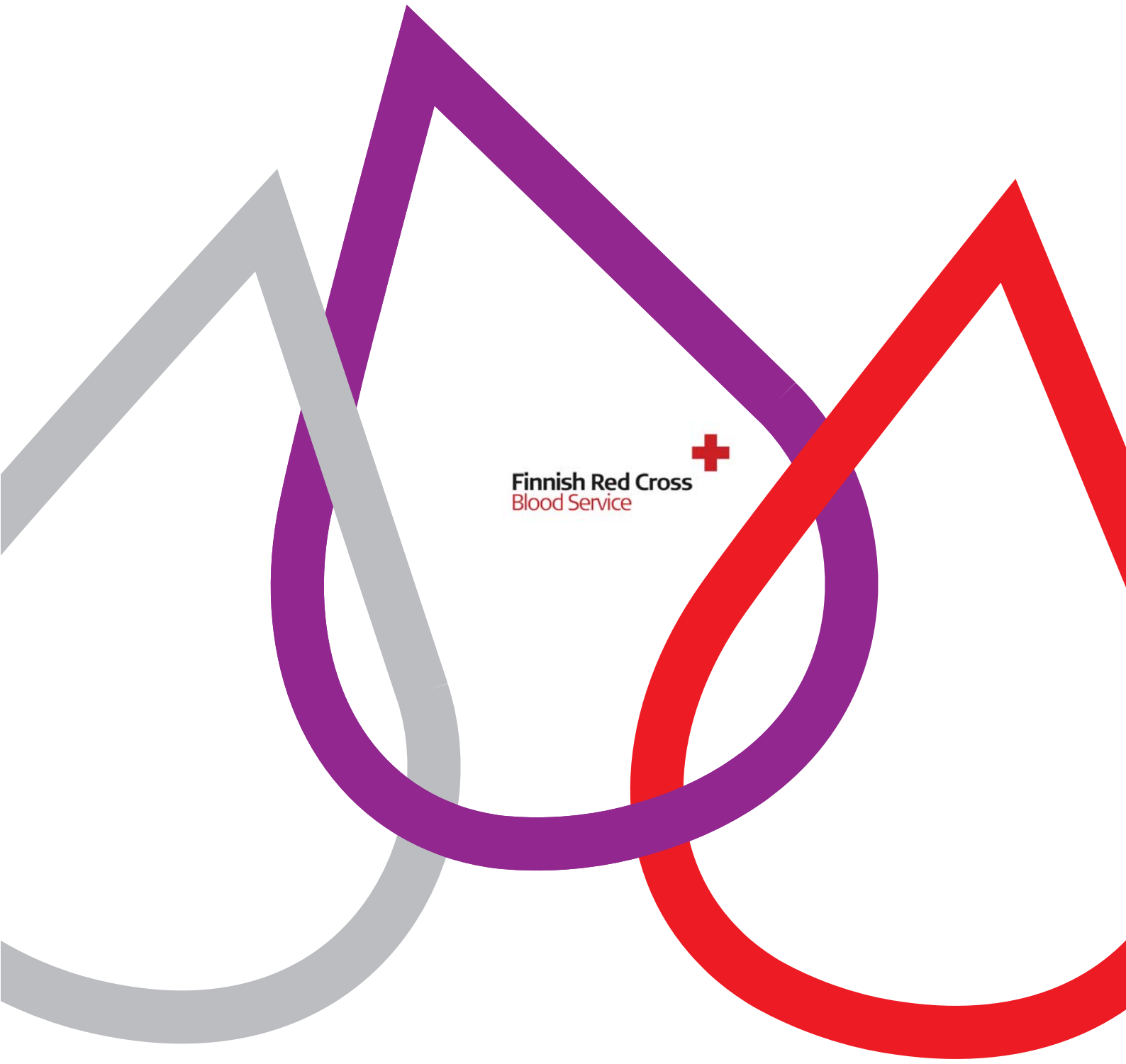
Link in a Chain of Helpers

The Blood Service Annual Report for 2013



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The Blood Service in a nutshell

THE BLOOD SERVICE IN THE FINNISH HEALTHCARE SYSTEM

The Blood Service is a financially and operationally independent section of the Finnish Red Cross. We are responsible for supplying blood products all over Finland in a centralised manner. Our tasks include organising blood donations and collecting blood as well as testing donated blood, manufacturing blood products and distributing them to hospitals.

We provide healthcare sector services such as blood cross-matching, tests needed for organ, tissue and stem cell transplants, and coagulation factor and thrombocyte assays. The Blood Service performs blood group and blood group antibody tests for all pregnant women in Finland. The Blood Service also hosts the Finnish Stem Cell Registry, which provides stem cell grafts for stem cell transplantations.

Our strong expertise is built on in-house research and development, which forms the foundation for safe blood transfusions and novel cell therapies now and in the future.

