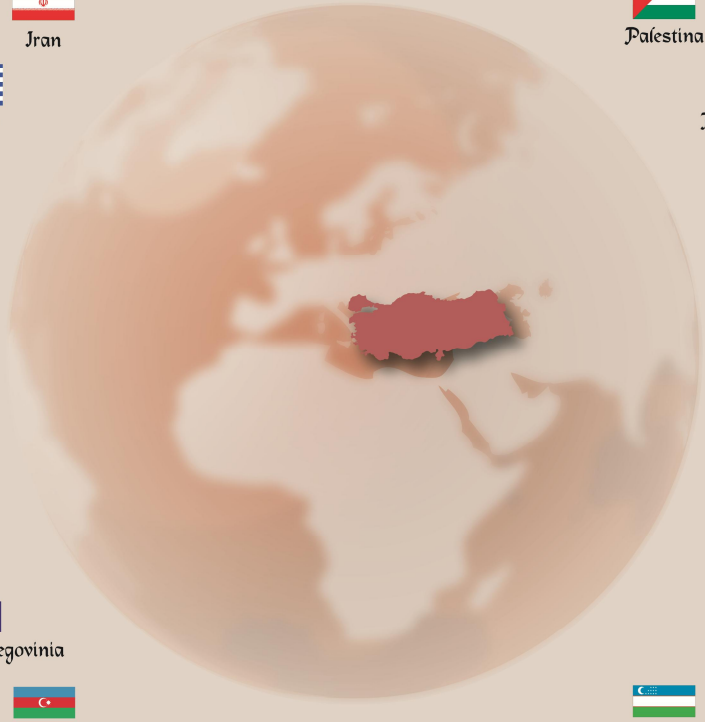
# 3RD ANATOLIAN BLOOD DAYS

29 November – 2 December 2014 / Maritim Pine Beach Resort Hotel Belek / Antalya-Turkey



Lithuania
Macedonia
Oman
Kosovo
Pakistan
Iran
Palestina
Greece
Romania
Germany
Slovenia
Estonia
Spain
Egypt
Turkey
Czech Republic
United Kingdom
Bosnia & Herzegovinia
USA
Azerbeycan
Uzbekistan
Albania
Yemen

TURKISH BLOOD FOUNDATION

BLOOD BANKS & TRANSFUSION SOCIETY OF TURKEY

## ***CONTENTS***

Dear Colleagues,

Turkish Blood Foundation (TBF) initiated annual trans-national workshops since 2012 under the name of “Anatolian Blood Days” (ABD). Sharing the experience and finding solution alternatives are the main aims of this initiative. This workshop also aims to touch the untouched or less discussed topics of Blood Banking & Transfusion Medicine.

There have been numerous occasions on Blood Banking and blood bank staff activities offered by international and national organizations over the decades but very limited interest has been paid on the “comparison of the socio-economic conditions” of blood bank staff with the other medical disciplines and effects of this situation on the success of the service.

This year, Turkish Blood Foundation invited both developed and developing countries to understand the actual situation of the socio-economic conditions of blood bank staff and compare the other medical disciplines in different countries. This workshop will give clear evidence about the success of Blood Banking and the effect of the blood bank staff satisfaction.

Turkish Blood Foundation believes that this interactive trans-national workshop will have an important outcome on the actual success of Blood Banking activities depending on staff satisfaction level by clear scientific evidence. This will also have a positive impact while defending socio-economic conditions of blood bank staff towards the employers

Sincerely yours;

Prof. Mahmut Bayık
President

## 3rd Anatolian Blood Days Committee

### Scientific Chairs

Dr. Faten Moftah, Egypt
Prof. Mahmut Bayık, Turkey
Dr. N. Nuri Solaz, Turkey
Prof. José Manuel Cardenas, Spain
Dr. Gamal Gabra, UK
Prof. Brian McClelland, UK

### Secretary of Anatolian Blood Days (ABD)

Dr. Ramazan Uluhan, Turkey

### Venue

Maritim Pine Beach Resort Hotel and Convention Center,
Belek, Antalya- Türkiye

### Date

30 November – 2 December 2014

# 3rd Anatolian Blood Days Program

## 30 November 2014

09:00 – 09:30 Opening
09:30 – 11:00 Country presentations – 1
Albania
Azerbaijan
Bosnia & Herzegovina
Czech Republic
Egypt

11:00 – 11:30 Coffee break
11:30 – 12:30 Country presentations – 2
Germany
Greece
Iran
Kosovo
Kuwait

12:30 – 14:00 Lunch break
14:00 – 15:30 Country presentations – 3
Lithuania
Macedonia
Mauritania
Oman
Pakistan
Palestine

15:30 – 16:00 Coffee break
16:00 – 17:30 General overview on first day presentations

**01 December 2014**

09:00 – 10:00 Country presentations – 4
Estonia
Romania
Slovenia
Spain

10:00 – 10:30 Coffee break

10:30 – 11:30 Country presentations – 5
Turkey
UK
Uzbekistan
Yemen

11:30 – 12:30 General overview on second day presentations

12:30 – 14:00 Lunch break
14:00 – 15:30 Discussion on declaration -1
15:30 – 16:00 Coffee break
16:00 – 17:30 Discussion on declaration -2

**02 December 2014**

09:00 – 10:00 Finalization of "Workshop Declaration"
10:00 – 10:30 Coffee break
10:30 – 11:30 Finalization of "Workshop Declaration"

**Language:** English

# SOCIO-ECONOMIC CONDITIONS OF BLOOD FACILITY STAFF - ALBANIA

**Irena Seferi, Arben Metka, Zhaneta Abazaj**

## Introduction

Socio-economic status is the individual's economic and social conditions in relation to others, based on income, education and occupation. Therefore we expect that among health workers with same education, occupation (public health sector), we have similar income and socio- economic status, but unfortunately in our country there are differences among health workers occupied in transfusion compared to other health sectors, related either to income or to carrier progress and emotional satisfaction, differences that affect the decision of young doctors to be employed in transfusion.

## Analysis of the socio-economic conditions of transfusion workers in Albania

Transfusion Service in Albania is only public, is centrally organized with a National Blood Transfusion Centre in Tirana, and hospital blood banks near each public hospital. All blood banks at national level (31) are technically controlled from NBTC, whereas in Tirana all hospital blood banks (5) are not only technically but also administratively controlled from NBTC. All staff employed in transfusion in Tirana (NBTC and hospital blood banks) is accountable to NBTC. There are about 33 transfusion specialists at national level, about half of them employed in Tirana with a doctor/technician ratio of about 1:2. NBTC, Tirana has a total collection activity of 20000 donations/year. There are no differences in income of doctors or technicians employed in different health sectors in Albania, related only to the income given to them from the government. However, in practice there are some differences among doctors or nurses occupied in transfusion related to others.

The differences consist in the fact that transfusion by Law is only public, and all private hospitals have to contract this service with NBTC. In this situation private hospitals do not have the right to

practice transfusion activities and transfusion specialists cannot be employed in the private sector. All medical specialists (doctors or technicians), except for transfusion specialists, in our country can be employed in public sector and/or in private sector, by increasing in this way their income. This of course makes significant differences in the income of transfusion specialists and other medicine specialists by leaving transfusion as the last choice of people who look for jobs in health sector.

The prohibition by Law of private hospitals to perform transfusion activities has caused a lot of problems. First of all, NBTC has to afford activities of private sector and is really overloaded and has not enough resources to afford this situation. Therefore, actually it has been discussed in National Blood Committee to change the Law by permitting to private hospitals performance only of some transfusion activities (collection of blood, blood group typing and compatibility tests). This intervention will not only help decrease the overload that has been created in NBTC by affording all activities for private hospitals, but also will create occupation posts for transfusion specialists and will improve their socio-economic condition.

But this is not the only difference in the socio-economic status of transfusion staff compared to other health sectors. The carrier progress is another weak point for transfusion because it affects not only the social status of transfusiologists for whom is very difficult to obtain a M.Sc or PhD compared to other sector specialists, but also the income because this titles in our country are associated with better income. The reason why it's difficult for transfusion specialists to obtain scientific titles is because of lack of post-graduate specialization in transfusion. According to our legislation if you lack a diploma of post-graduate specialization you enter the competition for MsC with -30 points that means that you begin with a disadvantage compared to others, and that's the reason why there is only one doctor employed in transfusion service at national level actually that has obtained a PhD. As mentioned above this affects

also income and of course affects the decision of young doctors not to choose transfusion.

These difficulties have caused a shorter permanency of doctors employed in transfusion compared to other specialties. They begin with transfusion because it's easier to find a place and then they leave for other places. During the last 10 years there have left 5 young doctors from NBTC (after about two years experience in NBTC) who have been replaced from other young ones, most of them planning to leave for other places. This situation of course affects the quality of staff in transfusion service, and in this way the quality of blood and components in our country.

Except for the social and income differences between transfusion specialists and hospital staff, we note that there are also differences in the emotional satisfaction. This difference is related to the fact that all transfusion specialists work for bringing to patients a high quality product, but unfortunately there are no contacts among transfusion specialists and patients. These contacts are very important for giving emotional satisfaction to health workers, and sometimes people in transfusion are tired of working in the second line where they lack the direct contact with the benefits that the patients have from the products produced by them.

For all the above mentioned reasons we can say that there are significant socio-economic differences between transfusion specialists and other medical specialists in Albania.

**Conclusion**

The implementation of post-graduate transfusion specialization in our country is crucial for increasing the quality of specialists involved in transfusion and for establishment of parity in social conditions of transfusion specialists and other medical specialists. There should be a change in our legislation aiming the liberalization of some transfusion activities to private hospitals. This intervention will open occupational posts for transfusion specialist's doctors and nurses and will improve their post permanency and satisfaction with a positive impact in blood safety.

# SOCIO-ECONOMIC CONDITIONS OF BLOOD FACILITY STAFF IN AZERBAIJAN

**P.Sh.Haciyeva**
**Central Blood Bank, Baku, Azerbaijan**

Demographic and Socioeconomic Indicators of Azerbaijan
Total area: 86.600 sq.км
Population: 9.500.000 (urban:52,9 %; – rural:47,1%)
GNI per capita: $7,812
Income Group per World Bank classification: Upper middle income
Human Development Index: Rank 76 out of 177 countries
Physician per 10,000 population: 34.5
Hospital beds per 10,000 population: 46.5
Life expectancy M/F - 64,9/69,2
Child mortality (per 1000): 13,5
Infant mortality (per 1000): 11,0
Maternal mortality (per 100.000 children born alive) - 15,3
15-60 year mortality M/F (per 1000): 37,2/16,9

**Socio-Economic Conditions of Blood Facility Staff**

Azerbaijan has both centralized and hospital based blood supply system (mixed type). There is no private blood banking system in Azerbaijan. This is prohibited in accordance with the law of the Azerbaijan Republic on blood donation and blood transfusion services.

There is no any salary difference between Regional Blood Center / hospital blood bank staff and hospital staff.
There is no any social benefit difference such as paid vacation period, working hours, etc Regional Blood Center / hospital blood bank staff and hospital staff.

There is carrier progress such as M.Sc, PhD, etc difference between Regional Blood Center / hospital blood bank staff and hospital staff. Regional Blood Center/hospital blood bank staff has a better carrier

progress chance. There is no any permanency difference between Regional Blood Center / hospital blood bank staff and hospital staff.
There is no any economic, social and emotional satisfaction difference between Regional Blood Center / hospital blood bank staff and hospital staff.

There is no any future expectation difference between Regional Blood Center / hospital blood bank staff and hospital staff.
It is easier to find similar position as medical doctor, laboratory technician and nurse for a hospital staff than for a Regional Blood Center / hospital blood bank staff.
The qualifications necessarity are same for working in a Regional Blood Center / hospital blood bank the same or different from those necessarity for working in a hospital.

**Order of the President of Azerbaijan Republic**
Double rise in co-efficient of the rate (post) salaries determined according to the Unique Rate Schedule of the personnel of the enterprises (departments and sections) engaged in the supply and treatment of the blood and its components as well as bone marrow and their storage at the frozen state, that are subjected to the Ministry of Health of Azerbaijan Republic.

# SOCIO-ECONOMIC CONDITIONS OF BLOOD BANK STAFF WITH THE OTHER MEDICAL DISCIPLINES BOSNIA AND HERZEGOVINA

**Elma Ćatović-Baralija**

Health systems are complex, variable and unstable organizations for the provision of health services: subject to the influence of various environmental factors and different behavior of actors within the system, with different interests and expectations.

Bosnia and Herzegovina's surface: 51,130 km2 and population: 3,791,622 mill. The administration is divided into the Federation of Bosnia and Herzegovina (2,371,603 population), Republica Srpska(1,326,991) and Brcko District ( 93,028). Health financing, management, organization and provision of services is the jurisdiction of two the Entities(Federation of Bosnia and Herzegovina and Republica Srpska) and Brcko District (BD). The organization of health care in the Federation of Bosnia and Herzegovina is based on the principles of solidarity, accessibility and integral approach, regardless of age, gender, religion and ethnicity. Health services are provided at the primary, secondary and tertiary levels of health care, and at the level of federal and cantonal public health institutes.

