Inter-regional Workshop on 'Blood Donor Selection and Donor Counselling' for Priority Countries in the African and Eastern Mediterranean Region

27-30 June 2011, Nairobi, Kenya

Organized by WHO and Centers for Disease Control and Prevention
Executive summary

Blood transfusion contributes to saving millions of lives each year and improves the life expectancy and quality of life of patients suffering from life-threatening conditions. In fulfilling this responsibility, the blood transfusion service (BTS) should ensure that the act of blood donation is safe and causes no harm to the donor and to the patient. In order to donate blood, individuals should be in good health and free from any infections that can be transmitted via the route of transfusion. Blood transfusion services (BTSs) have a duty of care towards prospective donors who are screened and deferred from donation, whether on a temporary or permanent basis, as well as those who donate blood and are subsequently found to have abnormal test results. Counselling is part of the spectrum of care that a BTS should be able to provide for its blood donors as well as referral to medical practitioners or specialist clinical services.

Counselling and the practice of confidentiality and privacy during donor screening contributes to a safe blood supply by reinforcing donors’ confidence that personal information revealed to BTS staff will be protected. The biggest challenge in most countries is donor counselling guidelines that have not been fully implemented with a few countries not conducting post-donation counselling at all. Confidential treatment of TTI test results especially HIV is very crucial because of the stigma and discrimination following a positive diagnosis.

This is a report of the outcome of the Inter-regional Workshop on ‘Blood Donor Selection and Donor Counselling’ for Priority Countries in the African and Mediterranean regions, which was held on 27-30 June 2011 in Nairobi, Kenya. A total of 32 participants from 14 African and two Mediterranean countries attended the workshop together with international facilitators from Hong Kong Red Cross Blood Transfusion Service (RCBTS), South Africa National Blood Service (SANBS); Kenya National Blood Transfusion Service (KNBTS); CDC Kenya and Atlanta; WHO-HQ Geneva, Regional Advisers and staff from AFRO and EMRO, and WHO Kenya Office.

The workshop shared information and experiences on how donor selection and counselling programmes were structured in the respective countries, identified challenges and constraints, introduced participants to WHO recommendations on "Blood Donor Selection" and WHO/CDC/IFRC implementation guidelines on "Blood Donor Counselling", defined key strategies, developed draft country action plans and made recommendations to WHO, CDC, MOH, NBTS and other stakeholders for supporting or establishing such programmes.

The following were identified as the serious barriers to the implementation of national guidelines on blood donor selection and counselling in many countries: lack of advocacy and policy development, absence of legal frameworks, shortage of trained staff to conduct situation analyses and develop policies and implement plans and systems for blood donor selection and counselling, financial limitations, inadequate facilities and insufficient education materials. The workshop recommendations to WHO and CDC, MOH and BTSs would assist in the development of national guidelines, implementation and monitoring of blood donor selection and counselling practices.
1. Introduction

Blood transfusion contributes to saving millions of lives each year and improves the life expectancy and quality of life of patients suffering from life-threatening conditions. It is a primary responsibility of the blood transfusion service (BTS) to provide a safe, sufficient and timely supply of blood and blood products. In fulfilling this responsibility, the blood transfusion service (BTS) should ensure that the act of blood donation is safe and causes no harm to the donor. This requires the recruitment of voluntary non-remunerated blood donors (for both whole blood and aphaeresis), selection, care and counselling as well as the quality-assured testing and processing of all donated blood, and the safe and rational use in the clinical setting.

Individuals who donate their blood for no personal gain provide a unique and precious gift in an act of human solidarity. Blood donors should therefore be provided with high standards of care and assurance of their health and safety. In order to donate blood, individuals should be in good health and free from any infections that can be transmitted via the route of transfusion. Most blood donors perceive themselves to be healthy, but some are unsuitable to donate blood, either because of the potential risk of compromising or worsening their own health if they donate or because their blood might cause harm to the patient who receives the transfusion. BTSs have a duty of care towards blood donors as well as to the recipients of transfusion. In this regard, BTSs have a responsibility to provide information, counselling and support to help such prospective donors to understand and respond to unexpected information about their health status or personal life. This duty of care extends to prospective donors who are deferred from donation, whether on a temporary or permanent basis, as well as those who donate blood and are subsequently found to have abnormal test results. Counselling is part of the spectrum of care that a BTS should be able to provide for its blood donors as well as referral to medical practitioners or specialist clinical services.

Background

Historically, donor counselling was not widely practised until relatively recently. Some BTSs provided information to donors on test results that were indicative of infection, initially with syphilis and later, as tests became available, for hepatitis B. It was not until the HIV/AIDS pandemic of the 1980s and the introduction of screening tests for HIV that BTSs began to acknowledge the importance of donor counselling, particularly to ensure the safety of the blood supply. Pre-donation counselling was recognized as one element of the strategy to reduce and if possible, prevent the donation of blood by individuals who might have been at risk for HIV and other transfusion-transmissible infections (TTIs), including hepatitis B and C. Post-donation counselling was also acknowledged to be a necessary element of donor management as an adjunct to informing the donors of reactive results or positive test results.
In 1994, the ‘Guidelines for Blood Donor Counselling on HIV’ was published by the International Federation of Red Cross (IFRC) and the World Health Organization (WHO) Global Programme on AIDS, in response to the specific challenges posed by the need to protect blood supplies from HIV infection and to provide support for blood donors who tested positive for HIV. There were also concerns that due to the limited availability of facilities for HIV testing and potential stigma associated with HIV, some donors might deny practicing high-risk behaviour and donate blood for the purpose of finding out their HIV status. These concerns are still true today.

Many countries still relied on family replacement donors or paid donors and were unable to consistently screen all the donated blood for TTIs in a quality assured manner and as such protecting blood supplies remained a challenge. Blood donor selection and counselling by trained specialist staff is considered to be a key component of the blood system in most countries that have well-developed BTSs. It is required at a number of stages in the blood donation process or following blood screening and should be available at any point at which the blood transfusion service has an interface with donors.

In many countries, however, blood donor counselling was not yet available in a structured way. Information reported by 164 countries for 2008 to the WHO Global Database on Blood Safety (GDBS) indicated that worldwide, more than 93 million blood donations were collected each year. Of these, an estimated 1.6 million donations were discarded due to evidence of TTIs during blood screening. In addition, at least 13 million prospective donors were deferred from giving blood due to anaemia, existing medical conditions and the risk of infections that could be transmitted through transfusion. The scale of these discards and deferrals underlined the importance of accurate public information combined with donor education and counselling so that prospective donors who may be unsuitable to donate blood for reasons of their own safety or patient safety may self-defer at any stage in the donation process, preferably before donation. It also highlighted the need to establish counselling programmes for individuals who were not accepted as blood donors or who were found to have abnormal test results.

