported by Specialist Medical Staff and a Consultant Haematologist.

The services provided by the Diagnostics laboratory include;

As hospital Blood Bank for several city hospitals the Cork Centre undertakes blood grouping, antibody screening, provides cross-matched red cells and other components for individual patients. Provides laboratory and clinical advice for these patients. Investigates possible transfusion reactions, participates in Patient Blood Management and transfusion practice planning and review through the hospital transfusion committees and audit, and manages component traceability.

As a reference laboratory the Cork Centre investigates complex or anomalous red cell typing, extended typing for transfusion dependent patients, positive direct antiglobulin tests, auto-immune haemolytic anaemia, haemolytic disease of the fetus/newborn, and complex antibodies providing extended matched (phenotyped) and crossmatched red cells for these patients. Individual samples in these cases may take several hours to investigate fully and may require donation screening where matching red cells are not available on the shelf. Three patient samples required further specialist referral to the international blood group reference laboratory (IBGRL) Bristol, and a further 17 samples were sent to the NBC for genotyping. Advice is provided to colleagues in the region.

As a reference laboratory, the Cork Centre investigates antenatal patients with red cell antibodies and tracks their care through the pregnancy to plan availability of matched blood for mother and baby at delivery.

The Diagnostics' laboratory staff manage special component stock for the region. This includes all platelet components and all orders received by the electronic order system (EOS) for

antigen typed red cells, irradiated blood components and blood components for babies.

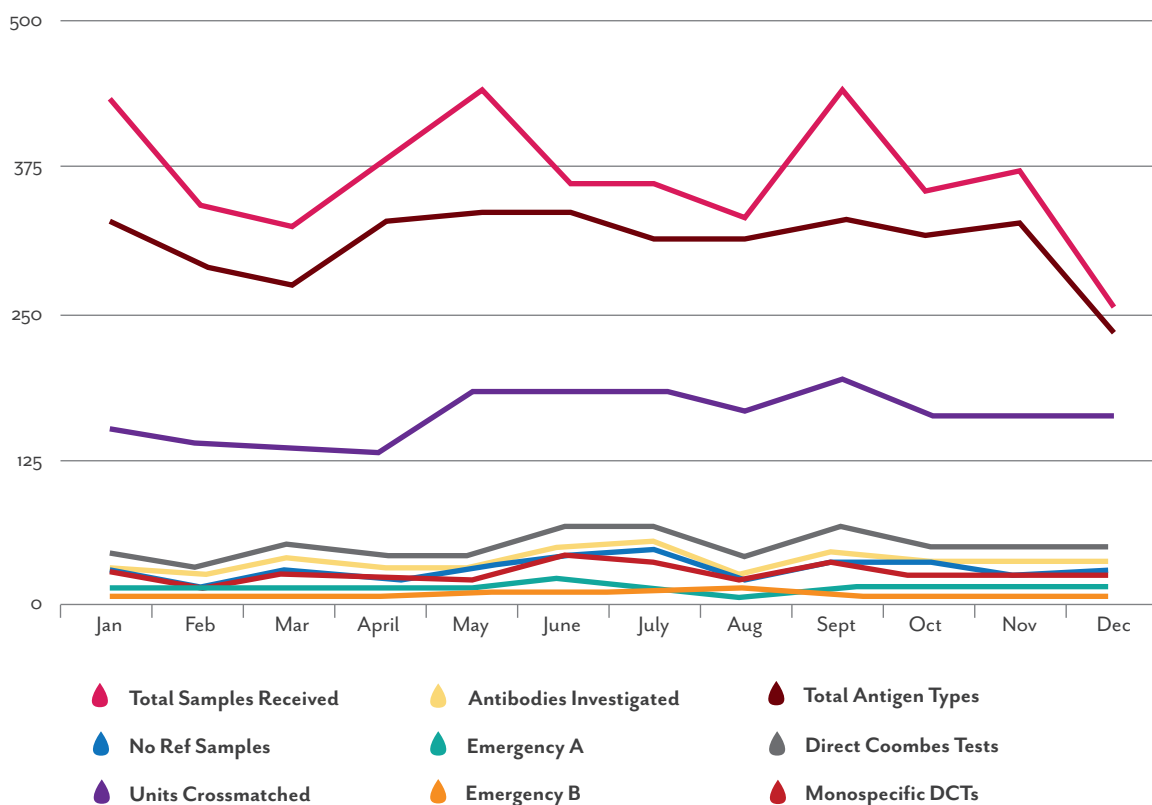
The scientists on duty out of hours in the Diagnostics laboratory contribute to the service by undertaking secondary processing of blood components, and are the first point of contact for clinical queries which are referred on to the medical staff.

Performance in External Quality Assessment Schemes was satisfactory throughout the year and staff attended the British Blood Transfusion Society (BBTS) UKNEQAS and IEQAS meetings.

Diagnostics Laboratory Activity 2018

Total samples received 2018: 3714 (2017: 3491)

Diagnostics Cork Activity 2018



Donor Grouping

The Automated Donor Grouping (ADG) is responsible for the ABO blood group and the Rh D typing which must be determined on each blood donation and all donations must be tested for the presence of red cell antibodies by performing a routine antibody screen to ensure that the patient is receiving compatible blood

In 2018 139,236 donation samples were tested and of these 11,480 (8.25 %) were from donors giving their first time donation. In addition 1,746 sample only new donor samples were tested in 2018. From the results obtained from testing new donors it is possible to estimate the frequencies of blood types in Ireland.

The ADG laboratory is continually striving to introduce the most up to date and sensitive testing techniques available. This is achieved by individual research or by way of projects performed as part of further study. These changes not only improve the safety of blood products, but also increase the efficiency of providing red cell products of rare or complex phenotypes, in response to specific requests from hospitals. In 2018 two OrthoVision immunohematology analysers replaced the QASAR blood typing platforms, with more up to date technology and sickle cell screening using the high performance liquid chromatography method was introduced.