A special form of protection of the health of the population is achieved through public health, the act establishes the rights of citizens is largely financed by compulsory health insurance. (Law on Health Care, Health Insurance Act).

The organization of the health system in the Republic of Srpska is centralized, and decentralized in the Federation.

According to national health account FBiH for 2013 the Federal Bureau of Insurance , in the health sector of the Federation of BiH for a total of 30,929 employees, which is 1.7% more than in the previous year. Of the total number of employees in the health sector of the Federation of BiH, in health care institutions (public and private) has recorded 30,146 workers (97.4%), and health insurance funds (federal and cantonal) to 783 workers or 2.6% of total employment

in health care. Of the total number of workers in health institutions, in public health institutions in order to 26,955, and in 3191 the private sector employee. Of the total number of employees in public health institutions, the workers of the healthcare profession refers 22,206 workers, or 73.7%, and the administrative, technical and other non-medical workers, 7,940 or 26.3%. In health facilities, the number of health workers has increased in the reporting period by 2%, and the number of administrative staff by 2.2%. The health insurance funds number of workers increased by 3.6% compared to the year 2012.

Per 100,000 population in 2013 in the Federation was 198 doctors, 25 dentists, 14 pharmacists and 565 health technicians. While in RS, 2012, there were 165 medical doctors and 16 dentists.

The average net salary per employee in 2013 was 415 € .

Organization transfusion activity also is divided into: Transfusion in Republic of Srpska(RS) , transfusion in FBiH and Brcko District.

**Republic of Srpska**

Blood transfusion institute of Republic of Srpska is centralized and incharge of collecting, testing, preparation of blood components, storage and distribution of blood intended for transfusion and covers the need for transfusion treatment population.

Institute is based in Banja Luka and ten organizational units located in cities Banja Luka, Bijeljina, Doboj, Foca, Gradiška, Kasindol, Nevesinje, Prijedor, Trebinje and Zvornik.

The largest number of collected blood donations (about 65%) is obtained from individual donors. These are donors who give blood dedicated for certain patients. The rest of the doses for the most part collected during the action of voluntary blood donors. Number of collected donations on an annual basis is approximately 24 000 doses. Currently the percentage of donations per 1000 population is 1.98%

There are 96 medical employees in all the transfusion units. The breakdown of the medical staff is as follows: 15 transfusion specialists, 5 transfusion specialist interns , 2 general practitioners, 8

senior nurses(technicians) 66 mid level nurses (technicians). Compared to the neighboring countries, the Republic of Srpska has fewer transfusiologists, i.e. it has 1.02 transfusion specialists per 100,000 population (Serbia has 2.7/100,000, Montenegro has 2/100,000, Croatia 1.8/100,000).

**Federation of Bosnia and Herzegovina**

In the Federation of Bosnia and Herzegovina is present mixed type system for the collection of blood and varies from canton to canton

In Federation of Bosnia and Herzegovina there is 1 Institute, 4 transfusion centers (Tuzla, Mostar, Mostar-Istok, Zenica) and 2 sections, 8 service and 3 cabinets. (Bihać, Livno, Gračanica, Tešanj, Orašje, Brčko Distrikt, Travnik, Konjic, Goražde).Number of collected donations on an annual basis is approximately 55.000 doses.

Blood transfuzion institute of the Federation of Bosnia and Herzegovina is a public health institution based in Sarajevo , which has been operating for 58 years.

The oldest and only independent institution in the field of transfusion medicine in Bosnia and Herzegovina, as well as scientific and educational base of the Medical Faculty of the University of Sarajevo. Institute of Transfusion Medicine of the Federation of Bosnia and Herzegovina is a health care institution to perform transfusion services in the territory of the Federation of Bosnia and Herzegovina. The rate of donation in the Federation of Bosnia and Herzegovina, specifically in the Canton of Sarajevo is 2.62%.

As regards the kind donation of the Federation of Bosnia and Herzegovina, the situation is diverse.

The Institute for Transfusion Medicine Federation of Bosnia and Herzegovina based in Sarajevo, mostly covers the Sarajevo Canton, more than 95% of donations were collected from blood donors on a voluntary basis. Of the total number of 60% of donors are processed through the organized actions of which more than 50% of organizing services for the animation of the Institute for Transfusion Medicine FBiH and the other 10%, in cooperation with the Red Cross FBiH.

The Institute for Transfusion Medicine FBiH 40% of donors animate through calls. In other cantons is the exact opposite, over 70% of donations are obtained through family donation. The rest of the doses for the most part collected during the action of voluntary blood donors. In the Federation of Bosnia and Herzegovina in the field of transfusion medicine were employed:

-50 doktors( spec.transfusiologist)
-9 biologists
-12 medical technician (4 years Faculty of Health Studies)
-18 medical technician (2 years Faculty of Health Studies)
-129 medical technician (high school diploma)
- 53 technical and other non-medical workers.

Compared to the neighboring countries, Federation of Bosnia and Herzegovina it has 2.1 transfusion specialists per 100,000 population (Serbia has 2.7/100,000, Montenegro has 2/100,000, Croatia 1.8/100,000). Results indicate that the number of employees in this area corresponds to the number of doctors transfusion medicine in the neighboring countries. From that point of looking at the situation in the region, the number of employees should meet the need for sustainability of transfusion medicine. For example, in Croatia, there are 1.8 Transfusion per 100,000 residents and is collected by about 160 000 doses of blood. While the same number of personnel in Bosnia and Herzegovina to collect half the dose. Absence of the Annual Plan voluntary blood donation in accordance with the blood and blood components results in insufficient quantities of blood collected in Bosnia and Herzegovina. The existence of mixed-type blood collection in the Federation of Bosnia and Herzegovina has led to the increased representation of family donation, which is unacceptable. This situation in Fedaraciji Bosnia and Herzegovina points to the need for coordination of the system for collecting blood, which would lead to better utilization of existing resources.

# BLOOD TRANSFUSION SERVICE – CZECH REPUBLIC ORGANISATION, DEVELOPMENT AND SOCIO-ECONOMIC STANDING OF BTS EMPLOYEES

**Lenka Walterova, Petr Turek**
**Czech Republic**

Czechoslovakian transfusion service has been developing toward Western European standards since the change of political system in 1989. Since the division of the country into Czech Republic and Slovakia in 1993, it has become clear that building its own plasma fractionation plant would not be cost effective at the given time with population just over 10 million and existing old fashioned plasma fractionation institution producing mainly albumin and immunoglobulins for intra-muscular application. Contract plasma fractionation was introduced then and has been developing continuously. Since 2004, Czech Republic has become a member of European Union and thus bound by EU legislation.

**General organisation**

In 2014, Blood Transfusion Service (BTS) in the Czech Republic consists of three types of institutions:

1. Blood establisments (BE) - collecting blood mainly for the direct patient use as blood components (BC). Majority of these institutions also send part of produced plasma - originating both from whole blood donations and plasmapheresis – for fractionation abroad mostly to obtain stable blood products.

Vast majority of BE are within public hospitals, there is only a few in private hospitals - these are, though, also financed by general health insurance.

2. Plasma collection centres, generally private, producing exclusively plasma for fractionation. These have been proliferating extensively mostly since 2008. Plasma donors in these centres are financially compensated. Amount of plasma sent for fractionation has been steadily rising in these centres and has reached amount of 382 thds.

litres sent for fractionation in 2013 / nearly double of that produced by blood establishments/ , making Czech Republic one of the leading plasma producers per capita in the world. Even though these institutions adhere to national regulations, they do not cooperate in any way in provision of blood components, blood derivatives or provision of direct patient care. Therefore, they will be mentioned further just in statistical analyses and we will concentrate on blood establishments mentioned above.

3. Hospital Blood Banks (BB) – run their services in majority of hospitals where blood components are used. Their major task is to perform blood grouping and pre-transfusion testing and to keep a stock of blood components. BB are usually part of Blood Establishment if present in given hospital or hospital, or mergend with lab of haematology and / or clinical biochemistry in small hospitals.

**Blood Establishments**

Currently, there are 188 hospitals within Czech Republic. Of these, 148 have their own BTS-either as hospital blood banks only If not a part of BE, they usually have a contract with one such an institution to provide them with blood components, but are free to obtain needed components from any producer.

There is no centrally coordinated BTS. BE producing labile blood components must be licenced though, as BC are considered medicines since 1997. They are audited periodically- biannually- by the State Institute of Drug Control for licence renewal. Minimal requirements for BC quality, testing and storage are in place and followed but transfusion policy differs in different institutions substantially. Hospital blood establishments - both in teaching and regional institutions- are independent departments - covering both BC production - donor recruitment, whole blood collection (usually also aphereses) processing, testing and storage of BC as well as: the tasks of hospital blood bank i.e. pre-transfusion testing , expedition of blood components to the departments of the given hospital and usually also to other hospitals without its own blood components

production. Blood transfusion specialist is also responsible for the adherence to the good clinical transfusion practice and is expected to oversee transfusion policy within given institution. BE can be either specialised Dept. of Blood Transfusion- usually within teaching hospitals or major regional hospitals - or an integral part of a combined Dept .of Transfusion and Haematology, providing also laboratory service and clinical care for haematology patients - mostly in smaller hospitals. The number of BE has not changed substantially within last 25 years, but there has been a definite trend toward centralization in a sense that a number of small BE has transformed into collection centres only, where blood is taken from donors and then transported into a bigger BE for further processing. Within blood establishments, whole blood donors are 100% voluntary, non-remunerated, while there is a fraction of apheresis donors compensated for their time and inconvenience. There are nearly no family donations performed but pre-deposit autotransfusion programme is still popular even though the number of autologous donations has been decreasing steadily - partly being substituted by peri/postoperative blood recuperation - it represents about 3-4% of all whole blood donations

In 2013, with current population of 10.5 million, the number of licenced BE with full production was 53. Another 19 BE represent collection centres and 34 of these institutions are active in apheresis programme.

**Production and self-sufficiency overview**

Czech Republic is self-sufficient in RBC production (approx. 40 TU per 1000 inhabitants) for a number of years. Leukodepletion is not universal, but percentage of leukodepleted units has risen to nearly 25% of all RBC. There is still plasma overuse when compared to Western European countries - 41 thds. litres in 2013, i.e. 3,9 litres per 1000 inhabitants. There is a trend towards lowering the consumption also due to newly introduced plasma free protocols in intensive care units. More than half of clinical plasma is from donors with low risk of HLA antibodies and thus low risk of development of

TRALI in recipients. The amount of plasma sent for fractionation is well above the national need of stable blood products. Platelet production - both apheresis and buffy coat derived has been rising continuously – it reached 3.5 TU per 1000 inh., nearly all leukodepleted.

**Infectious markers**

Serology - Elisa for hepatitis B, hepatitis C, HIV and test for syphilis is required for all donations, PCR testing is not obligatory and is done in a few major institutions as pilot studies.

Prevalence of markers for transfusion transmitted infections is minimal - markedly lower in hospital -based blood establishments then in commercial plasmapheresis centres (especially hepatitis C). All clinical plasma is quarantined for 6 months before being released for patients use. All sera reactive in tests for TTI are further confirmed in National Reference Laboratory

National registry of permanently deferred donors prevents migration of donors deferred in one place elsewhere.

**BTS staff**

Medical doctors

There is a minimal or no pre-graduate training in blood transfusion. It is being taught usually within haematology, with only a few hours allotted to the whole scope of the subject - from donor recruitment, blood collection and blood components production, to clinical use - indications and administration. It is usually task of the local transfusion medicine (TM) specialist within given hospitals to develop guidelines for proper use of BC and to train the medical staff at clinical departments.

Post graduate training has been changed lately from 2-step (basic specialisation usually in internal medicine and further second board examination in haematology and blood transfusion) to one-step 5-years training programme. The final specialisation has stayed combined with haematology - as in many institutions the transfusion

medicine specialist has a combined responsibility in both specialisations.
There is general lack of TM specialists - it is difficult to find a qualified medical doctor especially for a post in transfusion medicine department which is not combined with haematology - which is generally viewed as more attractive. Academic growth is possible only in major teaching hospitals. It may be difficult for a TM specialist to introduce good transfusion practice within clinical departments as he is often viewed as blood components provider only. It is usually easier for a specialist who covers both haematology care and transfusion medicine within the hospital, to be taken as a consultant in transfusion medicine dilemmas as well.

**Non- medical staff**
Nurses, biomedical scientists and laboratory technicians often cover more than one task. Typically, laboratory technicians and scientists cover tasks both in BC testing as well as pre- transfusion testing. They often take part in night shifts work within hospital blood bank. Nurses may help not only in donor care but also in BC preparation and in some cases also in direct care for haematology patients within outpatient clinic in smaller institutions. Nurses, laboratory technicians and scientists have the possibility to specialize in haematology and blood transfusion thus acquiring the possibility of higher socio-economic standing.

**Financing of health care**
Predominant part of health care expenditure is financed by public health insurance system, covering 78.5 % of the total. State budget contributes about 5.5 %, private expenditure share is about 16 %.
Total expenditure represents 7.6 % of GDP (2012)

**Socio economic standing**
Average salary within Czech Republic amounted to 900 Euro per month (2012). Average income of medical doctors in public institutions was 2150 Euro. This includes all levels of medical doctors

from residents to consultants and also payments for night shifts (the basic salary represents only 50% of the total). Thus, if transfusion medicine specialist is not involved in night shift service – which is often the case - his income comes under the average. On the other hand, as the personnel in TM is scarce, hospitals may introduce some incentives for the specialists. In the past, there was a week of paid vacation above the normal norm, but that has been cancelled by legislative measures several years ago. As there are as a rule no obligatory duties off hours, transfusion medicine tends to attract women in child bearing age.

