Development of institutional control over the safety and quality of human blood and blood components

1. Basic Information
1.1 CRIS Number: 2006/018-180.03-05 Twinning No: PL/06/IB/SO/03
1.2 Title: Development of institutional control over the safety and quality of human blood and blood components.
1.3 Sector:
1.4 Location: Poland, Warsaw, Ministry of Health, The Institute of Haematology and Blood Transfusion

2. Objectives:
2.1 Overall Objective(s):
Assurance of the safety of blood and blood components according to EU Directives and standards; development and strengthening of the haemovigilance and traceability system.

2.2 Project purpose:

2.3 Justification

There is no CMR link for this project because there were no Directive recommendations at that time.

This project deals with the process of adaptation to the requirements of the following Directives:

The deadline for the Member States to adapt to the requirements of the "mother" Directive was February 8th 2005, the requirements therefore were not obligatory when the
Monitoring Report was prepared. This Directive replaced the Directive 2001/83/EC for which no detailed technical requirements were determined. According to the requirements of the Directives dealing with collection of blood and blood components, it is necessary to organize continual training of the whole personnel involved in collecting, processing and distribution of blood and blood components as well as in their use. With this project we aim at organizing a complex training of such personnel - both theoretical and practical. To achieve this aim we must have an adequate base and a sufficient number of trainers.

3. Description

3.1 Background and justification:
Blood Transfusion Service (BTS) in Poland is an integral part of the public Polish health service. Its activity is based on the legal law voted by the Polish Parliament.

The Institute of Haematology and Blood Transfusion is responsible for the activities of BTS and is involved in all issues concerning transfusion medicine.

In Poland there are 21 Regional Blood Transfusion Centres with 184 satellite blood banks. Only about 20% of blood is collected by mobile units. There are plans to increase such form of blood collection. Approximately 900 000 units of blood and plasma are collected every year i.e. 24 donations per 1000 inhabitants. Blood is not collected in hospital blood banks.

The structure of employment is as follows. Total number of: physicians – 263, nurses – 1007, technicians – 733, other higher graduates – 520, administrative personnel – 746.

Aphaeresis is performed in 81 establishments – Regional Blood Centres and satellite blood banks.

345 hospital blood banks are responsible only for distribution of blood in hospital.

BTS activity is based on voluntary, non-remunerated donors, the number of which has been constant for last five years. About 430 000 blood donors were registered in 2004, of which 160 000 were first time donors; 80% men and 20% women.

Blood collection is stimulated by promotion of voluntary blood donation. Leaflets, radio programs, lectures and promotion actions especially in schools, posters, billboards etc. serve this purpose.

We aim at strengthening solutions to assure the confidentiality of data of future donors and blood components related to their state of health, test results and monitoring from blood components to recipients.

Current implementation of a uniform computer system in Polish RBCs would help to create a safe link with hospital computer systems for the full traceability of blood components.

In Poland there are national guidelines for preparation of blood components with their specifications and quality control procedures. Whole blood, red blood cells (leukodepleted, aphaeresis, washed, frozen, irradiated), platelet concentrates (single units, leukodepleted,
aphaeresis, frozen, washed, irradiated), fresh frozen plasma (irradiated), granulocytes are available for transfusion. About 830 000 units of RBCs, 50 000 units of Platelets and 350 000 units of FFP are transfused annually in Poland.

Leukodepleted products are mainly intended for transfusions in neonatals, patients with leukocytes antibodies to prevent alloimmunization, haematological and other patients according to physician recommendations.

Annually, about 3.5% leukodepleted red cell concentrates and 38% - platelet concentrates are transfused. No plasma units are leukodepleted.

Research activities are carried out in coagulation, virology, immunology, blood components preparation and quality assurance. In some Regional Blood Centres there are tissue and organ banks and serological reagents are produced.

There is a haemovigilance system at a national level. The adverse transfusion reactions are registered and analysed by the regional blood centres and the supervisory organisation (the Institute of Haematology and Blood Transfusion). As there is no data transfer, it is necessary to strengthen the computer system for better haemovigilance.

It is important to implement a set of procedures for efficient management of near miss events and post transfusion reactions to eliminate such events and reactions in the future.