Apart from performing the mandatory serological tests (ABO, RhD and antibody screening) the laboratory routinely screens and types donors in order to find the rarer phenotypes or combinations of types, which may be requested in an emergency. The laboratory screened thousands of donors for Rh phenotypes (C,c,E,e) and other antigen types in 2018. These are to provide typed blood for routine hospital orders, intrauterine transfusions and emergency requests for more complex antigen negative units. The laboratory provides typed and screened units for patients with sickle cell disease. As the age group of these patients' increases there is a corresponding increase in the demand for HbS negative units for use in their treatment.

The project to screen the donor population to find new k negative donors is now complete and the IBTS now has a substantive panel of k (cellano) negative donors (frequency 1:1000) and this means any requests for k negative blood can now be dealt with on an off the shelf basis or specific donors of the appropriate ABO group and Rh phenotype can be called in to donate specifically to cover the request.

In 2013 the laboratory began screening certain donors with a new partial RhD typing kit to detect donors carrying a variant RhD type. This was in response to the finding of a previously typed Rh D negative donor that was found to be a very rare weak RhD variant (type 10). This meant that this donor was very weakly RhD positive and could have consequences if that unit was transfused to a true RhD negative recipient. These rare weak RhD types usually also possess the Rh C or even rarer the Rh E antigen. So all RhD negative which are also positive for the RhC or RhE antigens were targeted for screening. New donors with this Rh phenotype continue to be investigated and a panel of over 20 donors with rare weak RhD types have been identified.

The laboratory participates in three types of external quality assessment schemes, which involves the submission of 15 separate serology exercises per year, 6 abnormal haemoglobin exercises and 1 large international survey covering all aspects of the laboratories serologic testing. Staff competency is monitored by the use of these schemes and involves the testing of samples by both automated and manual techniques. The laboratory staff have scored 100% accuracy in the UK National External Quality Assessment Scheme (UK NEQAS), since the laboratory's first registration in 2008. Satisfactory results were obtained for all NEQAS exercises performed in 2018. The second scheme is performed once a year and covers all aspects of donor serology, ABO grouping, RhD typing, antibody screening / identification and other antigen typing. This European Directorate for the Quality of Medicines & Healthcare scheme is an international survey of laboratory standards.

As the Automated Donor Grouping Laboratory is a national testing facility, the IBTS has an external testing plan with the Scottish Blood Transfusion Service in case of a critical failure of instruments or site. The contingency plan is tested 4 times a year (3 by air and 1 by sea) by sending twenty four samples for testing. In 2018 the contingency was tested with favourable results and this plan has not had to be activated in a 'live' situation since the consolidation of testing at the National Blood Centre in 2010.



Other Services

Tissue Bank

The Tissue bank at the NBC is a licensed tissue establishment (TE-12) under the Tissue and Cells Directive 2004/23/EC which sets standards of quality and safety for the donation, procurement, testing, processing, preservation, storage and distribution of human tissues and cells. The bank is inspected every 2 years by the Health Products Regulatory Authority. The tissue bank manages all ocular tissue, heart valves, skin and some musculoskeletal tissue on a national basis.

Products supplied include corneas, both for PK, DSAEK and DMEK procedures, sclera, amnion, pericardium and fascia lata. These ocular products are all imported from the US. The IBTS also provides autologous serum eye drops for patients with severe dry eye on receipt of a request from an ophthalmologist. The tissue bank also has a GMP licence for the production of Limbal Stem cells. These grafts are used to successfully treat patients with Limbal stem cell deficiency.

Human skin is available for the treatment of severe burns and is imported from the BST Tissue bank in Barcelona, Spain. The skin is mainly supplied to the Burns unit in St. James Hospital.

The IBTS is a third party contractor to the MMUH for the processing, cryopreservation and distribution of human cardiovascular tissue.

Therapeutic Apheresis Service Cork

The Therapeutic Apheresis Service (TAS) in the Cork Centre provides therapeutic apheresis for patients in the Munster region at Cork University Hospital (CUH), Mercy University Hospital (MUH) and Bon Secours Hospital Cork (BSHC). Patients in other hospitals in the region are transferred to these facilities as appropriate.

The TAS is led by a Consultant in Transfusion Medicine, supported by Specialist Medical Officers and Nurses trained in therapeutic procedures. The procedures are carried out at the patients' bedside using mobile apheresis equipment, specifically the Terumo OPTIA Spectra. All procedures performed in 2018 were Therapeutic Plasma Exchange (TPE). The OPTIA software has been enabled for Red Cell Exchange (RBCX) and White Blood Cell Depletion (WBCD).

TAS provides individualised apheresis protocols for each patient in conjunction with the requesting attending Clinical Hospital Team, guided by the American Society for Apheresis 'Guidelines and Indications for Treatment' (ASFA- 2016), and

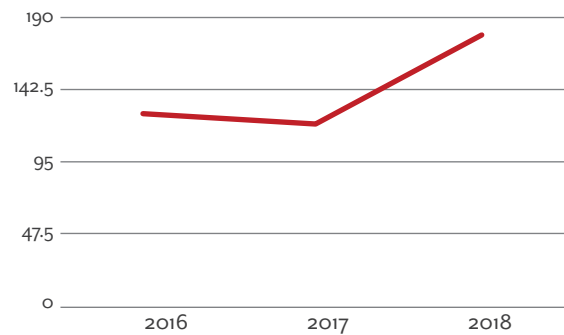
cognisant of the other guidelines including those from the British Society of Haematology (BSH-2015).