We help others to save lives. We operate together with voluntary donors and hospital professionals.

Helping patients is a joint effort

We work to help patients get better. Together with blood donors, the Blood Service supports hospitals in treating patients. A host of volunteers assists us in organising blood donations.

We are expert professionals

The Blood Service operates in 9 towns and cities and employs about 500 professionals, all experts in their field. We provide blood and cell products and associated laboratory and expert services for the healthcare system.

We are a non-profit organisation

The Blood Service is an independent, non-profit section of the Finnish Red Cross. We cover the costs of our operations and their development by selling blood and cell products and expert services to the Finnish healthcare system. The Blood Service strives to maintain a stable financial position in a responsible manner.

Production and layout: Mediafocus Oy **Texts**: FRCBS Communications
Photos: FRCBS **Translations**: Meditrans Oy **Printing house**: SP-paino

OUR VALUES

Patient well-being
Our operations always aim to increase patients' well-being.

Respect for donors
Voluntary blood and stem cell donors are important partners in the chain through which the Blood Service provides its help. We value donors and their gift and provide a channel through which they can help patients.

Reliability
We earn and maintain mutual trust by applying clear, consistent practices. We exercise good corporate governance and transparent communications.

Working community well-being
We seek to develop our personnel's well-being to achieve optimal results in our operations. We want to ensure that our personnel consider the Blood Service a good place to work, a place where they can succeed and where they enjoy their work while being encouraged to develop their skills further.

Operational efficiency
We value the gift given by donors and do our best to ensure it is used at the right time and as effectively and appropriately as possible for the benefit of patients. We also continually develop our operations to make them run as smoothly as possible.

We create potential for saving lives.

Review by THE CHIEF EXECUTIVE

In 2013, the Blood Service reshaped both its operations and its organisation. The use of blood products decreased, as was the case during the preceding year. The use of red blood cell and platelet products in Finland decreased by about 8% compared to the previous year. We expect the use of these products to decrease even further in 2014 but at a slower pace.

In 2012, we started adjusting our organisation in line with the anticipated decrease in blood product use through natural staff retirement. In early 2013, we had to accept the facts. Staff retirement and "slicing down" costs were no longer enough to balance our finances, and we therefore began negotiations involving all our staff and started reorganising our operations.

We decided to centralise all manufacturing operations in Helsinki and discontinue the manufacture of blood products in Oulu. The most clearly visible change must have been the decision to close eight blood service centres and replace them with mobile blood collection events. As anticipated, the closure of these centres attracted some negative feedback. We understand that many donors felt regular visits to a familiar blood service centre with the same familiar nurses were an important part of blood donation and that mobile blood collection events are a very different experience. The change was successful nevertheless. The majority of regular donors at the Pori, Vaasa, Kokkola, Hämeenlinna, Mikkeli, Joensuu, Lappeenranta and Rovaniemi blood service centres have switched to regular mobile events, and new donors have also joined the chain of helpers in these towns.

We also decided to stop collecting cord blood. The use of cord blood in stem cell transplantations in Finland was not extensive enough to make collection financially viable. We express our gratitude to all mothers who donated their cord blood over the years and to the midwives involved. The cord blood collected is still in storage waiting to be used.

We also discontinued our bone bank operations. Previously, the Blood Service managed bone banks in some hospitals. To keep operations effective and financially viable, it would have been necessary to extend the bone bank network to cover all parts of Finland. This was not feasible, and we therefore decided to withdraw and transfer the management of bone banks to the hospitals themselves.

Almost 1,000 blood products are still required every working day.

We continued our very active research and development work. Our researchers contributed to 55 scientific publications. Novel cell therapies are one of the areas under development. Last year, our cell production centre manufactured the first cell products for the treatment of patients. The products were required for stem cell transplantation patients who have severe graft-versus-host disease refractory to medication. Internationally, licensed cell products are available for the treatment of graft-versus-host disease, cartilage damage and burns. Promising new products will also be launched to treat cancer. The Blood Service wants to be a frontrunner in this area and to ensure patient access to these treatments both internationally and in Finland.

In 2013, more than 130,000 voluntary blood donors helped us to help others. I express my warmest thanks to all those who helped patients. Despite medical advances and some decrease in blood product use, almost 1,000 blood products are still required every working day. I also thank all volunteers who promoted our activities, as well as all our partners for their excellent cooperation. Lastly, I want to say a warm thank you to the Blood Service's personnel for striving to ensure the best for the patient and to meet our challenges.

Martti Syrjälä
Chief Executive of the Blood Service

Operational reviews

BLOOD PRODUCTS AND MEDICINAL PLASMA PRODUCTS

The use of blood products started to decrease significantly in 2012, and this trend continued in 2013. The use of red blood cells and platelets by hospitals was about 8% down on the previous year, which amounts to a decrease of more than 20,000 units of whole blood from a production point of view. The decrease in blood product use is thought to be due in part to developments in surgical and treatment methods.