HCV RNA testing for each donation has been introduced since January 1st 2002 and since January 1st 2005 - obligatory HIV RNA and HBV DNA testing. There is a hemovigilance system on transfusion transmissible diseases at the national level, but it is not computerised. It is necessary to develop procedures for identification, registration and processing of data on donors and candidates for donors.

The Institute of Haematology and Blood Transfusion is involved in personnel training in blood transfusion centres. Courses and individual training sessions are organised every year. Regional blood centres are responsible for education and training of the staff employed in blood banks, for blood grouping and performing pre-transfusion testing in blood banks and hospital labs.

The Institute of Haematology and Blood Transfusion and the Ministry of Health supervise the Regional Blood Centres and their satellite blood banks. In every region there are specialists in transfusion medicine who supervise blood transfusion activities. Performance at blood banks as well as appropriate use of blood components and documentation handling in hospitals are controlled.

Quality Assurance systems ensure procedures and instructions for selections of donors, collection of blood, and preparation of blood components, laboratory testing, dispatch, training and quality control. There are systems of procedures for corrective and preventive action.

To fulfill the obligations of the Directive 2002/98/EC some technical requirements of blood collection, processing, testing, storage and distribution should be ensured. The existing infrastructure of the Regional Blood Centres (rooms for collecting, processing, blood storage
and laboratory testing) is insufficient and does not meet the EU standards. Therefore, to reach sanitary and epidemiological protection conditions according to EU standards included in the Directive 2002/98/EC, further upgrading of blood bank facilities is required as well as development and strengthening of quality assurance system in Polish blood centers. It is also important to assure adequate personnel qualification required for quality and safety of blood and blood component standards. To make the implementation of the above processes easier it seems necessary to improve the software program for the National Registry for Blood and Blood Components and the introduction of an identification system legible in all EU countries for each unit of collected blood, each blood donation and blood component for full donor and recipient identification. Improved computer programmes are also indispensable for tasks related to blood transfusion practice, training and promotion of blood donation.

The aim of this project is to implement the requirements of the following Directives: Directive 2002/98/EC of the European Parliament and of the Council of 27 January 2003 on setting standards of quality and safety for the collection, testing, processing, storage and distribution of human blood and blood components and amending Directive 2001/83/EC,


The public sector employees of IHBT, RBCs and public hospitals will benefit from this program.

3.2 Linked activities

A new computer system, as project in the field of national registry for blood and blood components, is implemented in Poland. This program was launched in January 2006, therefore no results can be reported as of now.

3.3 Results

1. Developed haemovigilance and surveillance system at the national level.
3. Elaborated training programmes for various groups of health professionals engaged in blood collection, testing and transfusion practice to increase their qualifications.
4. Upgraded Regional Blood Centre facilities to reach sanitary and epidemiological protection conditions according to EU standards.
5. Created new website dedicated for blood donors and blood collection.
6. Personnel trained in collecting, testing, preparation and transfusion practice (approx. 325 persons – including approx. 300 trainers)
3.4 Activities

Contract 1 – Twinning: TF 0,7595 M€

Twinning focused on:

1. Interpretation and assistance in implementing Directive 2002/98/EC.
2. Preparation of a new version and update national standards concerning proper classification of donors, collection, testing, processing, storage and distribution of human blood and blood components.
3. Consultations for registry database professionals to disseminate current knowledge in this field as well as improve qualifications and maintain them at the appropriate level.
4. Training courses and seminars for various groups of health professionals involved in blood and blood components practice to increase their qualifications from Regional Blood Centres and from hospitals.

From each health professional group trainers shall be selected to continue training courses in the future:

a. medical doctors responsible for donor screening and classification (approx. 30 trainers),

b. high graduated staff (approx. 70 trainers)

c. nurses (approx. 50 trainers)

d. technical staff (approx. 50 trainers),

e. blood and blood components users (e.g. haematologists, surgeons, cardiosurgeons, paediatricians, etc., nurses approx. 100 trainers).