The number of medical doctors in the Czech Republic in 2012 was 40320, of which there were 56 % of women in all specialisations. In transfusion medicine the number of employed medical doctors was 507, of which only 1/3 (168) were men and 2/3 (339) women.

Nurses and laboratory technicians -in this category, there are two distinct groups:

Nurses in blood establishments work generally day shifts only, and thus cannot add to their income the off-hours work that represents about 35% of the income of nurses generally. In private plasma centres, salaries tend to be a bit higher, but the working hours may be in two shifts - morning and afternoon, extending well into evening hours. Also, generally, there are many benefits given by employer within public sector that is not provided in private institutions. Average income of the nurse is circa 50-55 % that of medical doctor. Nurses in transfusion medicine are being taken as specialists in their own field and even though they may not enjoy the same status as highly specialized personnel i.e. in operating theatres or intensive care units, they are compensated for that not only with the possibility of working morning shifts only, but also with the fact that they are working with donor - i.e. healthy population, so the burn-out syndrome is rare and it is not difficult to find a nurse interested in this work.

Laboratory technicians are nominally in a similar income group, but most of them are enrolled in night shift service within hospital blood

bank and thus have an opportunity to earn extra money - it varies widely, but as an average it represents about 30-35%of the entire income. There is a general lack of this specialised staff partly due to the scarcity of specialized schools and also due to number of reorganisations in the system of their further education and specialisation. On the other hand, laboratory technicians enjoy quite a high status among the hospital personnel.

**Conclusion**

BTS of the Czech Republic has developed in the last 25 years rapidly - starting, in 1989, with blood collection into glass bottles, when nearly 1/3 of production stayed as whole blood and nearly no platelet production and with minimal production of fresh frozen plasma - mainly for further preparation of cryoprecipitate that was used for haemophiliacs as coagulation factor concentrates were lacking – into modern, self-sufficient system. Due to private plasmacentres, Czech Republic has become also a significant plasma producer.

Blood transfusion service has stayed fragmented into hospital based blood establishments, but the trend towards centralisation is seen as the small scale BE have turned into collection centres. Highly specialised blood transfusion personnel - especially medical doctors - has been a problem in the whole history of Czech transfusion medicine, but connection with haematology in many places gives the TM specialist a tool to influence not only blood collection and BC production but also transfusion policy within their respective hospitals.

# SOCIO-ECONOMIC CONDITIONS OF BLOOD FACILITY STAFF IN EGYPT

**Dr. Faten Moftah**

**Introduction:** Blood supply system in Egypt is mixed, government and private health institutions produce blood and blood components. Within government institutions; MOH, University, Military, Syndicates, and other ministries are involved in this activity.

**Subject:** Blood banks in Egypt are operated by variety of staff; medical doctors, lab technicians, nurses, pharmacists, administrators, etc. The services have wide variations of quality depending on the financial level of the facility. Both centralized and hospital based blood supply system have same salary scale because they belong to MOH. Private blood banking system has higher salary difference between Regional Blood Center/hospital blood banks. Social benefit difference such as paid vacation period, working hours is significantly better in government system. Career progress such as M.Sc., PhD, is the same for all, and is more available to university graduates like; doctors, scientists, and pharmacists. Regional Blood Center/hospital blood bank staff appointments are permanent because the follow government lows. Social and emotional satisfaction difference between Regional Blood Center/hospital blood bank staff and hospital staff is minimal, but future expectations difference is significant between Regional Blood Center/hospital blood bank staff and hospital staff, because in hospitals, there are better promotion opportunities. Positions such as; medical doctor, laboratory technician, nurse are easier to find hospital staff than for a Regional Blood Center/hospital blood bank staff. Qualifications necessary for working in a Regional Blood Center/hospital blood bank are the same like hospital staff.

**Conclusion:** it is very important for the stability of blood supply that staff working in blood bank rewarded in a satisfactory manner. Social image is important to the Morales of staff working in blood banks. Career prospects should be promoted to all staff for the stimulation of better performance.

# UNIVERSITY TRANSFUSION MEDICINE IN LEIPZIG, GERMANY

**Gert Matthes**
**MedInnovation GmbH Berlin, Germany**

In Germany, Transfusion Medicine is recognized as a separate medical specialty since 1993. It is the largest interdisciplinary subject with a high degree of specialization of knowledge, and can be divided into a preparative, therapeutic, and laboratory diagnostic part.
In Germany, blood services (approx. 5 Mio. blood donations) are provided by four types of organization: a) German Red Cross Blood Transfusion Services (36 blood establishments, share of about 70%); b) state, communal, and university blood transfusion services (74, 25%); c) private blood centres (22, 5%) as well some plasmapheresis units.
Using the example of the Institute for Transfusion Medicine at University Hospital Leipzig it is shown how the services in patient care, undergraduate, postgraduate medical training and the training of medical assistance personnel can be arranged. Integrated hospital transfusion medicine departments are clinical facilities and primarily serve the complete supply of hospitals with transfusion medicine preparations and services.
At the University of Leipzig, the Transfusion Medicine has a long tradition: In 1933, Prof. Paul Morawitz had established for the first time a blood bank in Germany. Today, the Institute for Transfusion Medicine is one of the lead institutions in Germany, It offers the complete spectrum of Transfusion Medicine (whole blood donation, immunohematology, infectious disease serology, HLA-/HPA immunology, therapeutic and preparative hemapheresis (stem cell apheresis, multicomponent collection, leukocyte, erythrocyte, platelet apheresis, plasmapheresis, immunoadsorption, bone marrow harvesting), consultation service in transfusion medicine and blood coagulation, and quality management system for the hemotherapy). The Institute comprises 89 employees. On that basis,

a comparison of the socio-economic conditions of employees in the blood banks can be made with other medical disciplines such as in surgical or internal units. The complete spectrum allows a broad training in transfusion medicine. The exact allocation of the occupational groups depends on the specialization of the institution. In recent years, Transfusion medicine is in the stage of transition (patient blood management, multi-component collection, cell therapy, and pathogen reduction); especially in universities, these changes are visible. Furthermore, other changes have occurred in Germany that is characterized by the concentration in the blood donation services, and by the extension of private blood establishments. The main reason is to see in an effort to rationalize the blood component production and testing.

In summary, it should be noted that the socio-economic conditions of the blood bank staff are comparable to the conditions of medical disciplines if they also have specialized training and continuing education.

# SOCIO-ECONOMIC CONDITIONS OF BLOOD FACILITY STAFF - GREECE

**Dr Eleftheria Zervou**
**Medical Director**
**Blood Bank, University Hospital of Ioannina**
**Greece**

The Greek National Service of Blood Transfusion was established in 1952 by the Ministry of Health, with the objectives of implementing the new scientific methods in the collection and transfusion of blood, the proper education of personnel working in blood transfusion services and the promotion of scientific research in this area. The blood donation system in Greece is public, decentralized and consists of 81 hospital blood banks under the responsibility of the Ministry of Health.

Each blood bank is located in a public hospital and has the follow activities: the recruitment of blood donors, the collection and testing of blood, the processing of blood into its products and finally the provision of blood products in the hospital clinics. The large private hospitals have blood banks, but they do not conduct blood donations. Blood centers /blood banks of public hospitals supplies them with blood products, free of charge.

Since 2007 a new law, designed to organize a centralized system in accordance with the 2002/98/EC Directive, have been implemented in Greece. The first step of the centralization was the establishment of nine regional centers in which the blood donations of the whole country are tested for NAT (Nucleic acid testing).

These nine regional centers (with the exception of the national Blood center, EKEA) were also established in hospitals and had the same function as the blood banks. By the end of 2013, the nine regional centers decreased in four. According to the plans of the Ministry of Health the next step for greater centralization is the four regional centers to conduct and the serological tests for infectious diseases. In blood centers /blood banks the personnel consists of doctors,

chemists, biologists, technologists and nurses. The doctors who are working in blood centers and blood banks have the specialty of hematology, laboratory medicine and internal medicine.
The qualifications of all the staff of the hospitals are established by law and in accordance with this, nurses and technologists to be appointed at the blood centers /blood banks must have higher technological or university education. Regarding technologists and nurses before placing them in the blood bank or blood center should have done practical training, lasting six months, to a regional blood center or a certificated large blood bank. But in many cases where there is a great need for staff at blood centers /blood banks this procedure is not followed and technologists and nurses are placed in their position and trained there.
There is no difference between the salary of the staff working in blood centers/ blood banks and also employees with corresponding specialization in the various departments and laboratories of the hospital. The salaries and the work time in all the hospitals in the country, regardless of the capacity of the hospital, for each category of workers are the same. Only nurses working in blood centers /blood banks as well as those who work in the operating room, intensive care units and emergency departments, have two weeks vacation period in addition to the normal annual vacation period. The opportunities for career development of staff working in blood centers/ blood banks are similar to those of the rest of the hospital staff with relevant studies.

An advantage of the staff of blood centers /blood banks is that usually not moved to other departments or other hospital laboratories. In the large hospitals, the blood bank workers have a greater opportunity to attend courses and conduct studies on the subject of blood banking and blood transfusion and also to acquire master and doctorate. Sometimes the coexistence of workers with different specialty and the unclear job description of each specialty creates problems in the function of blood centers /blood banks and

also in the relationships between staff. The fact that during the undergraduate studies of all disciplines there is no enough teaching of transfusion medicine and blood banking, makes the candidates to work in blood centers /blood banks reluctant, particularly the nurses, because they have no experience in performing laboratory tests. For personnel working several years in blood centers /blood banks, especially in large hospitals, the inadequate blood supplies in order to be covered the needs of their patients is very stressful. But the majority of the staff of blood centers /blood banks despite the difficulties, loves their job, developing links with blood donors and hardly wants to change workplace. Generally, the Greek scientific community recognizes that the staff of blood centers/ blood banks has very good training and is very effective.

# COMPARISON OF THE SOCIO-ECONOMIC CONDITIONS" OF BLOOD BANK STAFF OF IRAN WITH THE OTHER MEDICAL DISCIPLINES AND EFFECTS OF THIS SITUATION ON THE SUCCESS OF THE SERVICE.

**Leila Kasraian**

**Blood Transfusion Research Centre, High institute for research and education in transfusion medicine, Shiraz, Iran**

Encouraging and motivation of people at work is an integral part of the management process. The human element has a critical importance in the organization. A well-managed organization usually looks at staffs as the root source of quality and productivity to achieve its goals. For an effective organization, a spirit of cooperation and sense of commitment and satisfaction within the staff is necessary. In order to make employees satisfied and committed to their jobs, there is need for strong and effective motivation at the various levels, and departments. Money is one of the most important motivator of workers to achieve greater productivity. Organizational success depends on the effectiveness of the performances of the individuals who works in organization.

To use salaries as a motivator effectively, personnel managers must consider four major components of a salary structures. These are the job rate, which relates to the importance the organization attaches to each job; payment, which encourages workers by rewarding them according to their performance; personal or special allowances, associated with factors such as scarcity of particular skills or certain categories of information professionals, or with long service; and fringe benefits such as holidays with pay, pensions, and so on. It is also important to ensure that the prevailing pay in other organs or information establishments is taken into consideration in determining the pay structure of their organization. That money has the power to attract, retain, and motivate individuals towards higher performance. Money possesses significant motivating power in as much as it symbolizes intangible goals like security, power, prestige,

and a feeling of accomplishment and success demonstrates the motivational power of money through the process of job choice.

Job satisfaction is often determined by how well outcome meet or exceed expectations. For instance, if organization participants feel that they are working much harder than others in the department but are receiving fewer rewards they will probably have a negative attitudes towards the work, the boss and or coworkers. On the other hand, if they feel they are being treated very well and are being paid equitably, they are likely to have positive attitudes towards the job. Job satisfaction of the staffs naturally depends on the economically, social and cultural conditions in a given country .A staff who cannot get a sufficient wage will be faced with the problem of maintaining his or her family's life. This problem puts staff far from being satisfied. Especially the social facilities (transportation services, and consumer cooperatives -cash boxes) are sufficient because of the economic conditions. Low wages and lack of status and social security affect motivation. Job satisfaction cannot be talk of where there is absence of motivation. Job satisfaction of the organization who has an important place in the information society will affect the quality of the service he renders.

Predictors of satisfaction of a workers included perceptions of importance of their role in organization and salary. The relations between job satisfaction and wages, management policy, working conditions, possibilities of promotion, gaining respect, the size of the organization and self-development and achievement of the use of talents. His results indicate that over time staffs become happier with their profession and more committed to their line of work.

**Organizational Commitment depends on**

1. a strong desire to remain a member of a particular organization;
2. a willingness to exert high levels of efforts on behalf of the organization;
3. a define belief in and acceptability of the values and goals of the organization.