The Blood Service was quick to react to this change. Earlier plans to expand production operations in Oulu were cancelled, and all production was centralised in Kivihaka, Helsinki. In Oulu and Kuopio, the storage and distribution of blood products in the evenings, nights and weekends was reorganised in cooperation with the client to ensure product availability even in high-demand situations. Production and distribution processes were successfully reorganised. We were, for example, able to halve the time required for platelet production, thanks to which the short-lived platelets, which only remain usable for five days, can now be distributed to clients fresher than before.

The supply of medicines was incorporated in the blood product supply chain organisation, and responsibilities and operations were integrated. The frozen plasma product Octaplas used in Finland and supplied by the Blood Service was replaced by the new product OctaplasLG.

Blood product supply reliability remained good nationwide. The use of blood products is expected to fall even further. Because of these changes in use, manufacturing must be flexible, cost-effective and also secure. Optimising the order-supply chain for blood products is a continuous process of balancing between supply reliability, product losses and cost-effectiveness in the entire chain. The greatest challenge is how to obtain sufficient information to manage activities, since current information systems do not allow data from hospitals to be combined with those from the Blood Service.

BLOOD DONATION

The blood donation network was restructured in its entirety to bring its operating capacity closer to hospitals' needs. Eight blood service centres were closed by the end of the year and replaced with regular blood donation events. The centres closed were those in Rovaniemi, Kokkola, Vaasa, Joensuu, Mikkeli, Pori, Lappeenranta and Hämeenlinna.

In towns where centres were closed, blood donation events were launched swiftly and blood donation numbers soon reached the targeted levels. We worked hard to inform people about these changes and closely monitored donor feedback. We aim to increase the proportion of blood collected during blood donation events to 50% of all blood collection in Finland. At the same time, the number of blood donations in the remaining ten centres will be increased by about 10–15%, which will be roughly on a par with the figures for 2011.

As to planning blood collection, a weekly minimum of collections, distributed evenly on each weekday, was introduced. To achieve regular daily donation numbers, the joint planning of blood donation events was improved. In the next few years, we will particularly focus on guiding blood donor activity more actively with regard to donors' blood groups and patients' needs. The effectiveness of such guidance will be improved for instance by launching new electronic tools.

The number of thrombapheresis procedures, i.e. automated platelet collection procedures, was three times higher than the previous year. We sought to select donors among persons able to donate two products at a time in the blood groups most urgently required, and new donors were recruited from the Helsinki region.

The cell production centre launched the production of its first cell therapy product.

RESEARCH AND CELL SERVICES

During the year the Blood Service significantly realigned its research and development operations and tissue and cell services and also reformed its organisation. To help balance our finances, it was decided to discontinue cord blood collection and bone bank activities. The use of cord blood grafts has been very low in Finland, and cord blood collection was no longer financially feasible. The Blood Service will still continue to supply cord blood grafts.

The Blood Service's bone bank network operations were also discontinued for financial and operational reasons. The bone grafts collected by the bone bank networks were submitted to the hospitals involved in the network, and a training programme was introduced to support hospitals as they launch their own bone bank operations.

The Finnish Stem Cell Registry (previously the Bone Marrow Donor Registry), maintained by the Blood Service, supplied 146 grafts to patients in Finland and abroad. The number of grafts supplied has doubled in the 2000s. A record number of 1910 new donors joined the Registry in 2013, bringing the total number of members to more than 23,000.

The cell production centre launched the production of its first cell therapy product, namely mesenchymal stromal cells, to treat graft-versus-host disease in stem cell transplantation recipients. In 2013, Turku University Central Hospital (TUCH) and Helsinki University Central Hospital (HUCH) treated their first ten patients with this new product. The Blood Service is also preparing to launch a new cell product consisting of isolated skin keratinocytes together with the HUCH Burn Centre for the treatment of burns.

The Blood Service also started distributing ChondroCelect© to hospitals. This product is the first advanced tissue engineering product licensed in Europe. Four patients with cartilage damage were treated with ChondroCelect©, which contains the patient's own cells.

The financial risks related to the collection of patents created by the Blood Service were reduced by selling the majority of patents and patent applications. Patent collections on stem cell glycomics and the associations between intestinal microbiota and blood groups, as well as the associated data, were sold on to companies that will continue commercialising these innovations.

The Blood Service is involved in a haematological biobank research project (FHRB) in which it is responsible for the laboratory processing of specimens. The long-prepared Biobank Act became effective in September 2013. In future, the research project will form a biobank that is consistent with the new legislation. The Blood Service is actively reviewing its role in biobank activities and is involved in different research projects in this field.