Training courses and seminars for:

f. medical directors of blood establishments (approx. 25 persons),

Training courses: Approx. 30 seminars x 5 days x 20 persons

Board and lodgings for trainees 80/ person / day
Tutorial fee 50 / hour
Translation 1000/seminar

Total: TF approx. 0,33 M€

National co-financing:
Training hall rent: 650 / day
Training materials: 25 / person

Total national co-financing: 0, 1125 M€

5. Consultations in upgrading blood bank facilities to reach sanitary and epidemiological protection conditions according to EU standards.

1 RTA, 10 STEs:
25 missions x 1 STE x 5 days (accommodation, transport etc) + RTA missions TF approx. 0,41 M€ Strengthening co-operation among institutions involved in blood banking, both at national and EU level.

It is planned that 10 STE of similar qualifications will simultaneously audit RBCs and conduct training.

Development of institutional control over the safety and quality of human blood and blood components.
Experts should have the knowledge and experience in organizing professional training courses in donor qualification, national data base development, implementing quality assurance systems.

The STE should conduct consultations in upgrading blood bank facilities to reach sanitary and epidemiological protection conditions according to EU standards.

6. Advisory in elaborating a special website dedicated for blood donors. Approx. 2 STE: 3 missions x 3 days TF approx. 0,0195 M€.
The visits will be devoted to preparing a web side-project for donors and personnel involved in blood and blood components collection, testing, preparation and transfusion. Materials for promotion of blood collection shall also be designed during such visits.

**IHBT – project leader will:**
- coordinate the project, collect and transfer data from and to the beneficiaries.
- interpret and provide assistance in implementing Directive 2002/98/EC.
- prepare new versions and update national standards concerning proper classification of donors, collection, testing, processing, storage and distribution of human blood and blood components.
- Consult registry data base professionals to disseminate current knowledge in this field as well as improve qualifications and maintain them at the appropriate level.
- prepare training courses and seminars for various groups of health professionals from Regional Blood Centres and from hospitals who are involved in blood and blood components practice in order to increase their qualifications
- provide consultations in upgrading blood bank facilities to reach sanitary and epidemiological protection conditions according to EU standards.
- strengthen co-operation among institutions involved in blood banking, both at national and EU level.
- provide advice in elaborating a special website dedicated for blood donors.

- Project leader should be experienced in blood and blood component practice and familiar with EU regulations relevant to the collection, testing, processing, storage and distribution of human blood and blood components (particularly Directive 2002/98/EC).
- have strategic management skills
- be fluent in both written and spoken English
- be a high level public servant.

To support activities foreseen in the programme, the Twinning component should include:

- For a period of 1,5 year - a Resident Twinning Adviser (RTA) located in the Institute of Haematology and Blood Transfusion in Warsaw and in the Regional Blood Centres in Poland. Approximately 360 working days

**RTA general tasks:**
The RTA should provide consultations, advice and expertise to implement Directive 2002/98/EC at the national level in the years 2006-2009. The RTA should also be responsible for the overall coordination of project activities.

**RTA detailed tasks:**

Development of institutional control over the safety and quality of human blood and blood components.
The RTA should provide consultations for registry data base professionals to disseminate current knowledge in the field and attain appropriate level of qualifications. He should organize training courses and seminars for various groups of health professionals from Regional Blood Centres and from hospitals involved in blood and blood components practice in order to increase their qualifications.

The RTA should strengthen the co-operation of institutions involved in blood banking, both at national and EU level. The RTA should be present in Poland during the period of 18 months, and participate in the consecutive stages of program implementation at the IHBT and the 21 Regional Blood Centres. His sojourn in Poland is calculated at 360 working days. RTA will also be responsible for performing audits in all RBCs and obliged to prepare reports on the start-conditions, with special focus on shortcomings and problems to be solved through TW.

The RTA should meet the following requirements:
- be experienced in blood and blood component practice and familiar with EU regulations relevant to the collection, testing, processing, storage and distribution of human blood and blood components (particularly Directive 2002/98/EC).
- have strategic management skills
- be fluent in both written and spoken English
- be a public servant.

The participation of short-term experts (STEs) will also be required.
STE profile:
- familiar with evaluating haemovigilance and traceability system
- familiar with implementation of blood identification system.
- experts should have the knowledge and experience in organizing professional training courses in donor qualification, national data base development, implementing quality assurance systems.