Commitment is an attitude reflecting an employee's loyalty to the organization, and an ongoing process through which organization members express their concern for the organization and its continued success and well-being. Organizational commitment is determined by a number of factors, including personal factors (e.g., age, tenure in the organization, disposition, internal or external control attributions); organizational factors (job design and the leadership style of one's supervisor); three components of commitment are:

- an identification with the goals and values of the organization;
- a desire to belong to the organization; and
- a willingness to display effort on behalf of the organization.

Blood transfusion organization is an important center to prepare sufficient blood for patients in need. Another importance of staff's satisfaction in organization is the importance of staff's behavior with blood donors. Blood donors expect to receive respect and attention from staffs and they can donate blood as fast as possible without wasting times. This encourages blood donors to refer for blood donation again but any dissatisfaction of donors caused not refer for blood donation again. This needs a motivated satisfied staff by salary and perception of their importance of their role in organization and for patients who need transfusion. In our country, the mean average outcome of staff of BTO was lower than other staffs at the same level of education who works in hospitals. Blood transfusion organization does not have any special income and prepared and disturbed blood to hospitals freely. The staff's hospitals can receives money from hospitals income and have more facilities. The differences between salary of blood transfusion staffs with hospitals' staff causes disappointment of them and a negative impact on the performance affects their performance. It needs to make some improvement in socioeconomically status of blood transfusion's staffs. Try to involve insure centers in paying expense of blood products patients who receives blood transfusion.

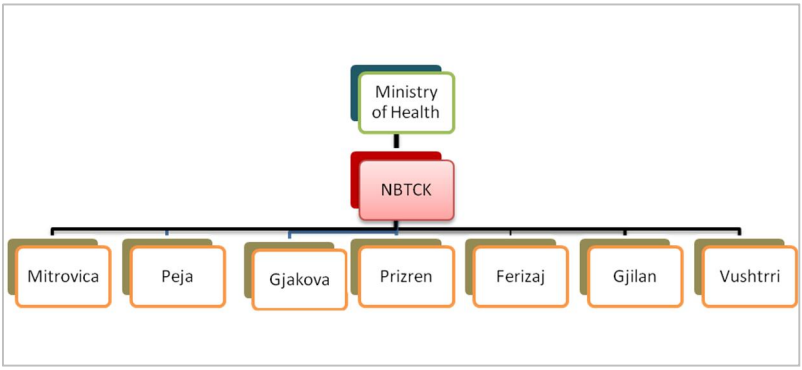
# SOCIO-ECONOMIC CONDITIONS OF BLOOD FACILITY STAFF - REPORT FROM KOSOVO

**H. Sadriu, B. Zhubi**
**National Blood Transfusion Center of Kosovo**

## Background

Kosovo blood transfusion service is organized in a mixed setup: National Blood Transfusion Center of Kosovo (NBTCK)- with its seven regional blood transfusion centers is attached to their respective regional hospitals. While NBTCK is linked directly to the Ministry of Health, the regional blood centers are linked vertically and horizontally with NBTCK and their respective hospitals. Following next year, all regional blood centers will be linked directly to NBTCK in an effort to unify the quality of work between the regions and NBTCK.

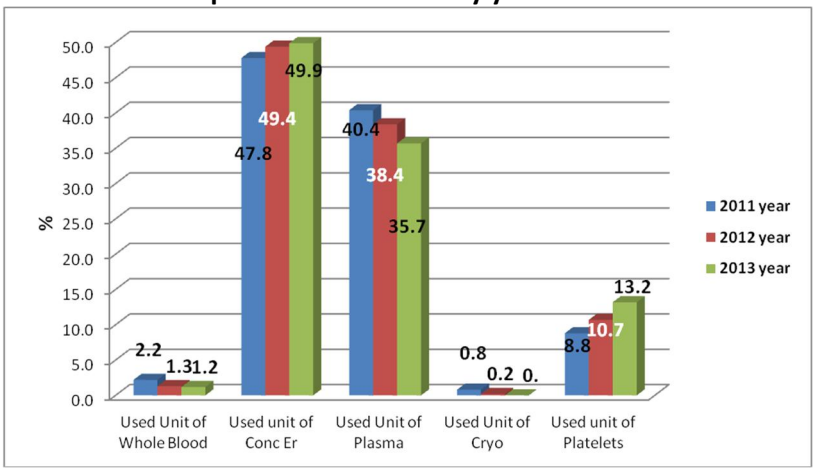
## Organogram of National Blood Transfusion Center of Kosovo (NBTCK).




NBTCK supervises regional centers in professional aspects, and supplies them with expandable materials. In order to standardize serology screening for TTI, NBTCK conducts serology screening for all regional centers. Other procedures are conducted at regional centers, accordingly.

Transfusions are performed at the Clinical University Center of Kosova CUCK (18 clinics) and 7 regional hospitals. Also, transfusion treatment is performed in 7 out of 25 licensed private hospitals. During the period of 2011-2013, there were transfused: red blood cell concentrates (47.8%, 49.4% and 49.9%), whole blood units (2.2%, 1.3% and 1.2%), plasma units (40.4%, 38.4% and 35.7%), and concentrated platelets (8.8%, 10.7%, 13.2%).

**Blood and blood products utilization by years in NBTCK**




Our country used to have the centralized blood supply system and hospital based blood supply system (mixed type). However, now we are restructuring NBTCK, so the centralized blood supply system will be implemented for all transfusion centers. All seven regional blood transfusion centers which have been within regional hospitals now are under the NBTCK (they are linked vertically and horizontally with NBTCK).

Blood banking and transfusion services are allowed to be run by authorized public institutions only and therefore, there is no private sector for blood banking and transfusion services. However, NBTCK

supplies with blood and blood products both public and private health domains.

The income differences between the Regional Blood Centres / hospital blood bank staff and hospital staff exists because the technicians or nurses who work in blood transfusion have undertaken courses of transfusion medicine, making them certified and subject to higher income coefficients. The staff employed in the Regional Blood Centers or hospital blood bank staff does not have any social benefit difference such as paid vacation period, working hours in comparison to hospital staff. There is no any career progress (such as M.Sc, PhD, etc) differences between the Regional Blood Centers / hospital blood banks' staff and hospital staff. Also, there are no permanent differences between the Regional Blood Centers / hospital blood bank staff and hospital staff.

The employees in the Regional Blood Centers or hospital blood banks' staff and hospital staff do not have any economic, social and emotional satisfaction difference. We expect that in future the differences between the Regional Blood Centers or hospital blood bank staff and hospital staff, namely to based on increasing workload and productivity. So, better expectation favors Regional Blood Centers and hospital blood bank staff compared to hospital staff.

In general, the positions for doctors, specialists of different medical fields other than transfusion medicine, nurses and lab technicians are scarce. However, NBTCK has carefully examined the need for transfusion medicine specialists and hereby, has taken measures to recruit new specialists according to our needs. Therefore, all specialists of the Transfusion medicine in Kosovo are employed. Most of the doctors are able to specialize in other more attractive specialties like: cardiology, surgery, gynecology, obstetrics, biochemistry or other specializations which are preferred because they are profitable.

The qualifications are necessary for working in a Regional Blood Center or hospital blood bank and they are different from those which are applied in hospitals. All technicians and nurses, working in

Blood centers or Regional Blood Center, must finish courses on transfusion medicine. Also, all doctors working in Blood centers or Regional Blood Centers must finish the specialization of transfusion medicine which lasts four years while the new curriculum has been revised and it lasts five years, like the curriculum in Croatia and Slovenia.

NBTCK organizes every two years the courses on special training and education program for blood bank staff and on clinical use of the blood and blood components. The nurses who are employed in clinics or hospitals have not taken such courses yet.

**Conclusion**

The Socio-economic conditions of Regional Blood Center / hospital blood bank staff versus hospital shows no disparity, due to universal scheme on incomes and other benefits applied to all medical staff employed on public health sector.

However, socio-economic conditions generally do not meet the satisfactory level the medical staff should be entitled. This is especially true for Blood Facility Staff whose specialty/expertise is tied to public sector only. Socio-economic conditions impact productivity and quality of work, especially in Blood Facilities where blood donation is on voluntary, non-remunerated basis.

# SOCIO-ECONOMIC CONDITIONS OF BLOOD FACILITY STAFF - SITUATION IN LITHUANIA

**J. Bikulciene**

Blood Service of the Republic of Lithuania consists of the National Blood Centre supplying blood components to all Lithuanian hospitals and two blood establishments under Vilnius and Kaunas Universities Hospitals, operating as their divisions.

The National Blood Centre has three divisions responsible for blood collection, testing and processing, and three stationary blood collection stations; in December the fourth station will be opened. Furthermore, at least five mobile teams daily operate in all Lithuania. The National Blood Centre has 202 employees, including 20 doctors, 51 general practice nurses, 30 medical biologists, technologists and laboratory assistants. Great part of employees consists of donor's organisers - 15, donor's documents registrars- 6, drivers - 16, whereas the National Blood Centre delivers blood components to hospital according to planned and urgent orders by own efforts.

Salary of doctors working in the National Blood Centre, comparing with salary of doctors working in hospitals, meet the average value and make in euros - 1140 EUR, salary of laboratory employees – exceed the average value and make - 926 EUR, and salary of nurses, comparing with wages of nurses working in other institutions, are the highest ones and make 840 EUR. Salary of other employees do not much differ. Comparing with other institutions, salary of the head of the National Blood Centre is half as smaller.

Salary of employees of blood establishments of University Hospitals are equal to salary of employees of other divisions of these Hospitals. It shall be noticed that minimum official salary in Lithuania makes 300 EUR, and average salary in the country makes 683 EUR. There is small difference between salary of blood centre employees working in the capital and province. Deference between salaries in hospitals depends on the hospital financial situation, but not on location.

There are no special researches, but considering low employee turnover and desire of employees to be transferred from hospitals to the blood centre, satisfaction of employees with their job in the National Blood Centre is high. This applies especially to nurses and laboratory employees. It is difficult to find doctors, because practicing doctors do not wish to lose their qualification, and in hospitals they have a change to receive “extra thank-you” from patients as bonuses to the official salaries, but this cannot be done in a blood centre.

It is difficult to the employees of the blood centre to improve their qualification according to their specialization, whereas there are few organized due to low demand. Therefore, it is difficult to the employees of hospitals to find an opportunity to improve their qualification due to flexible schedule and minimum capacity of the employer to pay for training.

# SOCIO-ECONOMIC CONDITIONS OF BLOOD FACILITY STAFF IN REPUBLIC OF MACEDONIA

**Marija Sholjakova[1], Lolita Mitevska[2], Pavlina Gerasimova[3]**
**University "Ss. Cyril & Methodius, Medical faculty, Skopje R. of Macedonia[1], Institute of Transfusion Medicine-Skopje, R. of Macedonia[2], PH Acibadem Sistina, Skopje, R. of Macedonia[3]**

**Introduction:**
Republic of Macedonia (RM) is a small country located in the south of the Balkan peninsula. It takes up a total area of 25,713 km2 with ~2 200 000 citizens. The amount of blood units needed in the country varies from year to year, (depends on the need for cardiac surgery, transplantations etc.), with an approximate use of 52 000 - 55 000 units per year. In the last three years, 98% of it comes from voluntary donors and only 2% is from family donors. Blood donation is based on voluntary, anonymous and non paid donation according to recommendations of the WHO and the Council of the EU. All activities in the blood bank (collection, control, processing and distribution of blood and blood components) are regulated by law, in a centralized government institution named Institute for Transfusion Medicine of Republic of Macedonia (ITMRM).
The main A*im* of this article is to present an overview of the socio-economic conditions of the staff working in the blood banking facilities in the R. of Macedonia.

**Material and method:**
It is an analytical approach to the socio-economic conditions and country legislations of the blood facility staff.

**Results:**
Historically, looking at the organization of the blood supply system in RM, it was found that until 2007 it was a mixed type, centralized and hospital based. The primary goal of the country was to provide a safe and functional health system and to develop national strategy for harmonization with the EU directives. The first of these activities was

the running of the project (EFS 2005-2008) for development of the legislative measures for blood safety, realized in cooperation with the French government. It was completed in 2007 as the "**Law for safety in blood supply in RM**", printed in the public newspaper "Sluzben vesnik" No 110/07, which met the EU Directive 2002/98. Private blood banking does not exist in the country.

Presently, the previous departments of transfusion medicine that were within the public health hospitals (hospital based blood supply centers), are integrated in a new, independent Blood Transfusion Services (BTSs), as part of a centralized unit named Institute for Transfusion Medicine of Republic of Macedonia (ITMRM). So, in the current ITMRM there are Institute of Transfusion Medicine in Skopje (ITM-Skopje), 3 Regional Centers of Transfusion Medicine (RCTM) (Stip, Bitola, Tetovo) and 17 BTSs in all other bigger cities. After the integration, it was followed by an IPA project: "Strengthening of the Blood Safety System in RM" (2011-2014), which provided new equipment (freezers, platelet agitators, etc.) and education of 150 employees about the Quality Management System (QMS). As a result of all these activities in 2011 a reorganization of the blood banking system was done and integration of the blood transfusion services was performed.

The ITMRM is managed by two managers (medical and financial) and supervised by a Board. There is also a Medical Board (chiefs of all departments), and independent Department for Quality Insurance and Quality Control.