In 2013, the Blood Service's researchers contributed to a total of 55 scientific publications. Twelve of these were published in acclaimed scientific journals with an impact factor of more than 4. The Blood Service's research projects were awarded about €595,000 of external research funding. The most extensive collaboration project underway is the TEKES-funded research programme "Intelligent Monitoring for Health and Well-being" by the SalWe Strategic Centre for Health and Well-being, launched in 2010. A consortium of 13 companies and 19 research groups participates in the programme. The Blood Service participates in the "Intelligent Biomarker Combinations" work package. The Blood Service's main research projects in 2013 also included research on the properties and production methods of mesenchymal stromal cells, as well as research projects related to cell, tissue and organ transplantations.

LABORATORY SERVICES

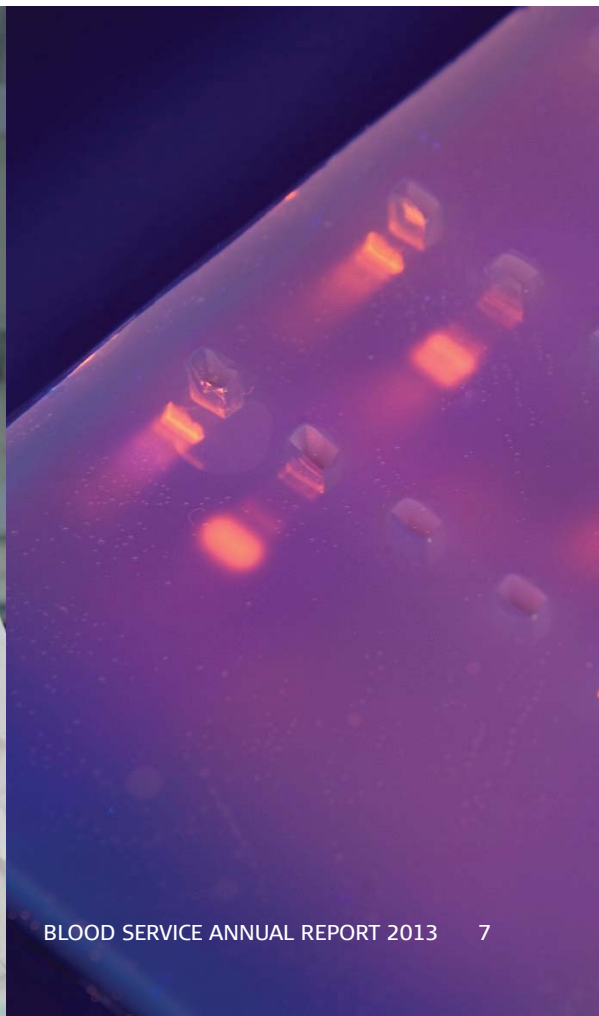
The production and patient care laboratories, which previously formed separate units, were integrated to form a single entity known as Laboratory Services. The aim is to ensure sufficient expertise and personnel numbers in the future and to keep operations effective to maintain a high level of service and expertise.

Blood group tests now operate more closely with the Blood Service's orders centre and blood product production as part of the blood product order and supply chain. Laboratory staff are now responsible for blood product and medicine orders and deliveries during evenings, nights and weekends, as well as the blood group testing required by hospitals.

A new anti-D prophylaxis programme for RhD negative mothers was prepared together with the National Institute for Health and Welfare. Starting in early 2014, RhD negative mothers will routinely receive anti-D prophylaxis, which allows the prevention of foetal and neonatal haemolytic diseases caused by the mother's blood group antibodies. This is a major improvement in Finnish maternity care. In the future, the Blood Service laboratory will determine the RhD blood group of the foetus from a plasma specimen given by the RhD negative mother, which allows anti-D prophylaxis to be targeted at those mothers who need it. The annual number of new foetal RhD blood group tests is estimated to be no more than about 8,000. The Blood Service has actively trained personnel from maternity clinics and obstetric hospitals to help them prepare for this change.

The numbers of clinical patient tests were very close to those for the preceding year. Blood cross-matching test numbers decreased somewhat as a result of the decrease in blood product use. There was some increase in tissue compatibility tests required for organ and stem cell transplantations, particularly because of the increase in stem cell transplantations.

A new anti-D prophylaxis programme for RhD negative mothers was prepared.



OTHER OPERATIONS

The physicians and experts of the Blood Service assist hospital personnel in carrying out blood transfusions and cell therapies safely and effectively. This involves consultations, supplying specialised products, finding suitable blood products for patients with alloimmunity, on-call activities and training. In 2013, the Blood Service organised 9 days of training for its hospital clients, attended by 251 persons. The Blood Service's experts also gave 65 lectures at different educational events, which attracted total audiences of several hundred, and published several articles in Finnish journals and textbooks.