Many countries had strategies and guidelines on donor selection in place though implementation was not 100% in some of them. The biggest challenge in most countries was donor counselling guidelines that had not been fully implemented with a few countries not conducting post-donation counselling at all. Financial and human resource limitations, inadequate facilities, lack of advocacy and absence of legal frameworks were identified as the serious barriers to the implementation of national guidelines on blood donor selection and counselling in many countries.
Inter-regional Workshop on 'Blood Donor Selection and Donor Counselling' for Priority Countries

To address the challenges in the development and implementation of national guidelines on blood donor selection and counselling, the WHO-HQ Blood Transfusion Safety team (WHO-HQ/BTS), WHO-AFRO and WHO-EMRO, in collaboration with the Centres for Disease Control and Prevention (CDC), USA and Kenya National Blood Transfusion Service organized a 4-day inter-regional workshop to review and update the guidelines and expand the scope beyond HIV to include other TTIs and donor health and safety. The workshop was held in Nairobi, Kenya from 27-30 June 2011.

Thirty-two participants from 16 countries from the African and Eastern Mediterranean regions attended the workshop. The selected countries included those without a nationally established programme for blood donor selection and counselling or have high deferral rates due to TTIs and those with successful donor selection and counselling programmes. The participating countries were Afghanistan, Egypt, Eritrea, Ethiopia, Gambia, Ghana, Kenya, Lesotho, Liberia, Malawi, Pakistan, Sierra Leone, South Africa, Swaziland, Uganda and the United Republic of Tanzania. Two participants were invited from each country, the national blood programme managers/directors of BTS and the national blood donor programme officers/professionals involved in blood donor selection and donor counselling at the national level. Two international experts and staff from WHO and CDC were involved in the facilitation of this workshop. The methodology of the workshop included presentations, group work, discussions, and the development of country action plans and recommendations to BTSs, MOHs, CDC and WHO.

This report shares information and experiences on how donor selection and counselling programmes were structured in the respective countries, identifies challenges/constraints faced by the countries and defines key strategies to strengthen blood donor selection and counselling programmes. The workshop introduced participants to the WHO/CDC/IFRC implementation guidelines on "Counselling Blood Donors" and "WHO Recommendations on Blood Donor Selection" which were used as the basis of this workshop. The report outlines the process followed by the participants in drafting country action plans for the implementation of blood donor selection and counselling programmes and makes recommendations to WHO/CDC and ministries of health to ensure that the global needs to establish national programmes on blood donor selection and counselling are met. The implementation of the strategies and recommendations contained in this report by all countries that have similar challenges will lead to significant improvements in blood donor selection and donor counselling globally.
2. **Official opening ceremony**

2.1. **Keynote and opening address: 'Blood Donor Selection and Donor Counselling’ for Priority Countries in the African and Eastern Mediterranean Regions**

Speaker: Dr Francis Kimani, Director of Medical Services, Ministry of Medical Services, Kenya

Dr Kimani recognized the presence of WHO, CDC through the President’s Emergency Plan for AIDS Relief (PEPFAR), Japan International Cooperation Agency (JICA), Kenya Red Cross Society (KRCS), Community Housing Foundation (CHF), Africa Society for Blood Transfusion (AfSBT) and many other partners that were collaborating in providing technical support to the Kenya National Blood Transfusion Service.

The primary objective of the workshop was to share experiences and to prepare draft action plans for strengthening donor selection and counselling programmes for participating countries. The primary objective of all BTSs is to provide an adequate and safe blood supply and blood donor selection and counselling are considered critical components for achieving this objective. BTSs, through the blood donor programme also have a legal and ethical responsibility to safeguard blood donors as well as the recipients of blood transfusion.

Being a signatory to both the World Health Assembly and the Regional Committee’s resolutions to establish national blood transfusion services, Dr Kimani reported that in 2001 Kenya had established a national service to oversee and manage the country’s blood program. Over the last ten years Kenya had developed the necessary infrastructure to provide a nucleus for the growth of the service. There was a network of six regional blood transfusion centres and nine satellite centres that together constituted the nationally coordinated service. KNBTS was meeting 52% of the country’s blood needs and the blood was collected from carefully selected voluntary non-remunerated donors by dedicated and trained staff. The Ministry was in the process of strengthening the systems within the blood service to ensure that post donation notification of TTI results through counselling was achieved 100% in order to ensure a safe blood donor pool as well as to reduce the spread of HIV and other TTIs. Efforts were focusing on strengthening KNBTS network to be able to meet the country’s blood needs 100% and do away with family replacement donations that were still being carried out in some hospitals due to unmet needs.

Dr Kimani pledged his Ministry’s full support for the inter-regional workshop and declared the workshop officially opened.
2.2. Workshop objectives
Presenter: Dr Neelam Dhingra, Coordinator, Blood Transfusion Safety, WHO-HQ, Geneva

Dr Dhingra outlined the objectives of the workshop which were to:

- share information and experiences on how donor selection and counselling programmes are structured in the respective countries,
- identify challenges and constraints faced by countries,
- define key strategies to strengthen blood donor selection and counselling programmes,
- introduce participants to the WHO recommendations on "Blood Donor Selection" and WHO/CDC/IFRC implementation guidelines on "Blood Donor Counselling",
- develop draft country action plans for the implementation of blood donor selection and counselling programmes at country level, and
- make recommendations to WHO, CDC, MOHs, NBTSs and other stakeholders for supporting or establishing such programmes.

Dr Dhingra encouraged all participants who were mainly decision makers with the mandate to make a difference in their respective BTSs to actively participate and contribute to the proceedings of the workshop in order to produce the best possible recommendations and plans to be implemented at country level.

2.3. Adoption of the agenda and programme of work
Presenter: Dr Christie Reed, Medical Transmission Team, HIV Prevention Branch, CDC, Atlanta

Dr Reed, in introducing the agenda and programme of work for the workshop, gave a brief background of the goal to prevent HIV transmission through blood transfusion since HIV was recognized as a blood borne or TTI. In 1985, the first test to detect antibodies became available. The WHO/IFRC/CDC jointly developed guidance on counselling regarding blood donors. The President’s Emergency Plan for AIDS Relief (PEPFAR) was established to support blood safety as part of HIV prevention. A variety of tests are now available, including rapid tests (which still detect antibodies), nucleic acid tests (NAT), 4th generation ELISA tests can now detect antibodies and antigen with a window period of approximately one week, approaching the sensitivity of PCR for HIV and other blood borne infections. No test is 100% sensitive. Therefore, in order to protect the recipient the donor must be comfortable to self-exclude even without cause. To achieve this, appropriate materials and questionnaires are needed, taking into account the importance of confidentiality, interview and counselling of every donor, every time.
Dr Reed anticipated that the workshop would bring together the latest and best guidance on two key elements namely donor selection and counselling. KNBTS had been involved in the formal review and update process of both guidance materials hence the opportunity they were given to host and also share their experiences. All participating countries would also share their experiences and challenges. Prevention of TTIs is very important in a comprehensive blood safety system from collections to processing and issuing. This was a new beginning that created an opportunity for examining practices and learning from the work of the guidance development groups. The goal is to achieve sustainable programs and participants would benefit from the development of plans and establishing networks with partners during the workshop and with those in the respective countries. The agenda and programme of work was adopted.