The TAS operates within the IBTS quality management system, with trained personnel, controlled documentation, SOPs, validated technology and adverse event monitoring. Adverse events are subject to on-going review and changes are incorporated into the IBTS Therapeutic SOPs, relevant hospital policies and procedures. TAS staff attend UK and international meetings, and comply with Continuing Professional Development (CPD), including audits. The service intends to participate in international data gathering, once available. In 2018 the TAS received 32 patient referrals and performed 181 procedures for 30 patients, over two hospital sites. As displayed in the following tables and figures, the demand for TAS is varied and unpredictable. Variability in demands include requesting hospitals, specialities, consultants, degree of urgency, ASFA category and trends by month, weekend and out of hours.

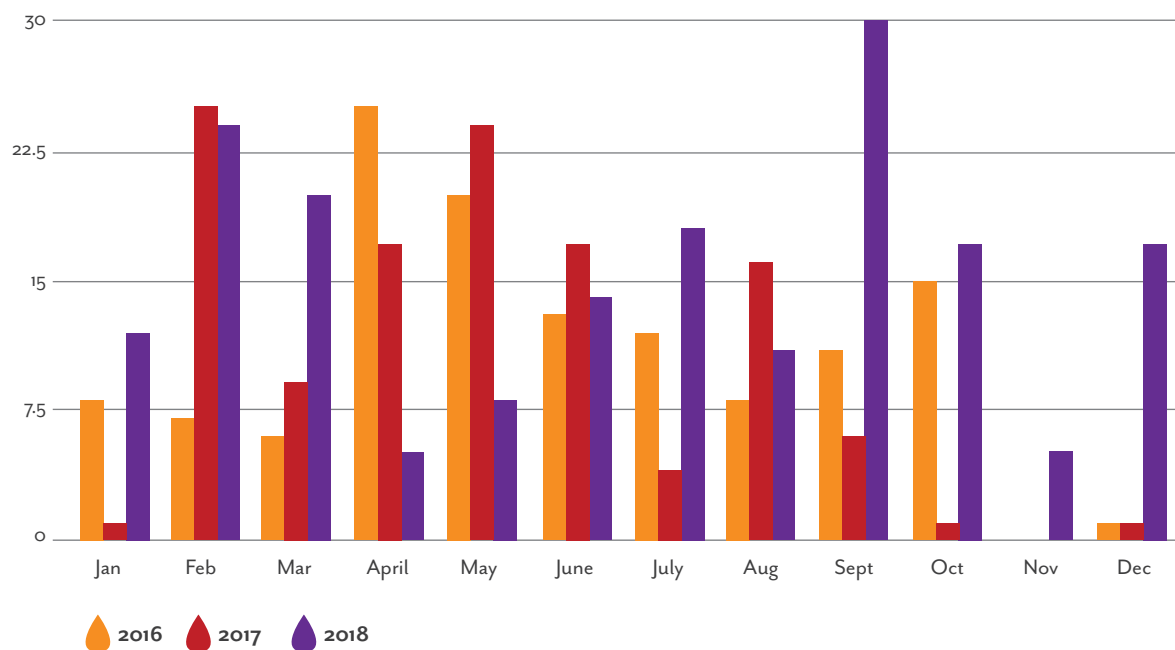
Service demand trend

The trends and variability in service demand over recent years are shown below

Total Annual Procedures 2016 - 2018



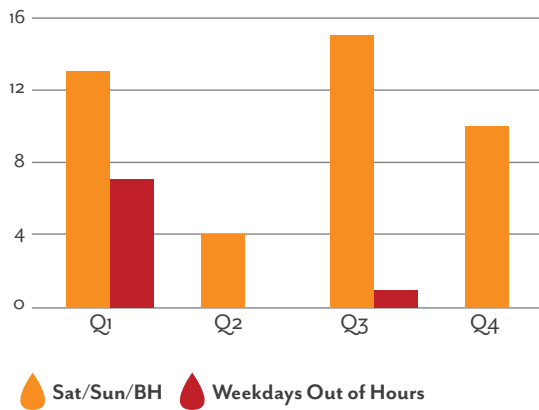
Service demand 2016 - 2018 by month



Weekend, Bank Holiday and Out of Hours Service

Patients may present for emergency, out of hours care when their diagnosis is life or organ threatening. The treatment programme may extend throughout a weekend period. Of the 181 procedures carried out in 2018, 43 (23.7%) were performed at the weekend and 8 (4.0%) were performed out of regular hours during the week. The trend in demand (by quarter year) for weekend/bank holiday and out of hour's service is displayed here.

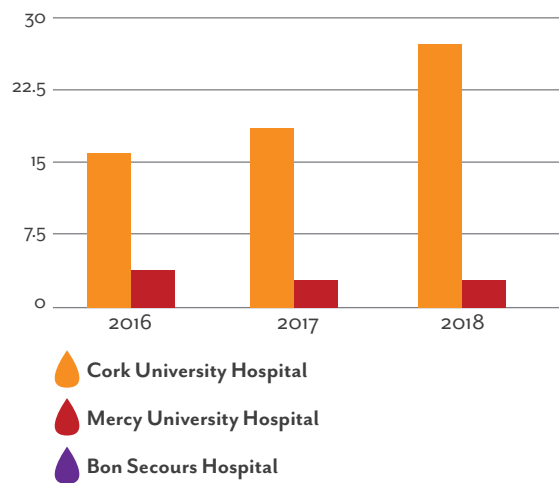
Weekend, Bank Holiday, Out of hours Service Provision 2018