In **quality management** the focus was on implementing the quality system amendments required by the organisational reforms – such as centralisation of manufacture, closure of some donation sites, and the reorganisation of pharmaceutical supply – in a controlled manner at the appropriate time. The quality unit also worked to establish quality systems required for the new cell products. Lean operating principles were successfully adopted in developing the Blood Service's operating system and processes, and our progress towards a lean organisation got off to a good start.

Information management services focused on maintaining and supporting production-related systems and on the introduction of the office, intranet, contact centre, instant messaging and reporting systems launched during the previous year. The Blood Service also adopted a new Enterprise Resource Planning system in which the old procurement, logistics and finance systems were integrated. In the coming years, new projects will involve updating the blood bank system, introducing lighter reporting systems, overhauling the human resource management system and developing electronic services for donors and clients.

In terms of **communication projects,** one of the most important was supporting changes to the blood donation network. In towns where blood service centres were closed, we were in close contact with donors and the media to explain the reasons for this change and to tell them about the regular blood donation events replacing the closed service centres. As a new communication channel, the Blood Service launched the Finnish Red Cross's mobile application, which allows users to test their eligibility for blood donation, check the blood reserve situation by blood group, and find the nearest blood donation site.

STAFF

In 2013, the Blood Service had an average of 585 employees, whose contributions total the equivalent of 492 full-time employees (FTEs). The mean age of our employees was 42.2 years. Women accounted for 88% of employees and men for 12%.

Statutory negotiations were conducted with all Blood Service personnel, numbering more than 600. As a result of these negotiations, operations were reorganised and a total of 61 employees were made redundant. Another nine employees resigned or retired during the process.

In developing our human resources, we particularly focused on training supervisors, on change management and on lean projects promoting the introduction of more effective processes. A survey to measure well-being in the working community was also carried out in autumn 2013, covering all employees.

There was a clear increase in employee turnover in 2013, one reason being the statutory negotiations. The proportion of permanent employees who resigned their posts was 8.1% (2012: 6.1%); among all employees, the corresponding proportion was 10.2% (2012: 9.1%). Total employee turnover was 29.2% (2012: 26.0%). In 2014, employee turnover is expected to return to pre-2013 levels. All in all, our employee turnover is fairly high and due to factors such as retirement, maternity, paternity and childcare leave and increased employee mobility. In 2013, the mean duration of employment at the Blood Service was 12.7 years (2012: 11.7 years).

Finances and social responsibility

The Blood Service is a non-profit organisation that uses the proceeds from its operations to cover its costs. Activities are funded by income from hospitals for the blood and other products they use and for services supplied by the Blood Service. The Blood Service is not supported by government funds or other external sources, except for some grants and subsidies for research projects.

In 2013, the Blood Service had a turnover of € 65.6 million, a decrease of 0.6% on the previous year. Turnover decreased in the majority of operational areas. Only the laboratory and tissue services recorded an increase in turnover. The first sales from the cell production centre were made, but their contribution to total turnover quite small. Blood product sales fell by almost €1.5 million and those of unprocessed plasma by €0.2 million. New treatment practices have allowed hospitals to reduce their use of blood products.

At the end of the financial year, the Blood Service held deposits in the FRC's organisational bank totalling €14.2 million. The balance sheet total of investable capital at the same date was €32.4 million. Most of this amount has been invested in a range of funds.

The Blood Service prepares a profit and loss account and a balance sheet on its operations. In 2013, the Blood Service had a surplus of € 2.4 million for the financial year (€ -0.8 million in 2012). The Blood Service's financial result is included in that of the FRC, on which no auditor's report had been issued at the time of publication of this annual report.

Social responsibility indicators

In addition to the key indicators specified in the GRI (Global Sustainability Reporting) guidelines, the essential indicators reflecting the Blood Service's social responsibility include indicators of blood donation activities, blood product use and blood transfusion safety.

		2013	2012	2011
	Financial indicators			
	Turnover, €1,000	65 571	65 956	69 230
	Materials and services, €1,000	-16 349	-17 762	-16 815
	Personnel expenses, €1,000	-27 168	-29 247	-32 437
	Environmental indicators			
EN3	Electricity consumption, MWh*	5 850	5 843	5 872
EN8	Water consumption, m^3*	10 080	9 922	14 465
	District heat consumption, MWh*	4 290	4 649	4 969
	Travel days	12 417	14 412	12 814
	CO_2 emissions, domestic flights, kg	28 017	47 884	65 250
	CO_2 emissions, international flights, kg	94 573	120 239	132 496
	Incinerable waste, kg*	27 300	26 950	34 400
	Sorted municipal waste, kg**	155 200	149 000	159 000
	Hazardous waste, kg*	7 700	12 000	7 050
	Social indicators			
LA1	Number of personnel (full-time employment, annual average)	506	561	555
LA7	Days lost through sickness	5 240	5 143	5 853
LA7	Accidents at work	25	30	28
LA10	Personnel training, €1,000	-156	-269	-543
	Personnel training, €/person	-308	-480	-978
	Indicators of blood service operations			
	Number of donations (whole blood and aphereses)	227 610	250 999	268 734
	Number of donors (whole blood and aphereses)	131 976	143 563	154 038
	Number of blood products sold	359 509	389 949	408 505
	Completely unused donations	4 279	4 191	4 606
	Reported adverse effects of blood transfusion	360	338	251