3. Country situational analyses on blood donor selection and counselling

3.1. Experiences from Kenya National Blood Transfusion Service (KNBTS)
Presenter: Dr Margaret Oduor, Medical Director, KNBTS

Dr Oduor gave a brief outline on Kenya. The country covers an area of ±582 650 sq. km, has 39 million people and a population growth rate of 3.09%. The population living below the poverty line was 56% with over 80% living in the rural areas. Only ±53% of the population constitutes the target and eligible blood donor base i.e. aged 16-65 years.

KNBTS operates as a division within the department of Diagnostic and Forensic Services in the Ministry of Medical Services. The national coordinating office is headed by a director and a team of line managers in charge of different departments. KNBTS has a network of six regional blood transfusion centres and nine satellite centres. It is mandated to collect, test, process, store and distribute blood and blood products to all the transfusing hospitals in the country.

Key national blood program data for 2010 was as follows: annual total number of voluntary donors was 101 702; total blood collection from voluntary donors was 133 885; total number of donors deferred before donation was 13 956 (13.7%); total number of donors deferred after donation (tested TTI positive) was 5 351 (5.26%) and the total number of donors counselled after donation was 7 500 (7.4%). Due to shortage of staff there was no full time staff assigned to donor selection and counselling. Donor selection was done by nurses while post donation counselling was done by both nurses and laboratory technicians trained in counselling. KNBTS had national guidelines and standard operating procedures (SOPs) on donor selection and counselling that were used at mobile clinics and at fixed sites. Pre-donation counselling was provided to all donors while post- donation counselling was only done to those who presented themselves.
Dr Oduor outlined the challenges as follows: KNBTS had national blood policy guidelines but had no legislation; expertise and the number of qualified staff for donor counselling was inadequate; donor education material was available but in short supply; there were no suitable facilities to ensure donor privacy especially in the field and donor counselling rooms were also inadequate at the donation centres; and referral facilities for TTI, especially Hepatitis B and C and syphilis were not accessible to all due to cost implications.

Expectations from the workshop were to: learn from other countries best practices that can be adopted in Kenya; understand the WHO Guidelines on ‘Blood Donor Selection and Donor Counselling’; plan for the implementation / improvement of the same based on the WHO guidelines and to identify the resources required.

### 3.2. Other country presentations on donor selection and counselling

**Afghanistan**

Presenter: Dr Enayatullah Hashemi, General Manager Diagnostics; Ministry of Public Health

Dr Hashemi gave a brief on Afghanistan. The country’s population is ±25 million. The structure of the blood program is not nationalized, it is fragmented and diffused across the country.

Dr Hashemi reported on the following key national blood program data for 2010: the total number of blood units collected was ±13,200; total percentage of blood donations was 0.5 donations per 1,000 population; total percentage of voluntary non-remunerated blood donors (VNRBD) was 37% and that of family replacement donors (FRD) was 63% with no paid donors (PD) on the donor panel. Prevalence of TTIs in donors was, HIV 0.06%, HBV 3.78%, HCV 1.61% and syphilis 0.69%. Both pre and post-donation counselling was offered but, post-donation counselling was only done for donors that tested positive.

The major challenges were: a low rate of VNRBD; non-availability of trained staff including medical officers, donor recruitment staff and laboratory technicians in all blood centers; the donor database was virtually non-existent and not computerised; lack of appropriate information materials to raise donor awareness and a lack of proper facilities to offer donor selection and counselling in a standardised manner.

The expectation from the workshop was to learn from the WHO guidelines and other countries on how to establish a national and integrated blood transfusion system that will cover the whole country.

**Egypt**

Presenter: Dr Faten M. Moftah, Director-General, Egypt National Blood Transfusion Service (NBTS)
Dr Moftah gave a brief outline of blood transfusion services in Egypt. The NBTS consists of the National Blood Transfusion Centre (NBTC), ten large, seven small regional blood transfusion centres (RBTCs) and six district blood banks (DBBs) which are located in remote areas and are overviewed and technically supervised by closest RBTCs. The rest of the country is covered by other providers of blood services e.g. military, private, universities and governmental organizations.

Key national blood program data from 2010 was as follows: total number of blood donations from VNRBD was 325 625; total number of donors deferred before donation was 33 676; total number of donors deferred after donating was 15 109 (4%); total number of donors counselled was ±10%. There are more than 40 doctors who are responsible for donor selection and two for counselling. Standard operating procedures (SOPs) and guidelines on donor selection were in place and the development of those for counselling was in progress. All donors were counselled before donation but only those with confirmed TTIs were counselled after donation.

Dr Moftah outlined the major challenges which were: spreading the awareness of regular and voluntary blood donations among the Egyptian society; to increase the number of regular, phenotyped donors on the donor panel and converting all family replacement donations including those donating outside of NBTS into VNRBD. The other challenge was shortage of staff.

The expectations from the workshop were: provision of WHO updated guidelines to the NBTS of Egypt; exchange of information and experiences with other countries during the workshop; MOH support to implement a professional national campaign for VNRBD and full implementation of NBTS regionalization programme.

**Eritrea**  
**Presenter: Dr Yifde-Amlak Tesfamariam Baraki, Director, Eritrea NBTS**

Dr Baraki gave the background and organisation of BTS in Eritrea. The Eritrean BTS transformed from being a hospital based blood bank in 1981 to a National Blood Centre which started operating in 2002. The BTS falls under the Medical Division of the Health Services under the Ministry of Health.

Key national blood program data for 2010 was as follows: total number of voluntary donors was 27 780; total blood collections from voluntary donors was 8 864; total number of donors deferred before donation was 18 916; number of donors deferred after donation was 398; total number of blood donors counselled was 14 546; number of deferred donors with confirmed TTIs was 311; number of full-time employed (FTE) staff assigned for donor selection/counselling was 10. Eritrea has national guidelines and SOPs on donor selection and counselling.
The major challenges were: a high rate of low body-weight deferrals (>70% of all deferrals) among secondary school students; insufficient number of eligible blood donors from population sub-groups other than secondary school students; increased number of self-deferrals due to reasons other than risk behaviour among potential blood donors and the reluctance by blood donors to return for their post-donation results.

The expectations from the workshop were to learn from BTSs that have had similar challenges and the solutions adopted to address those challenges and to learn from the WHO/CDC/IFRC implementation guidelines on “Counselling Blood Donors” and WHO “Recommendations on Blood Donor Selection”.

**Ethiopia**  
Presenter: Dr Girma Tesfaye, Director, Ethiopian Red Cross National Blood Transfusion Service (ERCS-NBTS)

Dr Tesfaye gave the background to the ERCS-NBTS. The ERCS-NBTS was established in 1969 under the ERCS HQ. From 1969-1980 it served the hospitals mainly in Addis Ababa. In 1980 they appealed for external support and the Finnish Red Cross responded to the appeal. Three project phases were developed and implemented from 1983-1996 and from 1997-1998 ERCS supported the service from its own resources. Since then support has been from the Global Fund and lately from PEPFAR, all in addition to a government subsidy. ERCS collects between 35 000 and 40 000 units per year.