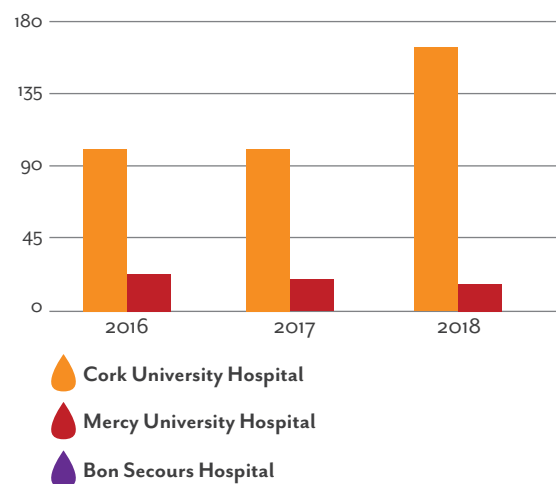
Service Provision by hospitals

CUH had the greatest demand for TAS referring 89% of patients treated in 2018. MUH referred 11% of patients. Below is a comparison of service provision to CUH, MUH, BSHC over the past 3 years by patients and procedures.

Service Provision to Patients by Hospital 2018



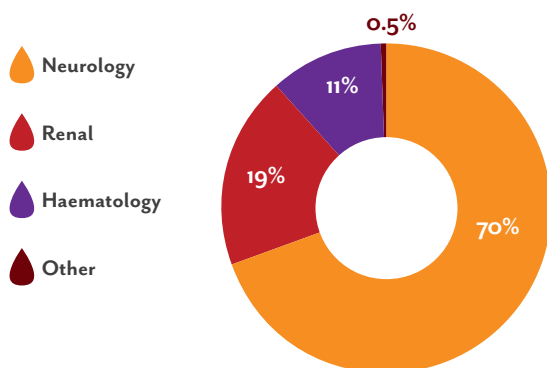
Procedures by Hospital 2016 to 2018



Clinical speciality by patient and procedure

The majority of referrals were for patients presenting with neurological conditions (70%), followed by renal (19%), haematology (11%) and other (0.5%)

Patients by Speciality 2018



The American Society for Apheresis (ASFA) guidelines The ASFA guidelines are used to plan individual patient treatment protocols. These are based on both quality of supporting evidence as well as the strength of the recommendation derived from that evidence. The most recent guidelines (7th Ed.) were published in 2016.

Category I – Disorders for which apheresis is accepted as first-line therapy, either as standalone or in conjunction with other treatments.

Category II – Disorders for which apheresis is accepted as second-line therapy, either as standalone or in conjunction with other treatments.

Category III – Optimum role of Apheresis is not established – Decision making is individualised.

Category IV – Disorders in which published evidence demonstrates or suggests apheresis to be ineffective or harmful.

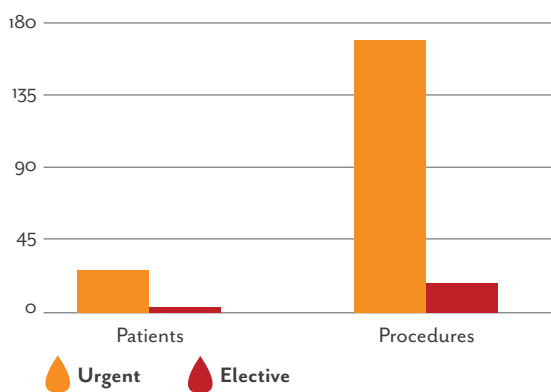
Degree of urgency of Therapeutic Apheresis Service required

Therapeutic Apheresis may, in some conditions, form part of the urgent clinical response to patients’ presentation. Early apheresis can reduce the threat to life or organs. 83% of patients presented with high and 14% presented with moderate urgency in 2018.

Service Urgency by patients, procedures and Specialties

Service Urgency by patients & Procedures		
Urgency	Patients 2018	Procedures 2018
Urgent	27	168
Elective	3	13
Total	30	181

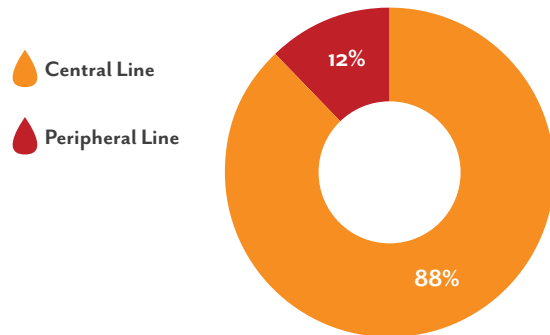
Degree of Urgency by Patients and Procedures 2018



Vascular access for patients and procedures

Therapeutic Apheresis requires excellent blood flow which, especially for an intensive programme over a short number of days, may require support by the placement of a central line by Anaesthesiology or Radiology Services at the referring hospital. A significant majority of patients required a central line in 2018, some had a combination of vascular access types.

Vascular Access By Procedure 2018



Cancelled Procedures

In 2018 one procedure was cancelled as the patient refused further apheresis and other treatment after an intensive course.

Quality Framework

A quality management system is defined as a formalised system that documents processes, procedures and responsibilities for achieving quality policies and objectives. The Therapeutic Apheresis Service is compliant with the American Society for Apheresis (ASFA) guidelines (2016), and British Society of Haematology (2015) and undertakes internal audits and continuous professional development to assure practice. Communication with other apheresis services and attendance at UK and international conferences also ensures that a service is evidence based.

National Haemovigilance Office (NHO)

Haemovigilance is internationally recognised as essential to the development of safe clinical transfusion practice. It collects and assesses information on unexpected or undesirable effects resulting from blood transfusion, and develops strategies and systems to prevent their occurrence or recurrence.