** Kivihaka, Helsinki*
*** The amount of landfill waste also includes waste from Helsinki mobile blood collection unit*

BLOOD SERVICE IN FIGURES

Blood product sales to hospitals

Product, units	2011	2012	2013	Change (%) 2012/2013
Red blood cells (without white blood cells)	240 558	228 411	210 396	-8
Platelet products (4 donors/product)	41 929	40 342	37 234	-8

The decrease in blood product use is thought to be due in part to developments in surgical and treatment methods.

Donated whole blood utilisation for blood products in 2013

	red blood cells	platelets**
Products for patient use	95 %	90 %
Removals related to blood donation	2 %	-
Removals related to laboratory results and the manufacturing process	< 1 %	2 %
Expired*	3 %	8 %

** Some expired red blood cells are used as raw material for manufacturing medicines*
*** Proportions of whole blood used for platelet product manufacture*

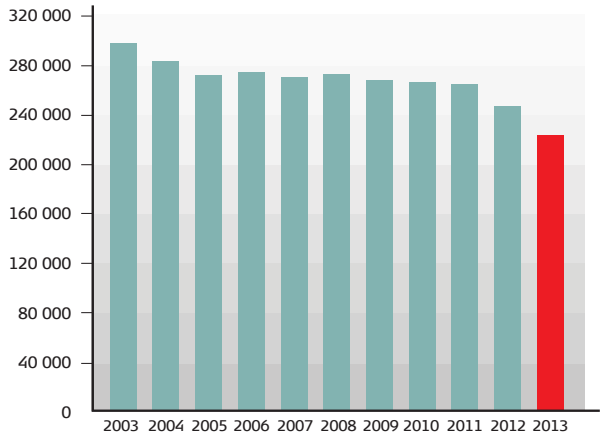
In Finland, blood is used effectively to treat patients.

Blood group distribution among Finns New blood donors in 2013

A+	A-	B+	B-	AB+	AB-	O+	O-
35 %	6 %	16 %	2 %	7 %	1 %	28 %	5 %

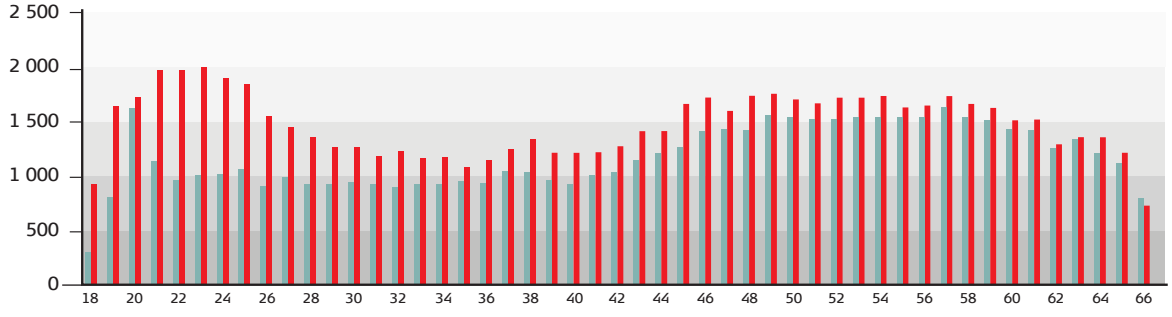
Blood donors are invited to donate on the basis of their blood group.

Whole blood donations, 2003 to 2013



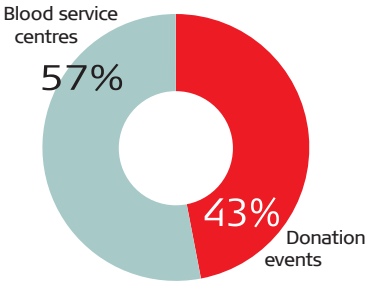
Blood is collected as required by hospitals, and the quantity collected therefore varies from year to year. About 4,000 plasma donations and 1000 platelet donations (aphereses) are also made annually.

Blood donors' age and gender distribution in 2013



Young women are very active blood donors, but the majority of blood is collected from those aged 40 to 60.

Whole blood donations, 2013



Mobile blood donation units collected more than 40% of all blood. In 2014, this will increase to 50% of all blood collected.