Challenges: There is an increased demand for blood and blood products from private and government hospitals indicating the need for an effective strategy to recruit 100% VNRBD. The increase from 12 to 26 blood banks needed a revision of the NBTS management structure. There was a lack of clear policy from the government on donor counselling and notification.

The expectations from the workshop were to share experiences and learn from other countries’ successful strategies that could also be implemented in Ethiopia.

**Gambia**  
Presenter: Mrs Aminatta Sarr-Bojang, Programme Manager, Gambia NBTS

Mrs Sarr-Bojang gave a brief background to the NBTS. The NBTS had recently been established by the Ministry of Health and Social Welfare as the unit responsible for providing safe blood and blood products for transfusion. It is largely hospital based with 80% of the blood supply coming from family replacement donors (FRD) and only 10% from voluntary non-remunerated blood donors. The NBTS was only allocated a budget for 23 staff salaries. The target donor population was youths from schools and other learning institutions. All blood donors were counselled before donating and only those who were interested to know their results were post-test counselled before results are
given out. Donors who were confirmed positive were referred to a clinic for further support.

Key national blood program data for 2010 were: blood units collected from FRD were ±3 800 (80%); from VNRBD ±1 200 (20%); donors which were deferred before donating were ±400 and donors which were deferred after donating were ±100.

Mrs Sarr-Bojang outlined the major challenges as follows: having no national guidelines and standard operating procedures (SOPs) on blood donor selection and counselling; no proper methods for donor selection; absence of NBTS staff at the regional levels; none of the staff had received any formal training in transfusion practice; low availability of donor recruitment materials; inadequate funding; insufficient supply of rapid test kits; there were no confirmatory tests; and no systems for donor record keeping. The expectation from the workshop was to learn from the experiences of other countries.

**Ghana**

Presenter: Dr. Lucy Asamoah-Akuoko, Medical Officer

Dr Asamoah-Akuoko outlined the background and BTS situation in Ghana as follows: Ghana covers an area of 239 480 sq. km with a population of ±24million and only ± 55% constitute the eligible donor population age range 17-60 years.

The Blood Transfusion Service in Ghana transformed from being a regional BTS in 1960 to become the National BTS in 1973. The National Blood Programme (NBP) was adopted in 2006 by Cabinet and a draft National Blood Service (NBS) Bill was awaiting parliamentary approval to establish the NBS as an agency of the MOH. The NBS was coordinating a fragmented system with a total of 153 fixed sites for blood collection, testing, processing and usage and an additional 21 facilities involved only with usage.

Key national blood program data for 2010 were: total number of voluntary donors 11 261; total blood collection from voluntary donors was 20 699; total number of donors deferred before donation 1 871; total number of donors deferred after donation 1 137; total number donors counselled 21 800; number of FTE staff assigned for donor selection / counselling was 21. National guidelines and SOPs on donor selection and SOPs in donor counselling were in place but there were no guidelines.

Dr Asamoah-Akuoko stated that the major challenges were: inadequate numbers of appropriately trained personnel; absence of a regulatory framework; underdeveloped quality systems and structures; inadequate, old facilities and equipment; extremely low percentage of regular voluntary and high percentage of family replacement donors with unreliable contact details; non-availability of a software for donor information management and inadequate funding for implementation of the National Blood Donor Programme.
Expectations from the workshop were to: share information and experiences with other participants; familiarise with the WHO/CDC/IFRC implementation guidelines on "Counselling Blood Donors and WHO "Recommendations on Blood Donor Selection"; obtain the requisite information and develop a draft action plan for the effective implementation of donor selection and counselling programme in Ghana and to acquire the competency to be able to improve on blood donor selection and counselling.

Lesotho

Presenter: Ms Maleqhoa Grace Nyopa, Manager Lesotho Blood Transfusion Service

Ms Nyopa gave the following background information. Lesotho Blood Transfusion Service (LBTS) is a national blood transfusion service providing blood to all the hospitals in the country. There were two regional blood banks (RBB) that had just started operating in June 2011 and were not yet fully functional. The main purpose of the RBB is for blood collection, storage and distribution to the hospitals in the region. All the TTIs are screened at the Central Blood Bank.

The key national blood program data for 2010 was: the total number of voluntary donors was 4,708; total number of blood collections from voluntary donors was 3,735; total number of donors deferred before donation was 1,099; total number of donors deferred after donation was 216; total number of donors counselled was 1,159; total number of FTE staff assigned to donor selection and counselling was three. The LBTS currently had a medical assessment guide for donor acceptability and draft SOPs for donor selection. One counsellor was formally trained to select donors, the other two had only received an orientation. A questionnaire, pre-donation counselling and physical check are used to select donors. There are no guidelines for blood donor counselling though staff are trained to provide counselling and all donors who donate at the BTS centre are counselled.

Ms Nyopa presented the following major challenges: shortages of staff and vehicles resulting in only donors who are able to come to the centre receiving post-donation counselling; some donors, especially the family/directed donors do not give the correct information during pre-donation counselling and donors were used to the old system when there were no counsellors at the LBTS.

Expectations from the workshop were to get assistance from other countries in developing standard guidelines for donor selection and counselling and continued training and follow up of countries on implementing donor selection and counselling programme.
Liberia
Presenter: Mrs Lwopu M. Bruce, Program Manager

Mrs Bruce stated that Liberia has a population of ±3 million with more than 50% consisting of the youth and covers an area of 43 000 sq. miles.

Liberia is signatory to the WHO resolution WHA 28.72 which encourages member states to develop and promote national blood transfusion services based on voluntary non-remunerated blood donation, and had a long history of blood donation that relied on family replacement and paid donations together contributing 95% of the blood supply. There were two regional blood banks and all donors were screened using rapid tests before donation. Donors are encouraged to come for their test results. Units donated at outreach blood drives that tested positive were discarded.

Mrs. Bruce presented the following key national blood program data for 2010: total number of voluntary donors was 229; total number of blood collected from voluntary donors was 216; total number of donors deferred before donating was 25; total number of donors deferred after donation was 35; and total number of donors counselled was 229. There were no guidelines or SOPs on donor selection and counselling.

The following major challenges were presented: no legislation and no policy on blood safety; a lack of resources to promote awareness of blood donation to the general population; general challenges in the process of transitioning to a system of unpaid donation; and myths and misconceptions that prevent blood donation affecting the ability to collect sufficient blood to meet the demand.

Expectations from the workshop were to learn from other countries as Liberia had an under-developed program and to obtain guidance in the development of critical documentation needed to improve on blood safety practices.

Malawi
Presenter: Dr Bridon M'baya, Medical Director, Malawi Blood Transfusion Service

Dr M'baya gave the following background information: Malawi had a population of ±13.1 million; 85% of the population was rural, national HIV prevalence was 12.2% (patient). Major health problems included malaria, TB, HIV-AIDS and a shortage of health personnel.