Haemovigilance in Ireland is co-ordinated by the National Haemovigilance Office (NHO), based at the Irish Blood Transfusion Service (IBTS). Since the programme commenced in 1999 a total of 6,588 serious adverse transfusion reactions and events have been reported. The NHO liaises with and supports hospital based Haemovigilance Officers (HVO) throughout Ireland and also Medical Consultants with Haemovigilance responsibilities. In addition, the NHO maintains links with colleagues internationally through the International Haemovigilance Network (IHN) and the UK Transfusion Network (SHOT).

Serious Adverse Events (SAEs) – mandatory and non-mandatory

Mandatory SAEs relating to the quality and safety of blood under EU Blood Directive 2002/98/EC and non-mandatory SAEs relating to the clinical aspect of blood transfusion are reviewed by the NHO. These reports come from blood establishments, hospital blood banks and healthcare facilities. During 2018, 126 mandatory SAEs were reported (65% of all SAEs). In addition, 69 non-mandatory SAEs, (35% of all SAEs) primarily relating to errors in clinical areas, were also reported.

Serious Adverse Reactions (SARs) - mandatory and non-mandatory

A total of 115 reactions that meet the criteria have been reported in 2018. Mandatory SARs (41) reported to date is a decrease on those recorded in 2017 (57).

Annual Notification of Serious Adverse Reactions and Events (ANSARE)

In compliance with Commission Directive 2005/61/ EC Annex II D and III C, all hospitals transfusing blood together with all blood establishments must complete and return an ANSARE

form to the NHO. 198 mandatory reports were reported by the NHO in 2017, with the compilation of 2018 ANSARE report on-going at time of writing.

Health Products Regulatory Authority (HPRA)

The Competent Authority for implementation of all aspects of the EU Blood Directive is the HPRA and, as in previous years regular case review meetings were held with the NHO to discuss reported incidents.

Education, promotion and developments

The NHO supports the on-going development of hospital in-service training programmes by working closely with hospital based HVOs. On-going education of undergraduate and post graduate medical scientists and specialists registrars also continued during the year.

In keeping with its remit to support hospital based staff, the NHO provided an 'open day' in January for newly appointed HVOs covering aspects of the reporting system, together with familiarisation with the workings of the IBTS and NHO. Twenty newly appointed HVOs attended this event.

NHO Conference 2018

Over 240 delegates from medical, nursing and scientific backgrounds gathered in the Croke Park Conference Centre on 24th October for the NHO Conference 2018. Delegates attended from almost every hospital in the Republic of Ireland together with representatives from Northern Ireland and other parts of the United Kingdom (UK).

Based on the theme 'Haemovigilance – its many dimensions' speakers were drawn from many disciplines from Ireland and the UK involved in both Blood Transfusion, Patient Blood Management and Human Factors in Patient Safety. Where permitted, presentations have been made available on www.giveblood.ie (Haemovigilance pages).

A Poster Competition was also held, in conjunction with the Conference, giving relevant staff an opportunity to showcase their work and initiatives in the area of transfusion. The competition attracted 20 entries from hospitals and the IBTS. The winning submission, a review of monitoring and awareness of Transfusion Associated Circulatory Overload (TACO) Reactions in a busy acute Hospital was compiled by a team headed up by Deirdre Harrington, Haemovigilance Officer, Cork University Hospital. It was noted by the Poster Judges that a high standard of poster entries were presented. A number of industry exhibitors' maintained stands throughout the day.

e-Learning

The IBTS continued to provide 'Learnbloodtransfusion' e-learning programme under licence to hospitals via LearnProNHS.

The majority of Irish hospitals and a number of third level institutions are registered on the programme. This includes hospital staff and health care undergraduates in several universities undertaking the modules as a mandatory course requirement. Over 10,500 users have completed one or more of the 'Learnbloodtransfusion' modules.

Irish Unrelated Bone Marrow Registry

Haematopoietic progenitor cell transplantation is a lifesaving therapy for certain patients with leukaemia, bone marrow failure syndromes, and for particular inherited metabolic disorders. For the many patients who do not have the preferred option of a fully matched sibling, an unrelated donor from one of the millions of volunteer donors available worldwide can provide a suitable alternative.

To meet the need for haematopoietic progenitor cell donors for both Irish and international patients, the Irish Unrelated Bone Marrow Registry (IUBMR) was set up in 1989. Since 2001 all donors registered on the unrelated panel are typed exclusively by DNA methods, by the National Histocompatibility and Immunogenetics Reference Laboratory (NHIRL). The registry is licenced by the HPRA under the EU Tissue Directive 2004/23/EC.

International Accreditation

Since 1991 the IUBMR has been affiliated to the World Marrow Donor Association (WMDA), an organisation which sets operational standards for bone marrow registries worldwide. In 2012 the IUBMR was awarded full registry accreditation. All search coordinators working in the IUBMR are certified through the WMDA education programme.

National Activities

The IUBMR searches for suitable donors on the Irish panel and through the Bone Marrow Donors Worldwide (BMDW) database, on behalf of the Irish transplant centres at St. James' Hospital (SJH) and Our Lady's Children's Hospital Crumlin (OLCHC). In 2018, 98 patients were referred to the IUBMR for unrelated searches.

Sixty-two Irish patients received stem cell transplants from an unrelated donor in 2018. The majority of these were from international donors (58).

International Activities

The IUBMR is connected to European Marrow Donor Information System (EMDIS), a communication system which allows international registries to search each other's panels and select donors for extended testing with ease. Seventy nine Irish donors were selected for additional testing in 2018.

Irish Donors

Potential stem cell volunteers are recruited through blood donation clinics, where they can request to join the registry. In 2018, 360 new volunteers joined the IUBMR, there are now over 22,000 potential donors listed on the IUBMR.

Donations from 4 Irish donors were facilitated in 2018, for national and international patients. There were no Donor Lymphocyte Infusions in 2018.