STE tasks:
The STE should organize training courses and seminars for various groups of health professionals from Regional Blood Centres and from hospitals involved in blood and blood components practice in order to increase their qualifications.
The STE should conduct consultations in upgrading blood bank facilities to reach sanitary and epidemiological protection conditions according to EU standards.
The STE should offer advice in elaborating a special website dedicated for blood donors.
The STE will be responsible for developing training curricula.

The Institute will support RTA and STE experts in their training activities, provide all indispensable information on blood transfusion service, guidelines, legal acts etc. whenever necessary.

Contract 2 - Investment – works: TF 0,475 M€
Investment work focused on:
Upgrading one blood bank facilities to reach sanitary and epidemiological protection conditions during blood collection and processing, to guarantee the desired continuous quality of the final product – blood and blood components:
1. Designing and upgrading of air condition system for collecting premises.

Development of institutional control over the safety and quality of human blood and blood components.
2. Designing and upgrading of blood processing rooms according to cleanroom standards.
3. Designing and upgrading of air condition system for processing premises.
4. Designing and upgrading of training hall.

There were no applications for Phare funds or other funds for this project in the past.

1. Reference center
   One standard reference center will be established in order to set up an adequate training base for personnel employed in Polish regional blood banks, hospitals and laboratories. Such reference center, with adequate, modern equipment, could provide both theoretical and practical training for blood collection, practice, testing, preparation, etc.

2. Air condition
   Installation of air conditioning system for collecting, processing and storage rooms in regional blood centres. Regional Blood Centers will be owners of the facilities and equipment.

3. Equipment:
   List of equipment (approximate costs are given in an annex):
   - Freezing room
   - 4 Centrifuges
   - Freezer

   Approx.: TF 0.475 M€

Investment (financed from Polish funds only):
- Renovation works and air-conditioning

- Training hall (financed from Polish funds only): 30 000
   List of equipment:
   - 11 computers: 11 x 1000
   - software for the 11 computers: 5000
   - 2 printers: 1100
   - 1 slide projector: 2500
   - 1 digital camera: 1200
   - cabling: 2000
   - furniture: 6000
   - other minor equipment: 1200

IHBT will be the owner of computer equipment (hardware and software) and training hall. With no adequate equipment it will not be possible for the training center to realize this TF program (see Appendix 4). The purchase of the equipment is the condition to start the training activities (training of trainers).

Contract 3 - Technical Assistance: 0.025 M€ (financed from Polish funds only):
   Technical Assistance focused on: Development, strengthening and testing of the specialised website for blood donors and other advertisements events and maintenance during project duration.

Including:
- Website design: 5 000
- Visualization (= Project design): 2 500
- Editing and translation: 11 000
- Promotion actions (leaflets, gadgets fairs) with national co-financing: 5 000

Development of institutional control over the safety and quality of human blood and blood components.
Website maintenance costs with national co-financing: 1 500

Approx.: 0,025 M€

3.5 Lessons learned

4. Institutional Framework
The Ministry of Health, as the main beneficiary of the National Registry for Blood and Blood Components will co-ordinate the project as activities are planned on a national level.

The Unit responsible for the realisation and co-ordination of the project:
The Institute of Haematology and Blood Transfusion in Warsaw, Phone/Fax +48 (22) 849 57 81
email:letowska@ihit.waw.pl

Implementation of the project does not change the above institutional framework.
5. Detailed Budget

<table>
<thead>
<tr>
<th>Transition Facility Support</th>
<th>Co-financing</th>
<th>TOTAL</th>
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<tbody>
<tr>
<td></td>
<td>Investment Support</td>
<td>Institution Building (IB)</td>
</tr>
<tr>
<td>Contract 1 – Twinning</td>
<td>759 500</td>
<td>759 500</td>
</tr>
<tr>
<td>Contract 2 – Investment works contract</td>
<td>475 000</td>
<td>4750000</td>
</tr>
<tr>
<td>Contract 3 – Technical Assistance</td>
<td>25 000</td>
<td>25 000</td>
</tr>
<tr>
<td>TOTAL</td>
<td>475000</td>
<td>759 500</td>
</tr>
</tbody>
</table>

- In cases of co-financing only

(*) contributions form National, Regional, Local, Municipal authorities, FIs loans to public entities, funds from public enterprises

(**) private funds, FIs loans to private entities

The amounts for national co-financing indicated in the table correspond to cash co-financing, unless otherwise stated. Contributions from the Polish administration for effective implementation of the twinning/TA may be further detailed in the twinning contract/Terms of references. Unless otherwise indicated joint cofinancing is provided.