Donors with confirmed positive results in infection tests, 2009–2013

	2009	2010	2011	2012	2013
Hepatitis B	3	4	1	2	1
Hepatitis C	9	6	9	15	9
HIV	1	3	0	1	0
Syphilis	3	3	0	51*	6*

**The test was changed in February 2012. The new syphilis bacterium antibody test identifies both recent infections and patients previously treated for an infection. In the latter group, there is no risk of infection and no need for treatment.*

Careful donor selection and reliability ensure that very few carriers of the HI virus or hepatitis viruses are identified when the blood is tested for infection.

Stem cell grafts delivered by the Stem Cell Registry, 2011 to 2013

Stem cell grafts supplied, total

	2011	2012	2013
Bone marrow graft	41	22	29
Blood stem cell graft	76	79	97
Cord blood graft	6	11	7
Lymphocyte graft	11	15	13
Total	**134**	**127**	**146**

The number of stem cell grafts supplied has doubled in the 2000s.

From a Finnish donor to a Finnish patient

	2011	2012	2013
Bone marrow graft	13	6	8
Blood stem cell graft	8	15	13
Cord blood graft	0	2	0
Lymphocyte graft	5	3	2
Total	**26**	**26**	**23**

From a non-Finnish donor to a Finnish patient

	2011	2012	2013
Bone marrow graft	27	15	18
Blood stem cell graft	65	62	80
Cord blood graft	0	3	1
Lymphocyte graft	6	12	10
Total	**98**	**93**	**109**

From a Finnish donor to a non-Finnish patient

	2011	2012	2013
Bone marrow graft	1	1	3
Blood stem cell graft	3	2	4
Cord blood graft	6	6	6
Lymphocyte graft	0	0	1
Total	**10**	**9**	**14**

The Stem Cell Registry operates internationally. The Blood Service's couriers also carry stem cell grafts from abroad.

Blood Service laboratory tests for healthcare units

	2012	2013
Haemostasis examinations	8 379	8 928
Blood group tests as a whole	15 658	14 736
Red blood cell antibody identification assays	4 283	3 738
Demanding red blood cell antibody identification assays	1 615	1 385
Blood compatibility tests performed urgently and outside office hours	2 270	2 283
Tests on maternity clinic specimens	80 215	79 511
Tissue compatibility tests	13 110	14 600
Platelet tests	563	580

Blood transfusion serology tests and antibody tests decreased somewhat as a result of the decrease in blood product use. There was some increase in tissue compatibility tests required for organ and stem cell transplantations, particularly because of the increase in stem cell transplantations.

The Blood Service's licences and the accreditations, inspections and audits performed at the Blood Service in 2013

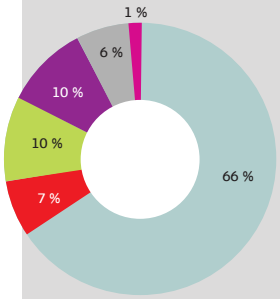
Licences	14
Accreditations	3
Inspections	12
External audits	11
Internal audits	14

Organ transplantations performed in Finland in 2009-2013

	2009	2010	2011	2012	2013
Kidney	180	175	177	199	189
Liver	48	50	56	52	49
Heart	13	22	18	22	21
Lungs	14	15	23	26	15
Heart-lung	0	0	0	1	0
Pancreas	0	2	1	8	10
Pancreatic islets	7	8	6	1	0
Small intestine	1	1	0	2	1
TOTAL	**263**	**273**	**281**	**311**	**285**
From dead Finnish donors	94	92	92	107	95
From live Finnish donors (kidney)	6	11	13	11	13

The Blood Service performs tissue typing for all organ and stem cell transplantations performed in Finland.

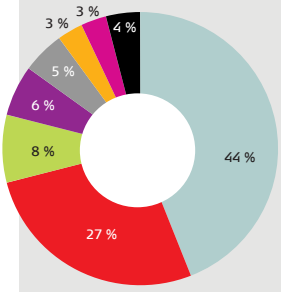
Turnover by product group (million euros)



	2012	2013	change %	% of turnover
Blood products	44,6	43,1	-3 %	66 %
Medicines	4,4	4,4	0 %	7 %
Laboratory tests	6,2	6,7	9 %	10 %
Unprocessed plasma	6,6	6,4	-3 %	10 %
Tissue services	3,3	4,1	23 %	6 %
Other	0,9	0,9	-2 %	1 %
Total	66,0	65,6	-1 %	100 %

Blood products form the majority of the Blood Service's turnover. The contribution from tissue services is growing.