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Quality & Compliance

Quality & Compliance

2018 has seen a number of changes within the Quality & Compliance function. A revised Quality Strategy for the IBTS has been developed and is now being implemented. The Quality Strategy is designed to ensure that the IBTS has a robust quality management system, which enables the organisation to effectively deliver on its mission, while ensuring that patient and donor safety are a top priority. The Quality strategy is built upon three main pillars:

Modern Quality Systems

- Our Quality Management System will be compliant, effective and efficient. We will incorporate principles of Quality Risk Management, and move towards an integrated Electronic Quality Management System (EQMS)

Stakeholder Engagement

- A key to successfully embedding quality in a Blood Establishment is to have a healthy, productive relationship between the Quality function and the other parts of the organisation. We will develop effective relationships with our colleagues, and create a true partnership approach in embedding quality principles and practices within the organisation

Sustainable Quality Workforce

- In order for the Quality Strategy to be enacted, we need:
- Appropriately qualified and experienced staff
- Adequate staff numbers, located where we need them
- Effective succession planning, with no single points of dependency
- Effective management structure and capability within the Quality function
- We will develop, support and enable a sustainable Quality workforce, which will be the foundation for continuing success in the future.

In 2018, the key achievements in achieving this strategy have included:

The creation of the Quality Systems Development team, which is tasked with reviewing our current quality management system, and driving changes. Having a dedicated team will enable adequate time and resources to be allocated to this vital task. The appointment of a Quality Control Manager, who is now responsible for the four laboratories located in Dublin and Cork, which form part of the Quality function. By appointing this position, we are able to explore and realise synergies between the laboratories, and deliver a more effective laboratory service. The beginning of a Quality Business Partner model to be deployed within the Quality Assurance team. This is designed to ensure that our operational teams are well supported by designated QA staff, who can assist in managing quality related matters.



“ In 2018, 942 complaints were reported, compared to 1026 in 2017. The percentage closed in the appropriate time frame was 79%, compared to 70% in 2017.”

Significant work is planned for 2019 and beyond to ensure that these three pillars are implemented, enabling the successful delivery of the Quality Strategy.

Regulatory Update

In 2018, the Good Practice Guidelines for Blood Establishments and Hospital Blood Banks were introduced into Irish law. This forms an additional set of guidelines that the IBTS is expected to comply with as a Blood Establishment. The HPRA are now using these guidelines during routine Blood Establishment inspections. The annual HPRA programme of inspection covered 6 inspections during 2018 which included 4 clinics and 2 site visits. These covered the Blood Establishment activity only with no HPRA inspections relating to the Tissue Establishment, or to the Distribution of Medicinal Goods. There were two major non-compliances raised for the BE system elements. Throughout the year the Manufacturing Authorisations are also regularly updated and maintained to reflect the current nature of the IBTS. Annual reports were filed on the associated activities of the Blood and Tissue Establishments as per HPRA requirements.

Key Quality Data

The IBTS monitors and reports Serious Adverse Events (SAEs) and Serious Adverse Reactions (SARs) to the National Hemovigilance Office (NHO). There were 60 Serious Adverse Events (SAEs) and 46 Serious Adverse Events (SARs) reported by the IBTS to the NHO. This represents a reduction of 12 SAEs and 14 SARs compared to 2017. The majority of SAEs reported

by the IBTS are due to processing and distribution errors. The IBTS records, investigates and actions internal incidents of issues that have a potential to impact donor or product safety, or which represent a departure from approved procedures, through the Incident Report (IR) system. In 2018, 618 IRs were raised, compared to 899 raised in 2017. The percentage closed in the appropriate timeframe was 78%, compared to 70% in 2017. The IBTS records, investigates, and responds to customer complaints through the Customer Complaint system. In 2018, 942 complaints were reported, compared to 1026 in 2017. The percentage closed in the appropriate time frame was 79%, compared to 70% in 2017.

Associated with IRs and Complaints, the IBTS undertook 312 product recalls in 2018. This compares to 364 product recalls in 2017. As in previous years, the majority of these recalls are a result of post-donation notification of illnesses by donors.

The IBTS proactively manages changes to processes and procedures through a Change Control system. This system allows us to assess the risks and benefits of a change before implementing it. In 2018, 385 change controls were raised, with 50% being closed out. This compares to 593 change controls raised in 2017, with 53% being closed out at the end of that year. In addition, 406 Change Orders, which are used to update documents where no significant process change is required, were raised in 2018, with a close out rate of 81%. This compares to 538 change orders raised in 2017, with a close out rate of 78%.

Human Resources



Human Resources

Our mission statement puts the workforce at the centre-point of delivering a world class blood service and our vision focuses on excellence in this service delivery through our people. People management is strategically administered in the organisation through the HR Functional Teams of: HR Management and Operations; Learning and Development; and Environmental Health and Safety (EHS), with additional responsibility for Internal Communications and Library Services. Against a background of a growing economy, emerging technology, almost full employment, a growingly diverse society and a multi-generational workforce, the organisation has arrived at a regenerative phase in its lifecycle and is going through a cultural transition.