VAT does not constitute eligible expenditure except where it is genuinely and definitely borne by the final beneficiary. VAT which is considered recoverable, by whatever means, cannot be considered eligible, even if it is not actually recovered by the final beneficiary or individual recipient.

In case of parallel cofinancing, the following activities will be financed from the parallel cofinancing provision in the budget table: lecture hall rent, accommodation and travel costs of trainees, accommodation and office costs of RTA, purchase of equipment for practical training, maintenance of web site, printing of promotion and training material and all necessary costs rising on PL side during the twinning to be covered according to the previous experiences etc.

According to the joint financing procedure, the total cost of contracts 2 (705 000 EUR) and 3 (25 000 EUR) will be financed with both Transition Facility funds and Polish funds, in proportions corresponding with contributions declared in the budget table.

Note  TRANSITION FACILITY expenditure for equipment should be put under Investment Support

Development of institutional control over the safety and quality of human blood and blood components.
In the case of Joint Co-financing, where the final overall cost is lower than foreseen in the project fiche, the National Public and Transition Facility Co-financing are reduced proportionally so as to maintain the agreed rate of co-financing. In the case of Parallel Co-financing, where the final cost is lower than foreseen in the project fiche, it must be shown that the overall objectives of the project have been fully achieved.

6. Implementation Arrangements

There will be a Project Steering Committee (PSC) established in order to speed up the implementation process of the given project components in the first months after Financial Decision for Transition Facility 2006 is taken. The structure of the Committee will be working as an advisory and monitoring body until particular components are contracted and thus where appropriate may be replaced by the Twinning Steering Committee as well as Steering Committees for TA or investment components independently.

The participants of the Project Steering Committee will be representatives of the following institutions: PAO, NAC, CFCU and beneficiary (SPO, contact person as indicated in the fiche and representative from Office for Foreign Aid Programmes in Health Care). It is also recommended to invite representatives of NAO services while the issues of financial management flow are to be comprehensibly discussed. The Project Steering Committee will meet every quarter starting from the date of signing the Financial Decision and will concentrate on discussing the problem occurred at the beginning phase of project implementation as well as on defining possible solutions and corrective measures. The PAO representative will organise and chair the PSC meetings.

6.1 Implementing Agency

PAO: Mr Tadeusz Kozek, Under Secretary of State, Office of European Integration Committee, Al. Ujazdowskie 9, 00-918 Warsaw, tel. (48 22)455 52 41, fax (48 22) 455 52 43.

CFCU: Cooperation Fund, ul. Górnośląska 4A, 00-444 Warsaw, tel. +48 22 622 00 31, fax +48 22 622 95 69.

CFCU is responsible for handling tendering, contracting and payments of contracts on behalf of the Minister of Health, who is responsible for preparing and implementation of the project.

6.2 Twinning

One RTA and a number of short-term experts will assist in project implementation:
- one-RTA-consultations continually through 18 –month stay in Poland
- short-term experts – consultations on specific issues by the beneficiary.
- Beneficiary institution – the Ministry of Health

SPO: Magdalena Letowska, Deputy Director for Blood Transfusion, Institute of Haematology and Blood Transfusion, ul. Chocimska 5, 00-957 Warsaw, Phone/Fax +48(22) 849 57 81, email: letowska@ihit.waw.pl

Contact Direct: Jolanta Antoniewicz-Papis, Institute of Haematology and Blood Transfusion, ul. Chocimska 5, 00-957 Warsaw, Phone +48(22) 849 36 51 ext. 138, fax: +48(22) 646 12 36, email: jpapis@ihit.waw.pl

Administrative Office: Department for Institution Building Programmes, Office of the Committee for European Integration, Aleje Ujazdowskie 9, Warsaw, Phone: 48 22 455 52 15, Fax: 48 22 455 52 14

Development of institutional control over the safety and quality of human blood and blood components.
6.3 Non-standards aspects