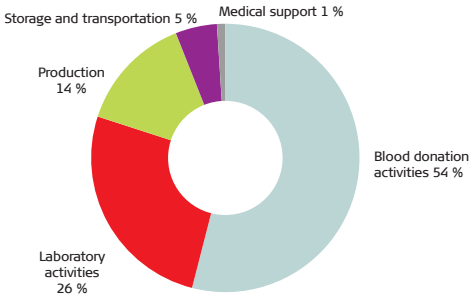
Cost distribution, 2013



Personnel costs	44 %
Materials and subcontracting	27 %
Rents	8 %
ICT	6 %
Facility and equipment maintenance	5 %
Logistics	3 %
Investment expenses	3 %
Other	4 %

Personnel costs account for the majority of the Blood Service's costs

Cost breakdown for one bag of blood, 2013 (%)



The cost of a blood product consists of several factors.

Number of personnel

	2012	2013
Total number of personnel, 31 Dec.	641	537
Permanent	540	470
Temporary	62	42
On-call	39	25
Number of personnel, full-time equivalents (FTE), average	545	492
Number of personnel, average	631	585
Full-time employment, average	561	506

The number of Blood Service personnel decreased significantly in 2013.

Education demographics (%)

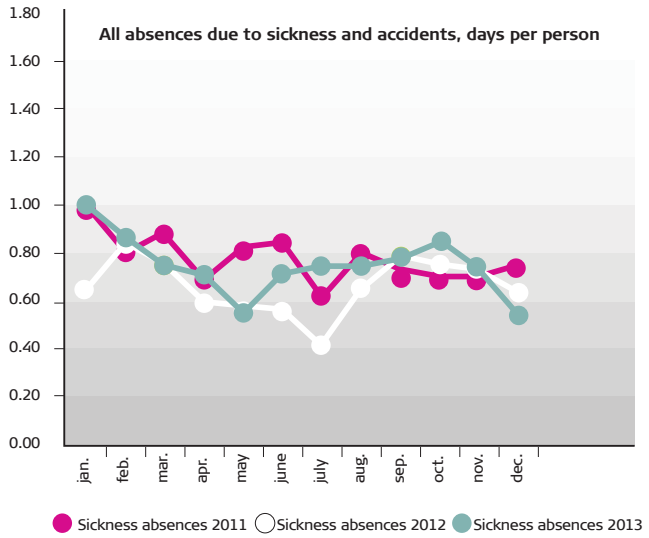
	2013
NURSING Nurse, specialist nurse, public health nurse	35 %
LABORATORY Clinical laboratory technologist, laboratory technician, laboratory analyst, medical laboratory technologist, special laboratory technician	17 %
SOCIAL SERVICES AND OTHER HEALTH CARE Practical nurse, auxiliary nurse	11 %
NATURAL SCIENCES B.Sc., M.Sc., Ph.Lic., Ph.D.	9 %
MEDICINE Lic.Med., D.Med.Sc., Specialist	3 %
BUSINESS QBA, BBA, B.Sc. (Econ)	5 %
PHARMACY B.SC. (Pharm), M.Sc. (Pharm), Pharmaceutical Assistant	2 %
TECHNOLOGY M.Sc. (Technology), technician, other education in the field of technology	3 %
Other education	15 %

The Blood Service employs professionals from a number of fields.

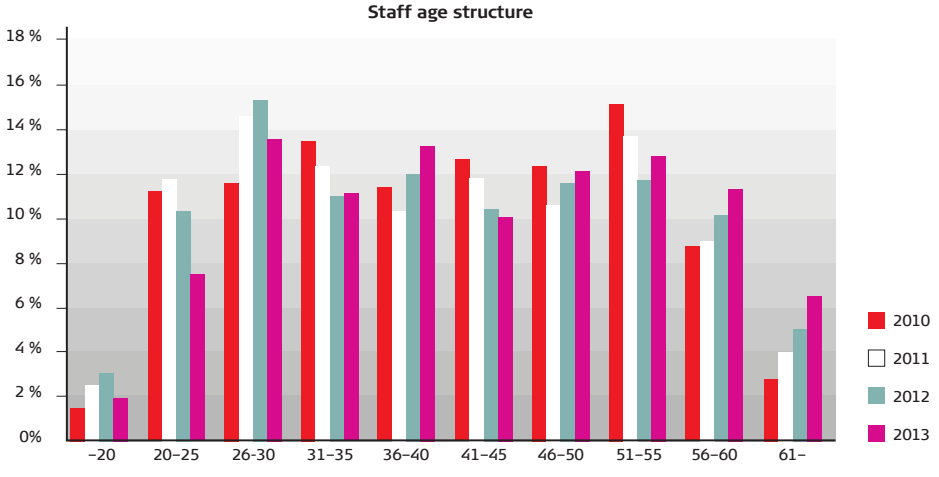
Distribution of personnel in the organisation (%)

	2013
Blood donation	43 %
Laboratory services	20 %
Blood products and medicinal plasma products	14 %
Research and cell services	6 %
Other	17 %

A total of 43% of personnel work in blood donation operations.



Absences due to sickness and accidents have remained low in the past years.



In 2013, the mean age of our employees was 42.2 years.

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