Transformational HR

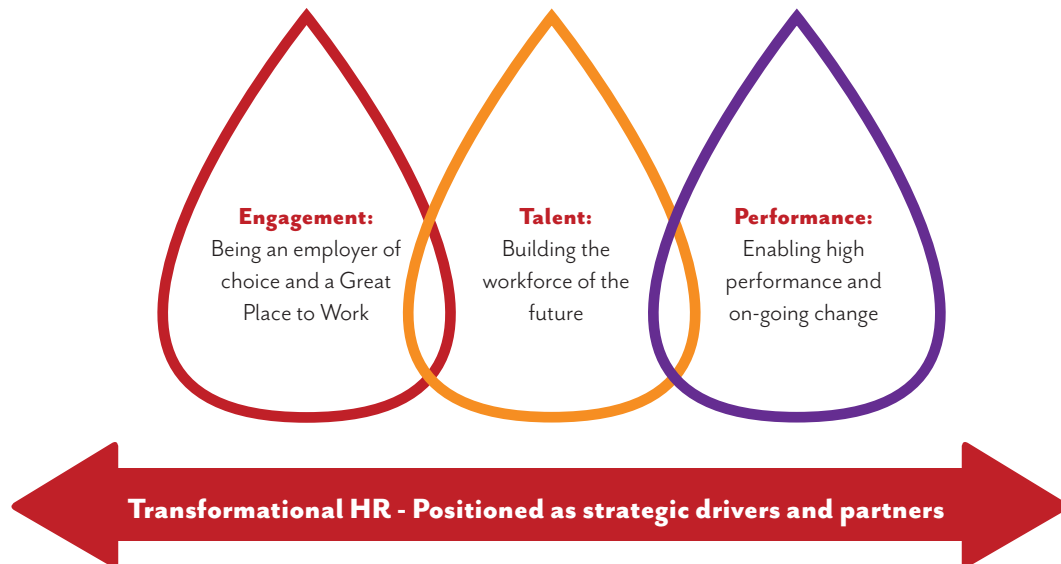
In response there has been a move towards transformational, strategic HR that drives culture change that values people and

people managers, directs, supports and recognises contribution and high performance, and positions the organisation for the future.

Significant progress has been made with regards to strategic people management, especially through the Learning and Growth strategic objectives of our Balanced Scorecard, in developing and implementing current key HR strategic initiatives.

The transformational approach has focused on three inter-linked strategic priorities, impacting across the organisation. These are

1. to be an employer of choice and a great place to work (Employee Engagement)
2. to have a clear defined approach to managing and optimising talent in the organisation (Managing Talent) and
3. to create an enabling culture where employees are encouraged and developed to deliver high performance and on-going change (Enabling Performance) facilitated by transformational HR, focused on re-positioning the HR Function as a strategic driver, partnering the organisation to deliver HR and organisational strategic objectives, aligned to the mission, vision and values of the organisation.



Transformational HR

Great Place To Work[®]: 2018

In 2015, the organisation undertook our first Great Place To Work Staff engagement survey, with the commitment to undertake a follow-up survey three years later. Significant progress has been made in delivering on the actionable priorities as communicated by our employees in 2015 and in November 2018, again under the responsibility of HR Management and Operations functional team, our second survey was rolled out as promised. The response rate in 2018 was a very healthy 20 percentage points higher than in 2015, at 68%, and also reflected a much broader and fuller representation of all the various roles, geographic-spread and diversity within the organisation. The positive engagement index increased by a very significant 9 percentage points from the 2015 result, showing that the hard work to improve employee engagement has paid off – lots done more to do! 2019 will see the next generation of actionable priorities being identified and agreed, and implementation plans drafted.

Embracing Technology

Embracing new technology was a notable focus for all the HR Functional teams in 2018, transforming how HR Management and Operations, Learning and Development and EHS is managed and delivered. This approach is transforming how employees access and interact with the related services. Expectancies are clearly defined and accountability is more transparent.

Learning and Development (L&D)

Our business strategy 2017 – 2020 defines ‘Learning and Growth’ as a critical strategic pillar. Consequently, our Learning and Development Strategy 2017-2020 aligns with, and underpins, the overall strategic objectives and business needs outlined in our business strategy. Our L&D vision of ‘Working, Learning and Growing Together’ has, at its core, the idea that positive on-going change results from a culture of learning, working and growing together and through opportunities for innovative life-long learning, thereby enabling the whole organisation to become a great place to work.

The successful implementation of our L&D strategy will be an enabling factor in delivering the ‘right people with the right skills at the right time’ so that we have the capacity to respond to the many challenges we will face in the future.

Our Learning and Development Framework, and associated principles has been developed and introduced to support the successful implementation of the organisations strategic objectives through the provision of expertise, growth and delivery. In order to deliver best in class L&D activities a set of common principles have been introduced which reflect best practice approaches and create structure and consistency around how L&D is planned, managed and aligned with the strategic objectives of the organisation see below.



Learning & Development Principles

The roll out of our new Performance Development (PD) process was an important first step in the delivery of our L&D strategy. Our employee led PD process is focused on learning and developments needs arising from PD conversations and ultimately results in an even a better service for all of our donors and transfusion recipients.

Similarly, the organisation is committed to strengthening the capabilities and capacity of current and future leaders with the development of our Leadership and Management Framework. Evidence based practice and stakeholder engagement workshops have informed the development phase of this vital initiative. Our framework consists of three core pillars:
Organisational Leadership