Key national blood program data in 2009: total number of voluntary donors donating was 37 276; total blood collection from voluntary donors was 37 276; total number of donors deferred before donation was 3 617; total number of donors deferred after donation was 526 and the total number of donors counselled was 40 883. The number of FTE staff assigned to donor selection / counselling was 16. National guidelines on blood donor selection and donor counselling were available and the staff was trained on the guidelines.

Dr M'baya reported on the following challenges: high prevalence of heterosexual HIV transmission in the general population; undefined national epidemiology of HBV and
HCV; poorly functioning electronic blood donor information management system; ineffective system for giving out TTI results and no referral services for hepatitis.

Expectations from the workshop were to learn from other country experiences especially on notification of TTIs and to get an overview of the updated WHO guidelines.

**Pakistan**

Presenter: Professor Mahfooz-Ur-Rahman, Director Institute of Blood Transfusion Services

Professor Rahman gave the following background information: Pakistan has a population of ±165 million people; covers an area of 796,096 sq. km with a literacy rate of 56% and an urban population of ±32.5%. The blood transfusion services in Pakistan vary from region to region, mostly fragmented to reasonably well organized; both public and private blood banks exist being predominantly hospital based with little concept of centralization; around 1.5 million units of blood are transfused annually with 80-85% as whole blood; and more than 70% of the demand is met by the public sector. However this also varies widely across the country and regulatory controls are weak to non-existent.

Professor Rahman reported on the key national blood program data for 2010 as follows: the number of total blood donations was 1,286,863 with 5.5% VNRBD; HIV prevalence was 0.001%; total number of registered donors was 1,349,920; total number of donors bled was 1,286,863; total number of donors deferred before donating was 63,057 and total number of donors deferred after screening was 96,515. Reliance is predominantly on family or replacement donors rather than voluntary donors due to a number of factors such as low literacy rate; lack of awareness; cultural taboos; socioeconomic factors and lack of trained staff. National guidelines and SOPs on donor selection and counselling are available but there is no adequately trained staff to provide donor counselling and as a result no counselling is conducted at all.

The major challenges were: the integration of the existing fragmented hospital based system into a centralized blood transfusion system; the introduction of non-remunerated voluntary blood donation system; introduction of centralized ELISA screening; introduction of donor retention and recall system; and capacity building of available human resources.

Expectations from the workshop were to share and learn from the experiences of countries which have attained success in establishing blood donor selection and counselling programmes and to develop an action plan that can be implemented in relation to the situation in Pakistan.

**Sierra Leone**

Presenter: Dr Sam Baker, Program Manager BTS Program, Sierra Leone

Dr Baker gave the following background information. Sierra Leone is a low income country with a national HIV sero-prevalence of 1.53% in the adult population. The NBTS
policy statement requires that the Government ensures the establishment of a national blood transfusion service based on VNRBD from low risk populations and ensure that every citizen has access to safe blood. The strategic goal and plan were to implement a nationally coordinated blood transfusion program and ensure accessibility to safe blood and blood products for all patients in need nationwide. There were in total 44 hospital blood transfusion outlets made up of 27 public, three private, 11 mission and three non-governmental organisations.

Key national blood program data in 2009/2010 was as follows: the number of total blood donations was 2,500 (2009); total blood collection from voluntary donors was 1,905 (2010); all donors were counselled but the number of donors deferred before and after donation was not recorded. National guidelines and SOPs on donor selection were available but there were none for donor counselling and there were no adequately trained staff for both donor selection and counselling.

There were efforts to improve the situation e.g. 418 blood donor promoters had been trained throughout the country to support the four regional blood donor recruiters. Over 60 community based blood donor organizations had been established to facilitate a move towards an increased VNRBD base.

Dr Baker reported on the following challenges: inadequate or lack of funds and logistics to run the National Safe Blood Transfusion Services (NSBTS); no referral system for blood donors with hepatitis positive results; no proper office infrastructure for the NSBTS and inadequate human resources.

Expectations from the workshop were to be able to leave the workshop more enlightened, having had opportunities to share experiences with other developed blood services in the region and to explore possible ways of resource mobilisation for infrastructure development.

**South Africa**

**Presenter:** Mrs Cynthia Sims, Haemovigilance and Donor Counselling Professional Nurse, Western Province BTS

Mrs Sims gave the following background information. South Africa has a population of ± 49 million people. The South Africa National Blood Service (SANBS) and the Western Province Blood Transfusion Service (WPBTS) are community based health organizations founded by an association of voluntary blood donors dedicated to providing the safest possible blood products and efficient service to the South African community. The transfusion services are non-profit making organizations and report directly to the Department of Health. In the general population there are more blacks than whites but, within the blood donor population 60% of donors are white, 23% black, 9% coloured and 8% Asian. The entire donor base is 100% VNRBD.
The 2010 key national blood program data was as follows: the total number of voluntary donors donating was 465,783; total blood collection from voluntary donors was 907,123; total number of donors deferred before donation was 88,950; total number of donors deferred after donation (viral marker reactive) was 4,186; total number of donors counselled (HIV) was 250 and the total number of FTE staff assigned for donor selection / counselling was 1,066 for selection and 13 for counselling. The youth (16-25 years) contribute ±39% of all blood donations. HIV prevalence amongst blood donors was 0.182% in 2010. Guidelines and SOPs on donor selection are available but the documents for donor counselling were being developed. The guidelines were yet to be nationalized. All donors that test positive for HIV were notified and counselled either at the donor sites or were otherwise referred to other external health facilities for counselling and further support. Due to the large numbers of blood collections, South African BTSs are not able to offer pre-test counselling to donors.

Some of their major challenges were: lack of privacy at mobile venues; insufficient time to conduct donor interviews; donors were reluctant to spend additional time with extended interviews and counselling; limited human resources for interview and counselling; language differences; difficulty tracing donors with confirmed TTI results; limited accessibility to donors in rural areas; problems with medical referral to local clinics; mentoring of counsellors over wide spread area and monitoring of efficiency of the counselling programme.

Expectations from the workshop were: to be able to work in collaboration with other countries and share information; to measure own processes and identify areas where these can be improved; the formation of a professional expert body in the field on donor selection and counselling and the elaboration of WHO guidelines on donor selection and counselling.

Swaziland
Presenter: Mr Stanley Mtemeri, Quality Assurance Manager Swaziland NBTS

Mr Mtemeri gave the following background information: Swaziland has a population of ±1 million people. The national blood programme is headed by a director and is funded by Government with a separate budget line from laboratory services. Alternative funding is sourced from National Emergency Response Council on HIV/AIDS (NERCHA) (Global Fund), Safe Blood for Africa Foundation (SBFAF), Italian Cooperation, WHO, PEPFAR and CDC. The SNBTS has a separate building at the hub of the country and a newly completed headquarters in Mbabane now operational. The National Blood Policy, a 5-year strategic plan and SOPs were in place. Swaziland has 100% VNRBD but, hospitals refer family replacement donors to blood bank where they are motivated to become VNRBD.