The salaries of the staff working in the Institute for Transfusion Medicine-Skopje, as the HQ institution, are 10% higher than the salaries in the Regional Blood Centers and BTSs. There are no differences in the salaries between the Regional Blood Centers, the BTSs and hospital staff. Slightly higher salaries receive the doctors and laboratory technicians that work in night shifts.

The subject transfusion is a regular subject in the medical curricula of medical students at Medical faculties in R. of Macedonia. The

possibilities for professional growth are equal for the staff in the hospitals and the blood banking institutions. The chances for career growth depend on the individual's interest and enthusiasm for research and educative job. Generally in RM the fluctuation from one to other medical institution is rare, and most of the staff stays permanently in same the post, with the possibility to progress in the position (Ex. Chief).

There are some social benefits for people working in Regional Blood Banking and in the hospitals. The working hours for some professions in the hospitals are shorter. The benefits and the duration of the working hours for all medical professions depend on the results of a survey done by the Ministry for Labor and Social Affairs. Social benefits for people that work in ITMRM and in the public hospitals are the same, (salary that depends of working hours that are calculated monthly, health and social insurance, retirement benefits, right for maternity leave of 9 months or absence as a result of illness). All employees from ITMRM work one hour shorter (7 hours instead of 8 hours daily), due to estimated risk of professional exposure to blood transmissive diseases.

Even though the work in the blood banking institution is stressful, full with professional challenges, it is an extremely humane job. This is exasperated especially in cases when the blood facility staff works with pupils and students in the public promotion of blood donation and when they promote that "voluntary blood donation can save many lives"". In addition, the hospital staff is more respected, is given more credit, which gives them personal satisfaction.

Future Expectations: We believe that the position of the staff working in the blood facilities will improve. The finalization of the IPA project will permit harmonization of the working standards, equipment and development of contemporary lab methods from the previous, hospital blood bank into modern regional blood centers.

The situation regarding employment in the country is difficult. The unemployment rate in the general population is 28.2% (September,

2014), with average monthly salary of 21,000 Denars (350 EUR). There are many unemployed medical doctors, laboratory technicians and nurses, which is why all medical institutions can easily find staff for similar positions. The staff working in the Institute of Transfusion Medicine in the R. of Macedonia has addition qualifications. In ITMRM there are around 250 medical staff employed, out of which 69 are doctors, specialists for transfusion medicine. The specialization lasts 5 years; at the moment 5 young doctors are in training. The lab-technicians and nurses working in ITMRM are obliged to pass 6 months' courses, theoretical and practical training for transfusion medicine at different departments at ITM-Skopje, which are finalized with an exam. The other staff has additional continuous education, workshops, symposiums, refresher courses and conferences with the aim to improve the knowledge of the staff.

**Conclusion:**

This analysis shows that the effort made by the Ministry of Health in RM with the implemented law and integration of the blood transfusion services in one Centralized Institute for Transfusion Medicine of the RM has positive results. The blood donation in R. of Macedonia is continuously increasing, especially in the last 3 years, which has made the staff employed in all ranges of blood banking proud.

It is necessary to work on improvement of the working conditions in some blood transfusion services and regional centers with the aim to become harmonized with the upper institutions. One of the future expectations of the blood facility staff is provision of the same benefits for all staff (Ex. higher salaries for staff that have increased their educational level - college degree, but salaries are not harmonized with their level of education).

# ANALISE OF THE SOCIO-ECONOMIC CONDITIONS OF BLOOD FACILITY STAFF IN REPUBLIC OF MACEDONIA

**Emilija Velkova, Lolita Mitevska**
**National Institute of Transfusion Medicine, R. Macedonia**

**Introduction:** Blood facilities in R. Macedonia since the year 2011 are organized in one nationally integrated system, called Institute of Transfusion Medicine of Republic of Macedonia (NITM). For the population of 2 065 769 (State Statistical Office, December, 2013), NITM succeed to provide enough blood and blood components for the treatment of patients at public and private hospitals. To fulfill the objectives of the institution such as NITM (blood collection, processing, control and distribution of blood components), there are around 350 employees, out of which more than 250 are medical staff. The annual collection of blood is around 55.000 units, mainly from voluntary blood donors (98%).

**Objective:** To analyze the socio-economic conditions of blood facility staff in R. Macedonia, what is current situation and future perspectives.

**Material and methods:** by retrospective method was analyzed situation in NITM in R. Macedonia, by the use of the questionnaire: "Socio-economic conditions of blood Facility Staff".

**Results:** organization and function of blood transfusion services in R. Macedonia are divided in two periods: before and after the year 2011. Before the year 2011, Blood Transfusion Services (BTSs) were part of public health hospitals. The Institute of Transfusion Medicine in Skopje (ITM-Skopje) provided blood and blood components for the Clinical Center as well as for the private hospitals in Skopje. Blood processing, control of TTI (Transfusion Transmissive Infections) and distribution of blood products was responsibility for each BTS. ITM-Skopje had a position as an educational and scientific institution, from which came out the national guidelines for different fields of transfusion medicine, education of doctors for specialists in

transfusion medicine and laboratory technicians for certificate – transfusist.

After the year 2011, all BTSs are integrated in one national blood establishment- Institute of Transfusion Medicine of R. Macedonia (NITM). That followed after long period of preparation, supported by two projects: "EFS 2005-2008 for development of the legislative measures for blood safety", realized in cooperation with the French government. As a result of this project, in the year 2007 was introduced the "**Law for safety in blood supply in RM**", which met the EU Directive 2002/98. The second, IPA project: "Strengthening of the Blood Safety System in RM" (2011-2014), provided new equipment (criophygues, freezers, platelet agitators, etc.) and education of 150 employees about the Quality Management System (QMS). After the integration, the NITM is organized in: one Institute of Transfusion Medicine in Skopje (ITM-Skopje), 3 Regional Centers (RCTM) in Bitola, Shtip and Tetovo and 17 Blood Transfusion Services in other cities. There isn't any private blood bank in R. Macedonia. The blood collection is general objective and area of work of all mentioned services. Control of TTI is responsibility of ITM-Skopje and RCTM. The distribution of blood and blood components is under control of NITM, which provide equal distribution for all hospitals and equal treatment according to the patient's needs.

The medical staff that works in the NITM has same social benefits: working hours, vacation, maternity leave etc. All of them have 7 hour working time (instead of 8 hours for other health professions), the social benefit that is a result of the negotiation between the Ministry of Labor and Social Affairs and NITM.

All employees have the same possibilities for further education at master and doctoral (PhD) level, but the expenses for this education is an individual responsibility, is not financially supported by NITM. Only the specializations for medical doctors are paid by the NITM. At national level there are 69 medical doctors, specialists in transfusion medicine.

Laboratory technicians are mainly with high school education. Those who continue the education at college level have slightly higher salaries, but their education is individual responsibility, not financially supported by NITM. There is a 6 month training course for laboratory technicians with high school degree, that are organized in ITM-Skopje, after which there is an exam and certificate, which also provide some benefits in salary. Due to bigger responsibilities and amount of work at ITM-Skopje, the employees have 10% bigger salaries than other RCTM and BTSs.

**Conclusion:** In the future are expected employees to have continuing medical education that will help to improve their knowledge and skills according to the national and Directives from EU. After the mentioned projects there is a big progress in working conditions and it's provided better equipment. Medical staff is aware for the need of further education and training. The Ministry of Health promotes and supports different short and long term educational courses within and outside of the country. Those that have pass educations makes progress with new methods and techniques in different fields and increase the level of services for patient's treatments.

# SOCIO-ECONOMIC STATUS OF BLOOD FACILITY STAFF – SULTANATE OF OMAN

**Dr. Thamina Muhammad Ashraf, Head- Central Blood Bank**
**Department of Blood Services – Ministry of Health**

The Ministry of Health in the Sultanate of Oman is responsible for ensuring the availability of health care to the people of Oman, free of cost except for the non-Omani population. MOH promotes effective participation of private sector in health. The Sultanate of Oman is administratively divided into 11 Governorates with 61 Wilayats. There is governalization of health services and decentralization of decision making in specified technical, administrative and financial affairs.

The blood bank sector in Oman is partially centralized under Department of Blood Services with Central Blood Bank in Muscat Governorate and hospital based blood banks in all the 11 governorates. There are no private blood banks but only transfusion services are allowed in private hospitals with blood bank laboratory services undertaking transfusion practices.
The economic factors influence the health status of the country – showing growing trend during recent years. The economy depends heavily on the oil and gas exports income.

The socio-economic conditions of blood bank staff with the other medical disciplines in MOH institutions remains same for Omani nationals. But for non-Omani professionals, there are differences in salaries and other benefits such as paid annual leave, opportunities to study abroad, etc. Similarly the professionals working in private healthcare sector have differences in salary and other job-related benefits. However, the qualification requirements of staff working in either sector remain the same.

Moreover, post-graduate training and education programmes are open equally to all Omani professionals whether working in centralized or hospital based blood bank institutions.

To conclude, the socio-economic conditions of blood facility staff working in MOH Government sector remains equal and sound but for staff working in private sector, there remains noticeable difference that encourages such staff to opt for government jobs.

## BLOOD SAFETY SCENARIO IN PAKISTAN

**Dr. Farrukh Hasan**
**President, Asian Association of Transfusion Medicine**
**Medical Director, National Hematology Centre & Blood Bank**

Pakistan 6th most populous country worldwide - population of 180 million. The Blood Transfusion System in Pakistan is fragmented and evolved as a result of local initiatives of various types and size of blood establishments. The mainstay of blood banking remains the 'multifunctional' hospital blood banks, complemented by an ever increasing number of private blood banks and NGOs.

In Pakistan hepatitis B and C infections have become widespread, dengue epidemic is a regular phenomenon although HIV/AIDS is present in very low percentage but' with potential to spill over.

The number of blood centres is around 1830 with an annual blood collection approximately 3 million units. Predominantly (>85%), these donations are replacement. The prevalence of HCV, HBV, HIV, Syphilis and Malaria is reported to be 7.1%, 3.76%, 0.04%, 1.16% and 1.78% respectively.

A third of blood collected is transfused to thalassaemia patients (6% carrier rate nationwide). The maternal mortality ratio in Pakistan is (276/100,000 live births) and a major cause of death is haemorrhage. Pakistan, passed Blood Safety Acts/Ordinances during 1997-2004. At the federal and provincial levels, Blood Transfusion Authorities (BTAs) have been notified, however, the fragmented blood transfusion system is difficult to regulate.

QM system remains a challenge though revision of the national standards and SOPs has been done in 2012 but. Just a handful of centers have MIS, both in the public and private sector, therefore data management is preliminary.

The Government of Pakistan initiated a blood safety reform process in 2010 with support from the Government of the Federal Republic of Germany through its Technical and Financial Cooperation components. The first phase of the project is nearing completion,

with the procurement process for the construction, equipment and development of 10 new Regional Blood Centres and 60 Hospital Blood Banks, The scope of the concept of the project is to be expanded through the establishment of partnerships between the public, private and NGO sectors.

Regarding the satisfaction of the technicians in the public compared to the private set up is quite interesting with a sense of great relaxation in terms of job security in the public sector compared to a much better salary in the private sector!

# SOCIOECONOMIC STATUS OF BLOOD BANKERS IN PALESTINE

**Khalid Younis**
**Assist. Professor of Clin. Hamatology**
**Al-Quds University**
**Palestine**

Palestine is one of the Mediterranean countries and part of the Middle East. Historic Palestine has an area of 28,000 $km^2$. At present it is composed of the West Bank (pop. 2.7 mill. and area 5655 $km^2$) and Gaza Strip (pop. 1.8 mill and area 365 $km^2$). Both wings are under Israeli occupation.

Most of the blood banks are hospital-based and still parts of the clinical labs but there is one small central BB in Ramallah. No private blood banking system in the West Bank but present in Gaza Strip. All those working in the BBs are Medical technologists holding BSc degree in Med. Technology but none is a blood bank specialists.

The basic salary of BB staff is similar to that of nurses, X-ray techs and physiotherapists ($450) but differs from that of MD and pharmacists ($550). The danger allowance is highest for nurses and X-ray techs while the career allowance is highest for pharmacists and MDs (120% & 200% respectively). There are no differences between BB staff and hospital staff in terms of social benefit, carrier progress, economic and emotional satisfaction, and future expectation. All workers leave the work for pension at age of 60 years. Qualifications for work are the same for the above mentioned careers except that nurses holding diploma can work.

## ESTONIAN BLOOD SERVICE

**Riin Kullaste**

Estonia is located to the northeast part of the Europe, on the coast of the Baltic Sea. Our neighbours are Russia, Latvia and Finland (overseas). Estonian population is a bit more than 1,3 million inhabitants and the surface is 45 000 $km^2$.

There are 4 blood collection and processing facilities belonging to the hospitals in four directions – north, south, west and east. Those blood centers are independent from each other, but working under the umbrella of the common legislation which regulates collection, testing, processing and quality issues.

Being part of the hospitals makes BE-s tightly connected to the other local medicine system, our doctors and nurses are working under the same conditions and terms as doctors and nurses in the medical wards in the hospital. Any salary or social benefit differences exists. All together 16 doctors, 48 nurses, 24 lab technicians and 53 persons with other qualifications are able to serve 35 000 donors per year who are giving 60 000 donations and over 130 000 different blood products have been produced.