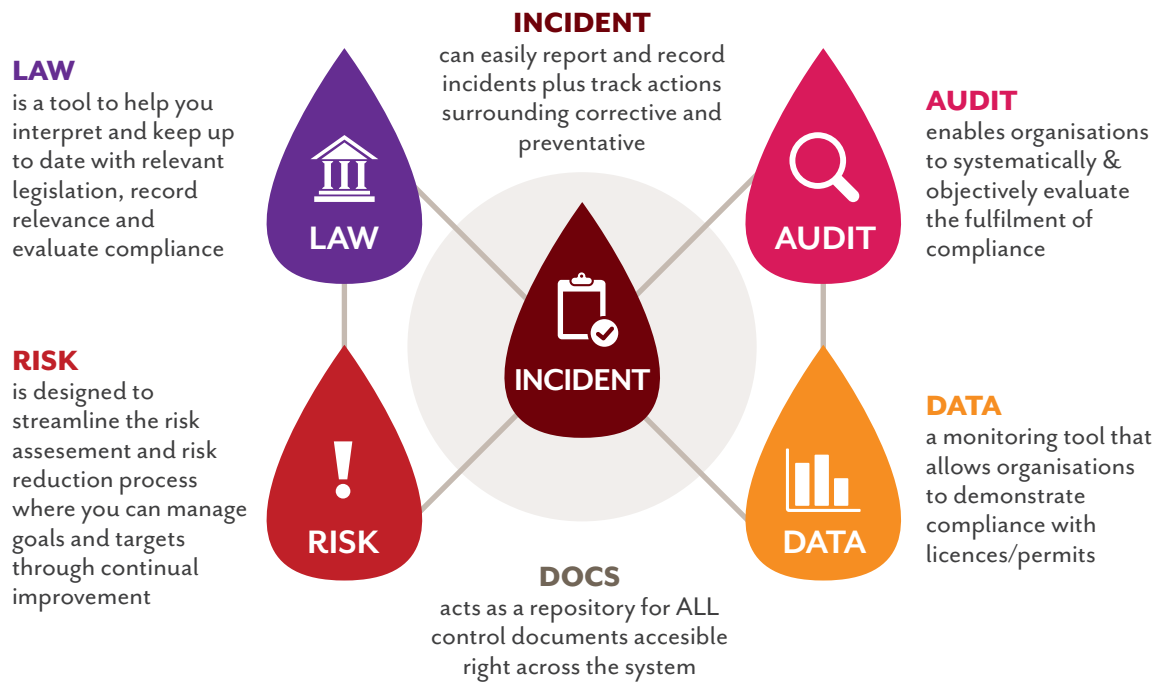
Team Leadership and Individual Leadership

and our mission and programme have been designed to reflect our need to strengthen our leadership capabilities.

The development of comprehensive role specific training pathways will ensure employees can progressively build knowledge, competence and capability that is required in their role. This will in turn ensure that we are able to consistently build individual and organisational capability in an ever changing environment.

Environmental, Health and Safety (E,H&S)

As outlined in the IBTS Strategy 2017 – 2020, our aim is to “Embed Environmental Health and safety in the organisation”. The culture we aspire to is one where EHS becomes part of the day to day role of all within the organisation. With this at the core, EHS commenced a project in 2018 to deliver an Occupational Health and Safety (OHS) Software System to the organisation with the goal of putting in place an integrated and centralized system for storing and organising health and safety records.



Overview of Occupational H&S Software System

The project was successfully launched with the roll out of electronic accident/incident/near miss reporting. The roll out was supported by the delivery of thirty five training sessions across the organisation, both one to one and group training. The implementation of this project will continue over the next year which will include the migration of health and safety documentation to the OHS system including risk assessment and inspections.

Our Dangerous Good Safety Advisor (DGSA) continued to work with the organisation in 2018 and a training programme was drawn up following a review of our training requirements in this area. A training programme for all employees was commenced in 2018 and will continue through 2019.

Finance

Summary Accounts for the year ended 31st December 2018		
	2018 €'000	2017 €'000
Income		
Recurring income	66,430	67,482
Non-recurring income	1,463	1,389
Total income	67,893	68,871
Expenditure		
Total expenditure	70,572	70,865
Surplus / (Deficit) for year	(2,679)	(1,994)
Actuarial gain / (loss) on pension schemes	1,926	7,224
Transfer to Capital Reserves	(9)	(17)
Transfer to Research Reserve	(155)	124
Accumulated Deficit at 1st January	(55,232)	(60,569)
Accumulated Deficit at 31st December	(56,149)	(55,232)

Income

The Board's total income for 2018 of €67.9 million (2017 €68.9 million) is analysed into recurring and non-recurring income. Recurring income consists of revenue generated from sales of products and services provided to hospitals of €66.43 million (2017 €67.48 million). Non-recurring income of €1.46 million (2017 €1.39 million) includes a grant from the Department of Health in respect of HEV testing and deferred funding for the single public service pension scheme. The decrease in recurring income represents reduced volumes in 2018 for both Red Cells and Platelets.

Expenditure

Expenditure for 2018 amounted to €70.6 million (2017 €70.9 million). The decrease in expenditure mainly arises due to a fall in depreciation costs.

The Board accounts for pensions in accordance with financial reporting standard 102.

Reserves

The Board has a Capital reserve for the development of new facilities in Cork. The balance in the fund at the year ended 31st December 2018 was €8.60 million.

In 2006 the Board set up a research reserve. In 2018 the balance of research funds was €1.8 million. (2017 €1.6 million).

Capital Expenditure

The Board invested €1.0 million in capital projects and equipment during 2017 (€1.7 million 2017).

The main investments during the year included further investment in laboratory testing equipment and replacement freezers along with an upgrade of the fire alarm system.

Prompt Payment Legislation

The Board complies with the requirements of Prompt Payment Legislation except where noted below. The Board's standard credit taken, unless otherwise specified in specific contractual arrangements, are 30 days from receipt of the invoice or confirmation of acceptance of the goods or services which are subject to payment. It is the Board's policy to ensure that all accounts are paid promptly. During the year ended 31 December 2018, under the terms of applicable legislation, invoices to the value of €311,573 were late, by an average of 15.74 days. These invoices constituted 1.43% by number and 0.81% by value of all payments to suppliers for goods and services during the year. Total interest and fines paid in respect of all late payments amounted to €11,159.14

The Board continuously reviews its administrative procedures in order to assist in minimising the time taken for invoice query and resolution.

Contact details

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Dublin 2

Solicitors

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Stillorgan Blood Donation Clinic

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Carlow Centre

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Hackettstown Road
Carlow
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Tuam Centre

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