The 2010 key national blood program data was as follows: current blood collections stand at 10,000 units per year, HIV prevalence is less than 2%, and 90% of blood
collections are from mobile clinics and only 10% from fixed sites. Pre and post donation counselling is conducted by trained nurses. Expectations from the workshop were to be able to form networks with other countries, share experiences and learn from their successes.

**Tanzania**

Presenter: Dr Efesper Nkya, Programme Manager Tanzania NBTS

Dr Nkya outlined the following background information. The National Blood Programme under MOH coordinates all activities concerned with blood donor recruitment, collection, testing, processing, storage, distribution and clinical use of blood and blood products. All activities are carried out within a network of national, zonal, and regional centres and blood banks. The Republic of Tanzania started actively addressing the World Health Assembly Resolution WHA 28.72 (1972) from 2004 and this was possible through the support from PEPFAR through CDC and technical assistance from AABB. All blood donors received pre and post donation counselling and ±63% post donation counselling was done for 2010. HIV prevalence among VNRBDs dropped from 7.8% (2007) to 1.2% (2010). SOPs and donor history questionnaire were available and all staff was trained on donor selection and counselling. However, there were no national guidelines on donor selection and counselling.

Dr Nkya outlined the key national blood program data for 2010 as follows: total number of voluntary donors donating was 120 000; total blood collection from voluntary donors was 160 000; total number of donors deferred before donation was 12 480; total number of donors deferred after donation was 10 400; total number donors pre-donation counselled was 120 000 and post-donation counselled was 100 800 and the total number of FTE staff assigned for donor selection/counselling was 24.

Major challenges were: inadequate numbers of skilled staff; inadequate transport facilities; delayed confirmatory lab test results for reactive screening tests; reluctance of some donors to receive results though having initially consented to receive them; blood donors are not readily available for post donation counselling; ill-defined referral systems; and inadequate funds for post donation counselling.

Expectations from the workshop were to: be able to share knowledge and experiences in blood donor selection and counselling with other countries; understand the challenges and come up with strategies to improve blood donor selection and counselling; come out with guidelines on selection and counselling and for each country to develop an action plan to be implemented at country level.

**Uganda**

Presenter: Dr Dorothy Kyeyune Byabazaire, National Programme Manager, UBTS

Dr Byabazaire provided the background information on the Uganda Blood Transfusion Service (UBTS) which is an MOH semi-autonomous organization responsible for
providing safe and adequate supplies of blood to all hospitals for the management of patients throughout the country. The UBTS works closely with the Uganda Red Cross Society (URCS) in the area of voluntary blood donor recruitment. UBTS operates seven regional blood banks (RBB) that are supported by six blood collection centers and each RBB is managed by a medical director.

Key national blood program data for 2010 was as follows: the total number of voluntary donors donating was 128,283; total blood collection from voluntary donors was 181,064; total number of donors deferred before donation was 14,485; total number of donors deferred after donation was 9,566 (5.28%) for TTIs and the total number of donors counselled was 126,101 (69.6%). National guidelines and SOPs on donor selection and counselling were available. All staff conducting donor selection and counselling were trained and all donors were counselled regardless of the sero-status.

Dr Byabazaire indicated that some of the major challenges were: inadequate funding to run the counselling program, (mainly for logistics, vehicles, fuel, vehicle maintenance and for staff allowances); inadequate numbers of staff trained in counselling; inadequate referral centres; and a lack of facilities to ensure confidentiality especially at clinics held out in the field.

Expectations from the workshop were to: be able to understand the implementation of a monitoring and evaluation program for blood donor counselling; understand ethical and legal issues in blood donor counselling; get a training curriculum for blood donor counsellors and establish networks to improve blood donor counselling in the region.

4. Introduction to blood donor selection

4.1. Introduction to the "WHO Recommendations on Blood Donor Selection for Assessing Suitability for Blood Donation"

Presenter: Dr Neelam Dhingra, Coordinator, Blood Transfusion Safety, WHO-HQ, Geneva

Dr Dhingra gave an introduction to the “WHO Recommendations on Blood Donor Selection for Assessing Suitability for Blood Donation” by highlighting the importance of blood donor selection towards blood safety, donors' health and safety as well as the protection of recipients' health from infections that are transmissible through transfusion. She also emphasized the significance of having national donor selection criteria that will be consistently applied to all categories of donors, and the immediate local factors that the BTS needs to take into account when developing the criteria like the burden of diseases, health facilities and available resources, and the relevant legislation and regulatory requirements. The WHO recommendations on blood donor selection are there to guide those countries that do not have or are in the process of developing and implementing national criteria for blood donor selection and those without effective national systems for assessing donor suitability. The BTS needs to
ensure that in the process of establishing national systems and donor selection criteria, the evidence collected is unbiased, up-to-date, relevant to users, and is based on internationally accepted principles of best medical and transfusion practice and expert opinion. Copies of various WHO recommendations or resource materials including those for donor selection and donor counselling would be given out to all attendees of the workshop.

The participants at the workshop were mainly decision makers in their respective BTSs. In view of this, it was expected that very meaningful recommendations, action plans and decisions would be made at the workshop. All the valuable inputs into the guidelines would be appreciated and would be captured into the final documents to be published. The topics that would be covered in Part 1 ‘Establishing a National System for Blood Donor Selection’ and Part 2 ‘Criteria for Blood Donor Selection’ of the Blood Donor Selection were briefly introduced to the participants.

Dr Dhingra gave the following general WHO recommendations on blood donor selection.

- Each country should establish a national system for assessing the suitability of individuals as potential donors for whole blood and/or apheresis procedures
- All prospective whole blood and apheresis donors should be assessed for their suitability to donate, on each occasion of donation, prior to blood collection
- National donor selection criteria to protect the health and safety of blood donors and the recipients of transfusion should be defined on the basis of epidemiological and clinical evidence and, where this is lacking, on best practice
- Donor selection criteria should define donor deferral periods for specific health conditions, the use of specified medications and specific lifestyle and behavioural risks
- Donor selection and deferral policies for the prevention of TTI should be based on up-to-date information on the local epidemiology of infection, the markers screened for, the availability of suitable blood screening assays and the technology in use
- Confirmatory testing for TTI should be applied before notifying donors with positive or inconclusive screening results of their infectivity status
- BTSs should maintain surveillance of emerging infections and assess the risk of TT and determine the need for action
- Donor selection criteria should identify those individuals whose blood might harm specific recipient groups, including individuals with sickle cell trait and G6PD deficiency
- BTS should have systems for the counselling of prospective donors and referral for further investigation if any abnormalities are found
• Adequate resources should be made available for the consistent and reliable assessment of blood donors
• A sufficient number of qualified and trained staff should be available for the blood donor programme, including blood donor selection
• There should be a national procurement policy and supply system to ensure the quality and continuity of equipment and consumables required for assessing the suitability of blood donors
• Quality systems should be in place for all elements of the blood donor programme, including standards, training, documentation and assessment
• BTS should establish mechanisms for the monitoring and evaluation of the donor selection to help to ensure that donor education, selection and deferral strategies are up-to-date and effective
• There should be regulatory mechanisms for oversight of the activities of blood transfusion services, including blood donor selection

Dr Dhingra encouraged all participants to be actively involved in all the topics and activities of the workshop in order to contribute and assist WHO in consolidating the guidelines and recommendations that would reflect consensus on the views from all the participating countries.