# SOCIO-ECONOMIC CONDITIONS OF BLOOD FACILITY STAFF - ROMANIA

**Georgeta Hanganu**

**Motto: "Man is the measure of all things"**
**(Protagoras - Greek philosopher, 490-420 BC)**

The famous aphorism has passed the test of time, being perfectly true today. In an era of robots, of engineering, when equipment meant to help man, are more efficient, we give less attention to humans. Although they seem lost in the competition with the computers and cars, man remain the most important resource in achieving all things.

Transfusion system in Romania is a national network consisting of 42 blood establishments, financially subordinated to the National Institute of Hematology, which in turn is financially subordinated to the Ministry of Health. National network of transfusion has about 1100 Employees: doctors, biologists, nurses, and administrative staff. Only nurses are enrolled in various union groups that do not possess considerable leverage since there are several hundreds of them working in the transfusion system. Unions are fighting for the interests of the majority, which is constituted by the employees in hospitals.

It is worth mentioning that the contribution of the National Institute of Hematology and the Ministry of Health which in their attempts to ensure that blood products achieve national self-sufficiency and to strengthen the network of transfusion, are trying to equip with modern equipment and reagents all blood establishments in Romania.

One important thing is missing from the health ministry's strategy for strengthening transfusion service in Romania: the concern for providing human resources t transfusion centers. Transfusion

centers in Romania are entirely funded by the state budget and are subordinated financially to the Health Ministry, which is always restructuring their plan, seeking solutions among costs saving, reducing the structures at the base of the system. Therefore all transfusion centers in Romania have a very small number of staff, which is far below the standards given by the Ministry of Health.

There is always an acute shortage of staff, who have to cope with the growing number of donors and professional requirements to achieve high quality blood products. Although transfusion center managers always ask the Ministry of Health to increase the number of staff, which in turn, due to low budget and continuous lack of funding cannot supplement the number of employees. In 2008, the economic crisis brought a drastic restructuring plan, in all transfusion centers, which were meant to be temporary, only until the passage of the economic crisis, which is not yet considered to have passed.

The monthly salary of staff transfusion centers is much lower than staff in hospitals, because staff transfusion center is located on the pay scale at the minimum limit, for economic reasons of the state budget. The hospital staff is remunerated much better, because hospital staff provides medical services that are reimbursed by National Health Insurance House.

Transfusion centers are not considered medical units providing health care, but medical facilities that consume budgetary funds. Blood products are given free of charge to hospitals and therefore is considered that transfusion centers are unproductive, and this context carries on the minimum wage. Until 2008 staff salaries centers were close to those in hospitals, but in 2009 were considerably lowered, and were not increased, as opposed to hospital staff salaries. Hospital staff is located on the maximum of the pay scale of 2008-2009.

Some union groups representing several centers, are suing the Ministry of Health, for accommodating (in accordance with the law wage) employees on the maximum salary scale. Only three (of the 42 centers), managed to get to court, only for the nurses to get payment

to the maximum of the scale, which has created great dissatisfaction among staff across the country.

Furthermore, hospital staff receives monthly food vouchers and gift vouchers for holidays, which, although are provided by law for state employees, they are never given to the staff of the transfusion centers because the state budget is insufficient.

Remunerations of the transfusion center staff that is on call in the afternoon or night is not getting the same payment of hospital staff working shifts. Hospital staff, working Saturdays and Sundays and legal holidays earns 100% salary increase, while staff transfusion centers that run the same program receives regular salary and are rewarded with legal days off, which unfortunately cannot be granted due to lack of staff. If overtime is made especially for mobile collections in different communities that require moving away, in other locations, these hours are not paid because it is forbidden by law to state employees receiving pay for overtime, this is possible only hospital staff. Hospital staff working shifts are well paid, while the staff of centers is not entitled to get paid for emergency program. In hospitals, in blood units, there are bonuses for special conditions of disease risk, such as risk of contracting blood-borne diseases, HIV, which hospital transfusion units can be up to 75% of salary. In 1999, a government decision which states that all staff should receive transfusion centers to the risk of contracting HIV by up to 100% wage increase, was never applied due to economic reasons. A total of up to 10 people around the country have sued the health ministry managed to get that bonus payment in court. The rest of transfusion centers, are supposed to pick just one person (the one working test HIV) that gets half of the (50%) increase, which creates great dissatisfaction among employees.. Hospital staff who works in virology laboratories similar performing HIV tests and working a much smaller number of potentially infectious samples receive 100% increase.

In these economic conditions, it is very difficult to work in transfusion centers in optimal conditions, because it is hard to motivate staff to

work with dedication while being underpaid, be courteous and smile to the public. Visible differences between the situation of the hospital personnel and the personnel of centers with the same level of training, are absolutely demotivating to support the activity. Many employees leave transfusion centers and seek for employment in hospitals. Unfortunately the lack of jobs in Romania and the existence of a large medical staff availability slimes down the chances of employment in hospitals in Romania. Many nurses and doctors choose to seek work in Europe.

In this context the motivating the staff in blood establishment is an art. Creating a pleasant environment, providing trust and respect, are elements that contribute to the development of the activity under optimal conditions, although it is often based on voluntary activity, persuasion and argumentation. Each transfusion center needs their staff to be conscientious, devoted to work, and kind to donors.

It should be noted however that despite economic conditions being very modest, transfusion center staff is still a dedicated staff that works, makes the full duty and provides necessary blood products in Romania.

I wish that these few lines will be a tribute to all those people, honest and humble, the professionals my country and around the world, who work in field of blood transfusion, because without their work, which unfortunately is very little known and far less appreciated, medicine today could not handle all the challenges.

## SOCIO-ECONOMIC CONDITIONS OF BLOOD FACILITY STAFF IN SLOVENIA

**Slavica Stanisic, MD, transf. med. spec.**

The blood transfusion services in Slovenia will celebrate the 70th anniversary next year. It has been organized as a public service so all transfusion-related establishments are non-private and non-profit.

The current transfusion service in Slovenia is composed of the Blood Transfusion Centre of Slovenia (BTCS) with 6 associated remote units at regional hospitals, the Centre of Transfusion Medicine Maribor (CTM) with 2 associated remote units at regional hospitals and the Centre of Transfusion Medicine Celje (CTM).

The entire transfusion service performs the activity of blood collection. The processing of blood into components is performed at the Blood Transfusion Centre of Slovenia in Ljubljana, the Centre of Transfusion Medicine Maribor and the Centre of Transfusion Medicine Celje. The processed blood is returned to the hospitals according to their needs.

Blood testing is performed at the BTCS in Ljubljana and the CTM Maribor. NAT testing is preformed only by BTCS Ljubljana.

Besides blood banking, transfusion services have also developed a range of diagnostic and therapeutic activities.

There is a unified Public sector salary system in Slovenia. Salary scale and salary grades determine salary of every employee. Social benefits such as paid vacation or paid extended working hours are the same regardless working in the BTCS or hospitals.

The BTCS is also teaching Institution for different profiles in the field of transfusion medicine. For that reason, there is a permanent drive for all employees to improve their knowledge and make a progress in carrier to obtain postgraduate title.

To improve and to unify national blood transfusion service of Slovenia, we started with reorganization in 2008. The main goals were professional unification of transfusion activity, equal safety and quality of treatment throughout the country, financial transparency of the blood supply system and equal accessibility.

In terms of reorganization transfusion service and to provide 24/365 permanency for pretransfusion testings and issuing blood components in all transfusion institutions, telemedicine system was introduced in 2011. In that way only one transfusion medicine specialist- consultant (from different locations) covers remote units in hospitals where is on site one laboratory technician or registered nurse.

The main stuff problem in remote units in hospitals with few employees is to arrange permanency. They are more often permanent (24h) and have consequently more extra hours. There is also problem to arrange leave or day off when urgently needed.

There are other kind of differences for stuff in BTCS - more extended and diverse work, work in mobile blood collection sessions, complicated cases in lab, work with difficult patients.

We are aware that there are still some smaller socio-economic differences between BTCS and remote units staff which we try to overcome.

# COMPARISON OF THE SOCIO-ECONOMIC CONDITIONS OF BLOOD BANK STAFF WITH THE OTHER MEDICAL DISCIPLINES - REPORT FROM SPAIN

**Jose Manuel Cardenas. San Sebastian, Spain**

Spain is a country member of the European Union since 1986, with a surface of 505.000 sq Km, and a Pop of 45,5 million. Although divided in seventeen autonomous regions each of them bearing a wide autonomy, there is a common legislation for the whole country regarding the health issues which in turn fall under European Union Directives when applicable. This is the case for everything dealing with blood components: donor selection, drawing blood, processing, labelling and distributing blood to hospitals. The regulations related to the use of blood within the hospital rely on the decisions taken by each Member state, and with the exception of traceability and haemovigilance, there are not any common European rules regarding compatibility testing, issuing blood within the hospital, or blood administration to the patients. Public health services in Spain are managed independently by each regional government, and so are the blood services. All the blood donation in Spain is managed by 23 blood establishments all of them public institutions. The blood donor base is all voluntary altruistic with no familiar, replacement or paid donations. There is a level of 36 annual blood donations per 1000 inhabitants, which is enough to cover the needs of red cells, platelets and clinical plasma, but insufficient for source plasma for fractionation which is covered only in 70% of the plasma products needed, mainly albumin and IV immunoglobulins. There are not programmes for plasma donation specific for anti-tetanic Ig, nor for source plasma anti-D mediated by immunization

**Blood bank personnel**

In the 2013 Meeting of the II-ABD, Anatolian Blood Days, an in-depth analysis of the nurse's role in blood transfusion was followed by a declaration on this key subject. This is why in the current meeting

there is no need to go further in nursing when analysing the blood bank staff positions. Besides medical staff, there are other people engaged in blood transfusion: biologists, pharmacists, administrative managers, laboratory technicians, auxiliary bodies, porters, promoters of voluntary blood donation. While these are important contributors to the efficacy of the blood service in favour of the patients, their position in the blood transfusion process management is rather simple. Much more complex is the physician's role and position within the system. Being this the subject of the III-ABD meeting let us briefly review the comparative positions and interactions of the blood bank medical staff with other medical services, and how they run in the particular circumstances of Spain

**Physicians within blood transfusion services in Spain**

In Spain the medical speciality of "Haematology and Haemotherapy" includes everything related to transfusion medicine. Haematology residents follow a four-year postgraduate programme of clinical haematology, erithropathology, coagulation, blood cytology, and transfusion medicine with only around a six months cycle for this last discipline. The resident's fourth year may be devoted to one single branch which may happen to be transfusion medicine. In these circumstances it is clear that most haematologists in Spain have followed an only six months training in blood transfusion. In any case it must left clear that in Spain there is not a specific and separated speciality for transfusion medicine

Medical doctors may be engaged with blood services in three settings: 1) hospital blood banks, 2) blood establishments, and 3) blood donor services. In no more than 5% of cases it may happen that the same physician is involved in all the three areas mentioned. Medical staff in hospital blood banks belongs to the Haematology Service and all the members must be specialists in haematology after completing the way explained above. Regarding blood establishments, by law their medical director must be specialist in haematology, generally assisted by three - four additional haematologists (the number depends on how busy and large the

institution is), and professionals in other disciplines, biologists, pharmacists, and others. As explained before all blood establishments are public managed, and so are most general hospitals (85% of beds) in the Country. Haematologists in blood establishments and hospital blood banks hold positions similar to other staff in medical disciplines with no differences in administrative status or pay level.

Physicians involved in blood donor selection and assistance in blood collection sessions live a different situation. All of them are linked to blood establishments, with no need to have a specialist diploma in haematology. A few are in fact haematologists but most have a background as general practitioners. Spanish law requires that blood donor sessions must be supervised in place by a medical doctor. In a large majority of cases the physician in charge is himself the donor's interviewer during the blood donor selection process, although this could be carried out by a nurse trained for this purpose. The socio-economic status of these medical doctors within Spain is variable, from a similar status with haematologists to a (slightly) lower status.

# SOCIO-ECONOMICAL COMPARISON OF BLOOD BANK STAFF WITH OTHER MEDICAL STAFF IN TURKEY

**Ünal ERTUĞRUL, MD**
**Unit Manager, Gen. Dir. of Blood Services, Turkish Red Crescent**

Turkey had a dual blood supply organization till the beginning of 2005. Turkish Red Crescent (TRC) Blood Centers were recruiting voluntary non-remunerated blood donors through its donor education and promotion activities while hospitals were accepting mostly replacement donors. TRC's share in the total number of blood and component supply was quite small.

In 2005 Ministry of Health (MoH) and TRC gave a start to "Safe Blood Project" to re-organize and rehabilitate blood services, aiming to cover Turkey's total blood demand only with voluntary, non-remunerated donors. TRC was authorized as the main (and in time the only) national blood supplier by the MoH. TRC started Blood Donation Management, Rehabilitation of Facilities and Product Management, Distribution and Stock Management Projects and achieved considerable development in means of both quality and quantity.