N/A

6.4 Contracts

Contract 1 - Twinning 0.872 M€ gross value (Transition Facility 0.7595 M€ + National co-financing - 0.1125 M€) parallel co-financing
Contract 2 - Investment - works contract 0.705 M€ – gross value (Transition Facility – 0.475 M€ + National co-financing – 0.23M€) - joint co-financing
Contract 3 - Technical Assistance - - 0.025 M€ - gross value National financing – 0.025 M€)

7. Implementation Schedule

Contract 1
7.1 Commencement of contracting process: - III/IV quarter 2006
7.2. Start of project implementation (signature of contract): - IV quarter 2007
7.3. Project completion: - I quarter 2009

Contract 2
7.1 Commencement of contracting process: - IV quarter 2006
7.2. Start of project implementation (signature of contract): - II quarter 2007
7.3. Project completion: - III quarter 2007

Contract 3
7.1 Commencement of contracting process: - II quarter 2007
7.2. Start of project implementation (signature of contract): - III quarter 2007
7.3. Project completion: - IV quarter 2009

8. Sustainability

The National haemovigilance and traceability system has been established by the Institute of Haematology and Blood Transfusion and Regional Blood Centres using their expertise, manpower and infrastructure. The annual budget for the activities of the system will be included in the budget of Poland’s Ministry of Health. A team of highly qualified tutors/trainers will be assembled and they in turn will be active in the in the training of personnel involved in blood collection, preparation, testing and using. The trainers/tutors themselves will further improve their own qualifications and adjust their knowledge according to the changing requirements and regulations.

9.1 Conditionality
1. Equipment purchased and operational before twinning activities start.
2. Training hall operational before twinning activities start.

9.2 Sequencing
1. Necessary equipment (Contract 2) purchased before twinning activities start
2. Reference center established and operational before twinning activities start
4. Twinning Covenant.
5. Setting and updating national standards for the quality and safety for the collection, testing, processing, storage and distribution of human blood and blood components.

6. Creation of training programmes for various groups of health professionals engaged in blood transfusion practice to increase their qualifications.

7. Training courses and seminars for various groups of health professionals engaged in blood banking and transfusion practices.

8. Development of a special system to hold several databases that will allow for traceability from blood, via donor screening and selection, blood collection, processing, and storage, up to clinical application and follow-up post transfusion treatment.

## Annex 1: LOGFRAME PLANNING MATRIX FOR THE PROJECT

### LOGFRAME PLANNING MATRIX FOR

<table>
<thead>
<tr>
<th>Programme name and number</th>
<th>Contracting period expires</th>
<th>Disbursement period expires</th>
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<tbody>
<tr>
<td></td>
<td>IV quarter 2008</td>
<td>IV quarter 2009</td>
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<td></td>
<td>Total budget 1,602MEUR</td>
<td>Transition Facility Budget 1,2345MEUR</td>
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</tbody>
</table>

### Overall Objective

**Objectively Verifiable Indicators**

- Assurance of the safety of blood and blood components according to EU Directives and standards; development and strengthening of the haemovigilance and traceability system.

**Sources of Verification**


**Assumptions**


### Project purpose (Immediate Objectives)

**Objectively Verifiable Indicators**

- Implementation of an appropriate training programme.

**Sources of Verification**

- System of data collection and on-line exchange of information between IHBT, blood centres and blood banks established.

**Assumptions**

- Project financing from Transition Facility budget and Ministry’s budget.

### Results

**Objectively Verifiable Indicators**

- Developed haemovigilance and surveillance system at the national level.

**Sources of Verification**

- Elaboration of training programme for Blood Transfusion Service personnel decreasing the number of disqualified units.

**Assumptions**

- Logistic and human resources commitment on the part of the beneficiary maintained.

- Professional staff involved in the project. Adequate funding by the Polish government to ensure proper, effective and continuous training of blood transfusion service personnel.
Elaborated training programmes for various groups of health professionals engaged in blood collection, testing and transfusion practice to increase their qualifications. Upgraded Regional Blood Centre facilities to reach sanitary and epidemiological protection conditions according to EU standards. Created new website dedicated for blood donors and blood collection. Personnel trained in collecting, testing, preparation and transfusion practice (approx. 1300 persons – including approx. 250 trainers).