4.2. Rationale for donor selection and counselling and steps in the donor selection and counselling process

Presenter: Dr Neo Moleli, Lead Consultant Donor Services, SANBS

Dr Moleli explained that the rationale or primary objectives of blood donor selection are to provide safe and adequate blood supplies to meet the clinical needs of all patients requiring transfusion and to ensure that the donor is not harmed by the blood donation process. The objectives may be achieved by:

• ensuring that unsuitable donors are deferred either temporarily or permanently;
• ensuring patient safety by collecting blood only from safe donors;
• optimizing donor safety by collecting blood only from healthy donors;
• reducing unnecessary deferral of safe and healthy donors and
• minimizing wastage of resources resulting from the collection of unsuitable donations.

There are eight major steps of the blood donation process that would be discussed in much more detail during the workshop and they are:

4.2.1. Donor education and recruitment leading to registration/enrolment: this is the first major step towards a successful recruitment programme.
4.2.2. Pre-donation information: this is aimed at increasing donor awareness of the donor selection criteria.
4.2.3. Completion of the donor questionnaire: the form needs to be user-friendly.
4.2.4. Pre-donation counselling: donor confidentiality, rights and responsibilities including self-exclusion are all very important during this process.
4.2.5. Pre-donation advice: this is aimed at preventing donor adverse events.
4.2.6. Medical interview on a one-on-one basis: (following completion of the donor questionnaire), ensures that the donor has understood the questions and answered correctly.
4.2.7. Health check: ensures that the vital signs are normal before donating.
4.2.8. Informed consent: this can only be given after information has been provided and all risks have been explained to the donor.

Dr Moleli emphasized that all the steps were important for the success of the donor selection process and they cannot be compromised.

5. Establishing a national system for blood donor selection and counselling

5.1. Requirements for a national system for blood donor selection
Presenter: Dr Christie Reed, Medical Transmission Team, HIV Prevention Branch, CDC, Atlanta

Dr Reed explained that there are six main elements necessary for establishing a national system for blood donor selection. These include policy and legislative framework, financial resources, infrastructure and facilities, human resources, quality system, and donor information and education. The goal of the policy and legislative framework is to protect the health of donors and recipients as well as to ensure that there is provision of information, confidentiality, result giving and referral for counselling and further care. WHO also recommends that there is need for a national blood policy, a national blood plan and a legislative framework. BTSs need to be familiar with the International Society of Blood Transfusion (ISBT) Code of Ethics for Blood Donation and Transfusion. Donor rights and responsibilities and donor counselling and information on adverse reactions should always be considered and donors should be informed if they have been harmed.

Adequate financial resources are an essential element and a dedicated budget for donor recruitment and selection to address all aspects including staff training, administration costs, donor information and education materials, and all supplies and materials needed for medical assessment of donors. The implementation of a system on donor selection must be done in a cost effective manner, avoiding bleeding unsuitable donors and reducing wastage from unnecessary discards.

Dr Reed stressed that staff working in blood collections or donor clinics need to be skilled, knowledgeable and competent in all the steps of donor selection. It is important to maintain such competent staff by observing all the factors that contribute to staff retention like continued training and skilling, defined career pathways, promotions, and performance appraisals among others. A properly implemented quality system ensures
good record keeping, traceability and meets the applicable legal requirements. The system should be uniquely coded and secure; should also capture haemovigilance data; monitor the maintenance and calibration of equipment; and staff should be well trained on the system. Donor information and education is crucial because prospective donors should understand the concept of safe blood and the relevance of their own health and lifestyle to blood safety. Instructional and educational materials should be easily accessible to the relevant staff and information materials and media messages should be understood across all educational levels. The elements of a national system for donor selection form the core of a national blood service.

5.2. Developing national guidelines on blood donor selection

Presenter: Dr Jean-Baptiste Tapko, Regional Adviser Blood Safety, WHO (AFRO)

Dr Tapko said that BTSs must provide guidelines to all staff involved in donor selection and donor care. He explained that the development of the national guidelines and donor selection criteria should be a consultative process, based on the best available evidence and international best practice taking into account factors like local epidemiological data on infectious diseases, risk behaviours, cultural practices, nutritional and health status of the population. Once developed, the national guidelines and donor selection criteria should be consistently applied to all donors across all categories and should be regularly reviewed and updated in response to changes in epidemiology, advances in technology and new evidence.

The process of development starts once the decision to develop the guidelines has been made. This is followed by literature review, assessment, development of the first draft, sharing of the draft with all stakeholders and the finalization and dissemination of the guidelines. The decision to develop guidelines is a top level decision usually made by the director of NBTS who will appoint a task team that will push the process through all the milestones and deadlines within the budget and resources provided. The team will embark on literature review from international, regional and national publications, international guidelines comparing with other countries, best practices and results of researches. The assessment needs to consider existing practices and protocols, cultural specificities and beliefs, literacy level of the population, TTI epidemiology, country geography and demography, normal adult weight for females and males in the country and normal haemoglobin levels in the population.

Dr Tapko outlined the content of the guidelines which must include an introduction, background, objectives, staff and skills required, donor selection criteria, donor selection questionnaire (as an annex), confidentiality, pre and post donation information, information on TTIs, donor counselling (pre and post), medical interview and medical check, donor deferral and donor referral, donor records, donor database, monitoring and evaluation of the donor selection process, post donation care, process of donor selection and other sections like the preface, foreword, list of acronyms, glossary
and annexes. The guidelines should provide clear guidance on processes and procedures, be written in a simple, clear and easy to read language, not be too big, and should guide and not confuse.

5.3. Assessing the suitability of prospective blood donors

Presenter: Dr Kit Lin, Chief Executive & Medical Director, Hong Kong RCBTS

Dr Lin gave the fundamental considerations in assessing a prospective donor's suitability to donate which include age, good health, capacity to understand the information provided, honesty in answering the questions asked and an informed consent to the donation process. The principles in the implementation of donor selection criteria are that: staff should be suitably qualified and highly trained in their specific tasks; the health of the donor and safety of the recipient in receiving blood must be safeguarded; only individuals in good health should be accepted as donors of blood and blood components for therapeutic use; a prospective donor’s health status and medical history should be evaluated on the day of donation by a suitably qualified and trained person; blood donation should be based on regularly reviewed medical selection criteria without discrimination of any kind; and good communication between the donor and the BTS staff should be established and demonstrated to be effective.

The BTS should provide appropriate information, develop understandable questionnaires and suitable forms to obtain donor's informed consent. Providing referral for further investigation and treatment for donors with medical problems revealed by donor selection or blood screening is also a BTS duty of care.

Dr Lin outlined the steps in the donor selection process as follows:

5.3.1. Pre-donation information: this is aimed at increasing donor awareness of the selection criteria, the process of blood donation and the tests that will be performed on donor's blood, in order to discourage blood donation by individuals at high risk for TTIs.