According to MoH/TRC targets, TRC will be covering all national demand in 2016. Currently (Nov. 2014), out of appr.1470 MoH, university and private hospitals only 33 centers (mostly in university, some in MoH training hospitals) are still being authorized to recruit donors and named as "Temporary Regional Blood Centres" (tRBC). Any other hospital that is eligible to transfuse blood components should have a "Transfusion Centre" (TC). Organizational structure of Blood Banking and Transfusion Medicine (BBTM) in Turkey (2014) is given in Table:1.

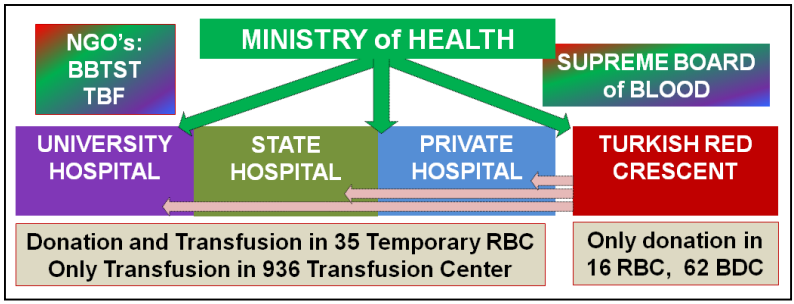



Table 1: Organizational Structure of Blood Banking and Transfusion Medicine in Turkey

Number of staff who work in blood institutions are given in Table:2.

| | Doctor | Other |
|---|---|---|
| TRC | 215 (admin. positions excluded) | 2102 |
| OTHER | 819 | 2386 |
| TOTAL | **1034** | **4488** |

*S: TRC and MoH, 2014*

Table 2: 2014 Figures of Blood Institutions's Staff in Turkey

Blood institutions are not preferable work places for health professionals in Turkey. When compared with the other health professionals who work at the same hospital's clinics, insufficient pre-qualification education, boring routine daily work in a restricted office with a few rooms, usually cited on the basement or the floor below with little or no daylight, less income, high medical and legal hazards, almost no academic career opportunity, little hope for a promotion are the main topics of complaints. This unfair condition

frequently pushes the staff away from BBTM services. This causes lack of experienced staff, repeating trainings for the newcomers, increased clerical or medical mistakes.

Medical staff should a have post-training program certificate on BBTM which is provided and approved by MoH. This certificate is necessary by regulations to work at Blood Banking posts such as Regional Blood Centre; permanent and temporary (RBC), Blood Donation Centre (BDC) and Transfusion Centre (TC). In 1992-2013 6343 specialist doctor, doctor and other health worker have been certified. The trainings are lasting 5 months for RBC doctors, 1 month for BDC doctors and other health workers, 2 months for laboratory staff. Yet, vast majority of the staff of some blood institution are not certified and there are long waiting lists for the nearest certification training course.

Despite their similar diplomas and working hours spent in the hospital blood bank professionals are paid less performance adjustments. This is one of the main reasons of personnel mobility in blood banks.

BBTM is not accepted as an independent medical discipline such as internal medicine or general surgery, etc. and there isn't any post-graduate specialization program based on official regulations. This is a real obstacle for institutions when they need new medical doctors to employ in RBC's, tRBC's and TC's.

Till 2005 TRC was offering lower salaries and could hardly employ doctors. Socio-economic condition of TRC staff improved since Safe Blood Project. TRC was employing 65 donor recruitment team doctors in 2004 and employs 215 team doctors in 2014.

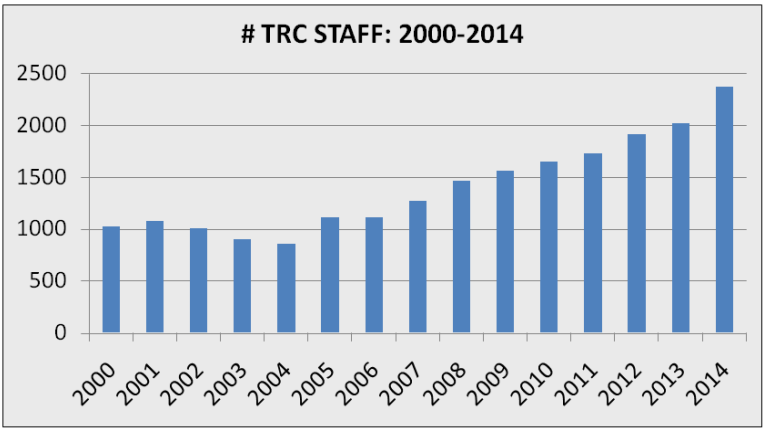


Table 3: Change in Number of TRC Staff

On 01 Jan 2013, number of TRC staff was 1916. 75 leaved during 2013 and turnover ratio is appr. 3,9%. This ratio is lower than other groups of blood institutions. Better conditions influenced human resources policies and institutional performance positively. However, irregular and unpredictable work-days and shifts, large hinterlands of RBC's and unfair donation site conditions are main source of complaints.

Better socio-economic conditions and some academic career opportunities should be provided for the blood services staff, not only for individuals satisfaction, but to strengthen the national blood services system as well.

# EMPLOYMENT AND SOCIOECONOMIC CONDITIONS OF BLOOD BANK STAFF IN THE UNITED KINGDOM

**Brian McClelland, Edinburgh**

The UK has a National Health Service (NHS) that was established in 1948 with the aim of providing Health care for all the population that was free at the point of use, and funded from the national Taxation revenues. Over recent years there have been profound changes in political, demographic, and economic conditions in the UK, and these have inevitably lead to changes in the Health Service including changes in the working conditions, status and qualifications of staff. Politically, there has been considerable movement towards devolution of powers from central government to the administrations of the 3 smaller constituent countries of the Union, namely, Scotland, Wales and Northern Ireland. Each now has its own Parliament or Assembly and these have considerable delegated powers over health and other policy areas. Demographically, the population is both increasing and ageing and as a result has an increasing need for health care. Economic factors such as the rapid expansion of medical technology and the active marketing of it combine to increase the cost of health care at a much faster rate than the general rate of inflation. The UK government has responded to the national deficit since the major economic recession since 2008 by a programme of massive reductions in public spending. Against this background the UK National Health Service is struggling to maintain standards of care in the face of increasing demand and shrinking resources.

Since staff costs are the largest single part of the NHS costs, there are major pressures to reduce the bill for salaries and wages, with inevitable effects on all aspects of employment. One consequence has been moves to transfer some of the NHS's work to private sector (commercial) providers in the hope that increasing competition may lead to increased efficiency and reduced costs The blood component

supply system, which is a part of the NHS, is affected by these pressures, although not yet towards privatisation. (The NHS used to have two major facilities producing plasma fractions, but both are now closed and this area is entirely in the hands of the commercial sector)

The blood component supply system in the UK has two main elements: The large and increasingly centralised "Blood establishments" which collect, process and test blood and supply it to the hospitals, and the Hospital Blood Banks, which supply blood for the needs of individual patients. Several professional groups of staff are involved, including nurses, donor attendants, qualified doctors, and laboratory staff including graduates in biomedical sciences and laboratory assistants who will not usually have an academic qualification. Until 10-15 years ago, terms and conditions of employment across the NHS were largely standardised for each professional group (nurses, doctors and laboratory staff). However with the increasing fragmentation of the system, the mix of staff and the terms of employment are becoming more heterogeneous. In the case of laboratory staff, there is a substantial movement towards the use of highly automated analytic equipment and at the same time, many skilled laboratory staff are being replaced by "laboratory assistant" staff who have little or no qualifications, much lower salaries, and are more likely to have poorer terms and conditions of employment including short term contracts and obligatory shift work. Similar trends affect the nursing staff. Changes such as these affect the Blood Establishments and Hospital Blood Banks as much as all other parts of the NHS.

In this fast changing situation, it is difficult to give a comprehensive comparison of conditions for Blood Service staff with those of others health service employees but it seems inevitable that the constant pressure to reduce personnel costs will continue to lead to poorer conditions of employment, affecting all who work in the NHS.

# SOCIO-ECONOMIC CONDITIONS OF BLOOD FACILITY STAFF IN UZBEKISTAN

**Mayya R. Makhmudova, MD, PhD, Tashkent, Uzbekistan**

Uzbekistan is the most populated country in Central Asia (30,5 million, 447,400 $km^{2)}$. Over the past years, remarkable initiatives have been launched by the Government and Ministry of Health to improve safety and quality of transfusion medicine in the country. Given Uzbekistan's widely dispersed population, a top priority is to have an adequate blood supply that is readily accessible at the point of need.

The Blood Supply in Uzbekistan was founded in 1940 as a hospital based system; however, after the fall of the Soviet Union, political and socio-economic changes caused weakening of highly fragmented old infrastructure.

Starting from 2006 Ministry of Health initiated the reform on centralization of blood service, consisted of 27 Blood facilities and 176 hospital blood banks. It was planned to consolidate the hospital based blood transfusion departments to centralized system of 6 regional blood centers. In transition stage the mixed type of blood supply system exists. All blood facilities are under government regulation, so there is not private blood banking system in the country.

Today, the majority of current blood donors are replacement or family donors (73%), followed by voluntary non-remunerated blood donors (VNRBD -25%) and paid donors -2%. Amongst 120000,00 donations per year, about 70% is collected in Regional Blood Centers.

While there is no significant difference in salaries of Regional blood centers and hospital staff, at the same time low motivation and high turnover in Blood Transfusion System staff are observed.

The social benefits such as paid vacation period, working hours in both systems, and the career progress for hospital staff are higher in comparison with RBC.

There is more opportunity for promotion and conduction of research work, better training and education program in hospitals. Most of the hospitals have numerous certified clinicians, surgeons, traumatologists and anesthetists with higher level of social, emotional and economical satisfaction.

Staff training is one of the most significant aspects for ensuring safety and quality of blood products processing and laboratory screening. The education program and trainings have to be revised in accordance with modern international standards. Qualification requirements for working in a regional blood center/hospital blood bank are the same; nevertheless, finding a job in Regional Blood center is easier than in hospital.

In conclusion, review of socio-economic conditions of blood facility staff in Uzbekistan revealed the key issues which still have to be improved. They include: development of the organizational structure and financial support of blood service; implementation of regular voluntary non-remunerated donor program; raise in employees' salaries and career structure; education and training at all levels, starting with community.

# SOCIO-ECONOMIC CONDITIONS OF BLOOD FACILITY STAFF IN REPUBLIC OF YEMEN

**Dr. Arwa Awn**

**Introduction:** Republic of Yemen faces enormous health challenges. These include rebuilding the infrastructure, strengthening management, re-organizing the Pharmaceutical sector and dealing with drugs shortages, reducing health risks in the population, retraining the workforce and tackling the main causes of the rise in communicable and non-communicable diseases.

The overall aim is to achieve better health for all and to reduce health inequalities while providing high quality services that are affordable, accessible and responsive to the expectations of the population, depends upon improvement in the economic and social well-being and in the lifestyles of the people. It requires investment in improved water and Sanitation services, in better environmental health and in education.

The safety of donors and recipients is of utmost importance. Blood transfusion services, should concentrate on the education, promotion, recruitment and retention of voluntary, non-remunerated donors from low risk populations, with the aim to reach an adequate percentage of quality donors.

**Recommendations:** With a nationally coordinated system, to improve blood services and for safe blood transfusion, needs assessment of blood services infrastructure – buildings and equipment and staff's life improvement, adequate expertise of staff is a prerequisite for a well-functioning system. Educational programs with regular training and proficiency testing must be introduced for all categories of staff.

Standardized and postgraduate training resulting in a transfusion specialty diploma/ specialization for medical doctors, biochemists, biologists, pharmacists and other professionals in the field is to be introduced.

## 1st ANATOLIAN BLOOD DAYS – FINAL REPORT

**The Blood Banking and Transfusion Society of Turkey (BBTST) launched the first Anatolian Blood Days in Antalya Turkey to meet its international and regional responsibilities.**

Representatives from transfusion services in the region surrounding Turkey were invited to participate in a 2-day meeting to explore the various approaches to establish the national policy and regulatory framework in their respective countries.

The meeting was convened in the historic Mediterranean sea resort of Antalya, not very far from ancient port of “Side” with its magnificent remains of the temple of Apollo, and the famous city of "Aspendos"

with its superb roman amphitheater and arena built by the Greek architect Zenon in 155 BC.

Participants from 9 services accepted the invitation to meet with experts from the Blood Banks and Transfusion Society of Turkey (BBTST). The group struggled over the 2 "Anatolian Blood days"; 17-18 November 2012, to share and exchange experience about the challenges each country faced during setting up of the appropriate national regulatory frameworks and the practical measures to establish safe, reliable and sustainable services.

The discussions revealed that the recommendations promoted internationally were not always "fit for purpose" in dealing with the wide range of challenges met in most of the countries participating in this gathering. Some had already achieved a good deal of progress on the road to developing an acceptable structure for their services.

A number were wondering whether they were on the right track and few were almost defeated by the magnitude of their problems and were not sure where to start. They were looking for an opportunity, and this forum was ideal to allow them to share their troubles with

their colleagues in pursuit of the ideal generic "blue print" approach for defining a policy and guidelines that would be suitable to overcome their problems within an appropriate regulatory framework.