<table>
<thead>
<tr>
<th>Activities</th>
<th>Means</th>
<th>Sources of Verification</th>
<th>Assumptions</th>
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<tr>
<td>Interpretation and assistance in implementing Directive 2002/98/EC. Preparation of a new version and update national standards concerning proper classification of donors, collection, testing, processing, storage and distribution of human blood and blood components. Consultations for registry data base professionals to disseminate current knowledge in this field as well as improve qualifications and maintain them at the appropriate level. Training courses and seminars for various groups of health professionals involved in blood and blood components practice to increase their qualifications from Regional Blood Centres and from hospitals. From each health professional group trainers shall be selected to continue training courses in the future: - Medical doctors responsible for donor screening and classification, - High graduated staff, - Medical directors of blood establishments, - Nurses, - Technical staff, blood and blood components users (e.g. haematologists, surgeons, cardiosurgeons, paediatricians, etc.). Consultations in upgrading blood bank facilities to reach sanitary and epidemiological protection conditions according to EU standards. Strengthening co-operation among institutions involved in blood banking, both at national and EU level.</td>
<td>Twinning contract signed (10 STEs), trainings, Investment contract TA contract</td>
<td>Manuals for blood banking procedures. Course reports including evaluation of trainees. Statistical data. Website. Certificates from trainings.</td>
<td>Professional people involved in the project. Provision of adequate funding by the Polish government to ensure proper, effective and continuous training of personnel from the blood transfusion service. Co-financing from the state budget ensured. Providing appropriate software for data collection.</td>
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</table>
Upgrading one blood bank facilities to reach sanitary and epidemiological protection conditions during blood collection and processing, to guarantee the desired continuous quality of the final product – blood and blood components:
- Designing and upgrading of air condition system for collecting premises.
- Designing and upgrading of blood processing rooms according to cleanroom standards.
- Designing and upgrading of air condition system for processing premises.
- Designing and upgrading of training hall.
- Advisory in elaborating a special website dedicated for blood donors
- Development, strengthening and testing of the specialised website for blood donors and other advertisements events and maintenance during project duration.

<table>
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<th>Preconditions</th>
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Annex 2-3. Implementation, contracting and disbursement schedules
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**Legend:**
D = design of contract and tendering  
C = signature of contract  
I = contract implementation and payment  
B = budget for period  

Annex 4

The relevant institutions involved in the project are the Institute of Hematology and Blood Transfusion in cooperation with the Polish Ministry of Health. These institutions will supervise the project at all stages. The project is intended for personnel of Regional Blood Centers and hospitals.


At present, none of the existing regional centers in Poland is prepared for such responsibility; there is no adequate training base, no sufficient equipment, no professional computer background.

Such reference center, with adequate, modern equipment, could provide both theoretical and practical training not only for personnel involved in Polish blood transfusion service but also for all blood transfusion professionals from other countries interested and involved in improving the quality and safety of blood and blood components as well as blood donation promotion.

Theoretical training and part of the practical training program will take place in a lecture hall of the IHBT. Practical training will be conducted mainly on the RBC premises.

List of equipment (approximate costs):
- Freezing room: 125 000
- 4 Centrifuges: 250 000
- Freezer: 100 000

Investment (financed from Polish funds only):
- Renovation works and air-conditioning: 200 000
- Training hall (financed from Polish funds only): 30 000

List of equipment:
- 11 computers: 11 x 1000
- software for the 11 computers: 5000
- 2 printers: 1100
- 1 slide projector: 2500
- 1 digital camera: 1200
- cabling: 2000
- furniture: 6000
- other minor equipment 1200

Improvement of the safety and quality of blood and blood components is possible on condition that the personnel involved in their collection, testing, processing, distribution and use is part of an organized training system. Besides theoretical training, such system should provide the opportunity of practicing on specialized, high quality equipment. One of the aims of the project is to set up such a training center. It will let the Institute of Hematology and Transfusion Medicine, as supervisor of the whole blood transfusion service in Poland, become the owner of a professionally equipped training hall, financed from national funds. Next step will be setting up a center for practical training, the owner of which would be the regional
blood bank. However, because of limited national funds we would not be able to provide such a center with appropriate equipment.