The country presentations revealed individual case studies with widely variable needs, challenges and in some services, what can easily be considered insoluble obstacles as in the case of Palestine. The inhuman fragmentation of services dictated by political, societal and geographical conditions resulting in particular difficulties that required special solutions to discover where to start on the road to development.

The representatives of Bosnia Herzegovina described difficulties of a different kind of fragmentation, this unusual form of state found itself emerging in the epicenter of the Balkan conflict with inherent internal malformations leading to its isolation. Trying, with great difficulty, in the midst of intense surrounding pressures, to establish viable services with normal acceptable criteria of quality, safety and reliability proved to be a daunting task.

The uphill struggle experienced by Albania, Egypt, Iran and Turkey, who were on the road to progress. Building the regulatory framework in these countries has taken time, effort and resources. The example of these four countries provided hope to participants from Afghanistan and Tajikistan where services were challenged by very limited infrastructure and lack of human and financial resources. It was clear that when local characteristics are taken in consideration, specific solutions would be discovered, and the appropriate system will eventually start to take shape.

The group realized from the deliberations that the variation in challenges and problems necessitated to formulate tailor-made solutions and that the off- the-shelf recommendations would be unsuitable and very difficult to implement. In fact they agreed that blind application of inappropriate measures might lead to problems

and even disasters.

A consensus, summarized below in the form of a statement, was arrived at after 2 days of agonizing discussions. This declaration would serve as guidance for those services and health authorities trying to establish safe and reliable transfusion systems for their respective communities.

This initiative led and supported by the BBTST provided the suitable forum to formulate a suitable generic "Blue Print". It is hoped that it will prove useful to assist services in trouble and facilitate the efforts of others looking for ways to resolve the problems on the road to progress in order to achieve sustainability and good quality transfusion practice.

The guest participants were later invited to attend the proceedings of the 5th annual national conference of the society. They found themselves sharing with their Turkish colleagues a comprehensive scientific program with state of the art lectures.

BBTST was established in 1996. It has currently over 500 members with an attendance of over 800 participants in the annual national conferences.

The social program was also rich and varied enough to suit all age groups and tastes. One evening was dedicated for the young, enjoying the standing and “hand-waving” concert atmosphere led by a Turkish well known popular "Diva". The star of the second day was the Symphony Orchestra of Antalya with its impressive well-established conductor Emin Guven Yaslicam and Antalya Philharmonic Orchestra. The hall was packed with seated senior members as well as young professionals that would not release the orchestra before two encores!

It has been a revealing experience to share with the Turkish society their 5$^{th}$ Annual Congress as well as the launch of their neighborly international initiative to help services in need and prepare the generic blue print for services and guidance for fellow professionals,

to take them out of their isolation and share experience without intimidation of high tech, high power meetings, in order to find the way for development, progress and sustainability.

It was a non-threatening friendly forum where professionals from the "G 12" services could share their experiences without reservation or embarrassment and reveal their aches and pains, stumbling blocks, serious worries and concerns on the hope to find assistance from the experience of fellow colleagues who were there and just made it.

**Consensus declaration of principles**

1. A national blood policy should identify at a high level the direction and strategies to provide a safe and adequate blood supply to meet the needs of the population. The intentions of the policy should be expressed in legislation, supported where necessary by regulations and guidelines. The legislative framework reflects the agreed national policy and identifies clearly the issues that need to be protected and regulated through the legal system.
2. Health Authorities must endorse National laws, regulations and guidelines on blood banking and transfusion medicine and require that relevant institutions and personnel should comply with them
3. Professional bodies and experts in transfusion medicine should be proactive in initiating and supporting the formulation of the national policy and guidelines.
4. The whole process of transfusion from the donor to the patient - should be supported by national laws, regulations and guidelines
5. The application of National laws, regulations and guidelines on blood banking and transfusion medicine must be supported by an effective quality system and an effective regulatory framework

6. Every country must prepare its own national laws, regulations and guidelines on blood banking and transfusion medicine according to its own situation with regard to its own economic, socio-cultural and health situation. A country in the process of the formulation of national laws and guidelines should examine existing international and national laws and guidelines and may decide to adopt those elements that are considered to be appropriate for that country
7. Development of guidelines on blood banking and transfusion must be the responsibility of those with the relevant professional knowledge and expertise and should be based on the best available scientific and medical knowledge but must also be adapted to each country's health needs and resources
8. The regulatory framework may be published as a single document or as a series of individual documents covering specific topics or meeting the needs of specific user groups. Whatever format is used the documentation must provide all the detailed information required
9. During development of a guideline, it must be made available to relevant personnel for review and their comments must be taken into account in preparing the final document.
10. The completed guideline must be introduced to all relevant personnel by means such symposia, seminars and training courses. It should be widely distributed by appropriate means including making it readily accessible via the Internet.
11. As an essential part of risk reduction, compliance with the guideline should be rigorously monitored by periodic internal and external audit, with prompt feedback of findings to the audited institution and personnel.
12. The impact of the guideline should be evaluated periodically. Guidelines should be subject to a periodic review and should

be updated according to the findings of audit and evaluation and new medical or scientific evidence. The review and updating process should enable relevant personnel to contribute their experience. A new edition or revision of a guideline should be effectively communicated to all relevant personnel.

**Any comments will be appreciated and most welcome by the group and can be sent to:**

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# 2nd ANATOLIAN BLOOD DAYS – FINAL REPORT

**Second Anatolian Blood Days**
**Antalya, Turkey. November 25th – 27th, 2013**
**Sponsored by the Turkish Blood Foundation**

This was a follow up of the initiative launched in 2012 by the Turkish foundation (TBF). The proceedings of that first meeting of this initiative were subsequently reported in Transfusion Today No 94 in March 2013.

The Turkish Blood Foundation continued to take seriously its partnership with neighbouring regional transfusion services to share experience. The Foundation believes that these interactive gatherings will provide fairly quick, practical and easily available approaches to enhance and develop the appropriate solutions required for resolving local problems and improving the quality and safety of transfusion practice in their respective services.

The theme chosen this year for ABD-II was “Bedside Transfusion Safety and Training of the Clinical Nurse”. It was intended to assist participating services to develop the quality of basic and specialised nurse training to improve the nursing skills and input in transfusion practice.

The Turkish Blood Foundation has been engaged since 2008 in evaluating, developing and establishing curricula and training courses for undergraduate and postgraduate training for nurses at a national level, as well as planning guidance and recommendations for in-service training.

International and European efforts to harmonise the general education and training of nurses can be traced back to 1967 in a publication entitled "The European agreement on the instruction and education of nurses". It was published under the Council of Europe Treaty Series. It was detailed in 10 articles and two comprehensive annexes. Unfortunately transfusion-nursing activities were not

included because the transfusion workforce was not regularly exposed to clinical blood transfusion practice and thus not familiar with bedside transfusion protocols.

In 2002 the council of Europe Committee of Ministers recommended that particular attention should be focused on the regular training and assessment of competency of nursing and junior medical staff who are more directly involved in bedside transfusion practice, as part of the hospital's and clinician's role in the optimal use of blood and blood products. This was followed by Recommendation (2004) 18 for the training and education of nurses in transfusion medicine that was adopted by the Committee of Ministers to member states on 15 December 2004

In spite of all these European initiatives training and education of nurses remained neglected with little national harmonisation of courses and national curricula. The training and educational needs remain not keeping pace with the developing patterns and increased participation of nurses in transfusion and their contribution and key position in particular to safety of clinical transfusion. The purpose of the meeting was to develop a consensus on the training of nurses in clinical transfusion.

Services from 17 countries accepted the invitation and completed a questionnaire to survey local approach to education, training and role of nurses in transfusion practice with special emphasis on bedside transfusion safety. This year participation included 8 participants from Asia, 6 from Eastern Europe, 2 from Europe and even 1 participant from Africa; Ghana. The participants presented detailed reports based on the questionnaire (can be supplied on request).

During the meeting 30 transfusion professionals representing; Albania, Belarus, Czech Republic, Ghana, India, Iran, Jordan, Kosovo, Palestine, Pakistan, Oman, Qatar, Romania, Spain, Tajikistan, Turkey and UK, had the opportunity to share their knowledge and

experience in the field and to report on the situation of nurses related to clinical transfusion in their countries.

The country presentations revealed many problems and fully endorsed the purpose of the meeting. The analysis of the data presented reflected the wide variation in standards, quality and approaches to nurse training as well as the wide difference in activities and input of nurses in transfusion practice. Participants agreed generally that a policy for clinical transfusion medicine should be developed at the national level.

They also agreed that comprehensive training for nurses in clinical transfusion should be included in schools of nursing and also at hospital levels. Discussion supported the importance of In-service training and on the job education courses in specific areas such as hospital and bedside transfusion, heamovigilance, stem cell collection, therapeutic exchange and other clinically related areas of clinical transfusion practice. The country representatives fully endorsed the purpose of the meeting as expressed in the following final declaration and consensus statement.

**Anatolian Blood Days Workshop-II**
**Final Declaration and consensus statement**

**Purpose and Activities of the Meeting**

The purpose of the meeting was to develop a consensus on the training of nurses in clinical transfusion. Nurses have a key position in ensuring the safety of blood transfusion in the hospital setting.

To discuss this important subject, the Turkish Blood Foundation convened an international meeting as the subject of the Second Anatolian Blood Days, November 25 -27 2013.

The participants in the meeting took into consideration the official Recommendation ((2004) 18 of the Council of Europe on teaching

transfusion medicine to nurses, which includes the following statements.

*Recent reports on risk assessment in blood transfusion demonstrate that more than 30% of serious adverse reactions and untoward events associated with blood transfusion are due to human errors and system errors in the blood transfusion chain (vein-to-vein). These can be fatal or cause major or minor morbidity to the transfused patient*
*Explanatory Memorandum Item 2*

*Most errors occur in blood sampling from the patient, in prescriptions of blood components, in the laboratory of the blood establishment or blood services, during collection of donor blood and in the ward where blood components are administered*
*Explanatory Memorandum Item 3*

*Haemovigilance systems stress that complications of blood transfusion can be avoided or reduced by the application of safety measures before, during, and after transfusion*
*Explanatory Memorandum Item 4*

*Blood transfusion safety depends largely on the nursing staff (while doctors are responsible for prescribing) involved in the transfusion of patients in hospitals or at home.*
*Explanatory Memorandum Item 5*

*Reports from Europe, the USA and elsewhere on evidence-based practice in the field of blood transfusion, stress that inadequate training of nurses is a key determinant of poor transfusion-related knowledge and practice of transfusion safety measures*
*Explanatory Memorandum Item 6*

*Therefore there is a need to determine common basic principles for pre and post-graduate education of nurses in the clinical setting, and to define a common basis for good transfusion practice*
*Explanatory Memorandum Item 9*

During the meeting 30 transfusion professionals representing 17 countries gave presentations on their own services. They presented evidence of inadequate training of nursing personnel in clinical transfusion that confirmed the need for work on this subject.

After a plenary discussion the participants formed three working groups dealing with
1) The core training common to all of nurses during their initial education (pre-graduate training),
2) The training required for all in-service nurses who have any responsibility in the clinical transfusion process, and
3) The characteristics and role of the nurse dedicated to or specialized in clinical transfusion.

Based on the reports presented by each working group a draft consensus statement was prepared and discussed. The final statement agreed by the participants is shown below.

**Consensus Statement**

1. The curriculum for education and training of nurses in the topic of clinical transfusion

- Should be clearly defined and the method of delivery should be practically achievable.
- The latter requirement is especially important for in service training
- The core curriculum for nurses in training and for in-service nurses should be similar
- In service training should give special emphasis to practical procedures that affect patient safety.
- The pre-graduate core curriculum should preferably be covered as a single block rather than distributed among different parts of the course.

2. The core curriculum should cover the following topics

- Responsibilities of the nurse in clinical transfusion.
- Knowledge of regulations and guidelines on blood transfusion
- Compatibility of the blood component with the patient: ABO types, hemolytic transfusion reactions and prevention. Prevention of Rh immunization
- Description of the main blood components, main indications, storage handling and administration
- Complications of blood transfusion
- Description of the clinical transfusion process
    - Informed consent
    - Request form, sampling and patient identification
    - Receipt and visual inspection of the component unit
    - Pre-transfusion identity checks to ensure that the blood component is the one intended for the patient
    - Baseline observation of vital signs
    - Administration of the blood component
    - Monitoring vital signs
    - Recognition of signs of acute transfusion reactions and initial management
    - Finalization of transfusion (completion of transfusion record, discard of blood pack and giving set).
    - Ensuring traceability of each unit transfused by completing the required documentation

3. With respect to the dedicated nurses in clinical transfusion, it was agreed that role requires a person with good clinical experience and skills, preferably including experience in a clinical specialty in which transfusion is used.

The role involves coordination, communication and the promotion of change and quality improvement, so a successful appointee will have a good aptitude for management. Specific tasks of the dedicated nurse would include

- Leading the implementation of training in clinical transfusion
- Co coordinating Haemovigiliance reporting
- Promoting best clinical transfusion practice
- Co coordinating a program of transfusion audits
- Providing progress reports to the Hospital Transfusion Committee (HTC)
- Participating as a full member of the HTC

Readers are invited to send comments, on the consensus statement and final declaration given below, or share their experience with the Transfusion Society of Turkey by writing directly to:

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