5.3.2. Donor registration/enrolment: this is important for record purposes.

5.3.3. Completion of the donor questionnaire: this stresses the significance of the questions and the need for the donor to provide accurate and honest information.

5.3.4. A confidential medical interview: this is to ensure that the donor understands the questions, answers correctly, and meets the basic health requirements. Privacy and the assurance of confidentiality are essential if donors are to disclose sensitive information.

5.3.5. Informed consent: this can only be given in the light of adequate information and knowledge, including risks associated with the donation procedure and risks of infected blood to recipients.

5.3.6. Donor deferral and counselling: deferred donors should be treated with respect and care, and should be given a clear and accountable explanation of the reason for deferral in a confidential manner.
Dr Lin concluded by emphasizing that monitoring and evaluation of the donor selection process is also an essential element. Various indicators may be used for measuring e.g. the numbers of donors completing blood donation, deferrals, donors who self-defer, incomplete donor questionnaires, the rate of adverse donor reactions, prevalence of TTIs in screened donations and the number of confirmed positive donors.

6. Criteria for blood donor selection

6.1. General donor assessment

Presenter: Dr Neo Moleli, Lead Consultant Donor Services, SANBS

Dr Moleli explained that general donor assessment starts with assessing the donor’s appearance and inspection. Well trained staff should be able to detect certain abnormalities on the donor by just looking, touching, listening and deciding if a donor is suitable to donate or needs to be deferred. Age is another element that is considered and the limits (lower and higher) needs to be aligned with national legal requirements for consent and as such may vary from country to country. The lower limit age for most countries ranges between 16-18 years. Physiological risks should be considered before decisions are made on the age limits. The lower weight limits need to be set and adjusted to fit with the demographics of an area but, must also be in line with the WHO recommendation that volume of whole blood donated should be less than 13% of the blood volume (e.g. 50kg donor can donate ± 450ml). There is no actual/defined upper weight limit unless veins are inaccessible because of obesity, or the donor cannot fit on bed/couch and resuscitation should be possible in case of a donor adverse event. Any rapid obvious weight loss should be explained and the possibility of an underlying disease should be excluded.

Dr Moleli further explained that food and fluid intake are also important before blood donation since it has been proven that the risk of vasovagal reactions is reduced if a donor has eaten and taken fluids before donating. In regions where fasting is practiced, collections need to be adjusted to suit the area. Gender is also considered because women with certain conditions or under certain circumstances need to be deferred for example during pregnancy, post-delivery of a baby or abortion, to allow for recovery of iron stores. In certain countries multiparous women are deferred from donating because of the increased risk of transfusion related acute lung injury (TRALI).

A physical check including donor’s weight is done at each donation. Vital signs like blood pressure, pulse, and sometimes temperature are also checked. All the lower and upper limits need to be set and standardized into the donor selection criteria. Pre-donation haemoglobin screening is performed to exclude anaemia and when setting limits factors like gender, ethnic group and age must be considered and failed donors must be referred for further investigations and medical attention.
Dr Moleli concluded by explaining that apheresis donors donate more frequently than whole blood donors. Therefore, there are special considerations for setting the apheresis minimum and maximum requirements which should include weight limits, donation frequency, screening tests (haemoglobin check and platelet count) and volumes to be collected e.g. plasmaphaeresis volume should be less than 16%. As with whole blood donation, donors should give written consent before undergoing the procedure.

6.2. Medical history I
Presenter: Dr Kit Lin, Chief Executive & Medical Director, Hong Kong RCBTS

Dr Lin gave the general principle of donor selection which is to take a detailed medical history using a structured questionnaire and an interview. The process is aimed at identifying risks and deferring, either permanently or temporarily, any donor with a condition that may predispose them to immediate or longer-term harm, or may affect the safety or quality of the product derived from the blood and compromise patient safety.

Conditions that donors may suffer from could be anything from a minor illness with symptoms of acute infection; non-communicable infections; haematological disorders e.g. anaemia and haemoglobinopathies; cardiovascular diseases e.g. hypertension and venous thrombosis/thrombophlebitis; gastrointestinal tract (GIT) diseases; metabolic and endocrine diseases e.g. diabetes mellitus and thyroid disorders; respiratory diseases; musculoskeletal diseases; skin diseases; and renal diseases to malignancies. The rationale for deferral and deferral periods needs to be defined and understood by staff responsible for donor selection and should be applied consistently. For certain conditions once treated, the donor is acceptable and can be reinstated.

6.3. Donor medical history II
Presenter: Dr Neelam Dhingra, Coordinator, Blood Transfusion Safety, WHO-HQ, Geneva

Dr Dhingra stated that there are other risks that the BTSs need to be aware of whilst assessing donors for suitability. These risks include TTIs from viruses and protozoa; medical and surgical interventions e.g. immunizations, medications, blood transfusion, and organ and tissue transplantations and surgical procedures including dental treatment and diagnostic procedures. The TTIs that are of most concern for BTSs are those that are transmissible through transfusion and are capable of causing morbidity or mortality to the recipient. The donor selection staff needs to be trained, skilled, knowledgeable and competent to understand the characteristics of the infectious agents. The staff also need information on emerging/new agents and disease epidemiology at the same time maintaining a systematic surveillance of transfusion recipients and implementation of appropriate donor selection criteria and quality-assured screening of all donations.

Dr Dhingra emphasized the importance of careful history taking from prospective donors about current or past symptoms of infection, travel history, contact with infectious diseases, and possible exposure to infection, lifestyles and environmental
factors associated with a high risk of exposure to infection. Deferral periods need to be set and expert virology advice may be needed regarding the mode of transmission and appropriate deferral periods for specific viruses. Donors who have travelled to a viral endemic region may be temporarily deferred, usually for an arbitrary period of 28 days, extended to 6 months if the donor has had any undiagnosed febrile illness during travel or since return. It was recommended that for those TTIs for which screening tests are carried out, confirmatory testing of screen, repeat, reactive donations should be undertaken for donor notification, counselling, referral for treatment, deferral or recall for future donation and look-back on previous donations. Specific TTIs and high risk activities that will have set temporary or permanent deferral periods were also covered.

Following medical and surgical interventions the BTS should take into consideration whether the reason for the intervention was an indication for deferral, it puts the donor at increased risk of harm by blood donation or whether the intervention could affect the quality or safety of the blood and patient safety. Normal practice is to defer donors for 4 weeks following immunization with live vaccines because there is a risk if the blood is transfused to an immune-suppressed recipient but, non-live vaccines pose no risk to the recipients of blood, therefore donors may be accepted provided they are well. Deferral criteria for medications taken by donors should take into account whether the indication for treatment is a reason for deferral, and/or whether the medication could affect the quality or safety of the donated blood. It was stressed that donors should not omit regular medication in order to attend a donor session.

Despite all efforts for safety of blood transfusion, it remains an important risk factor for transfusion-transmitted infection hence anyone who has received a transfusion of a blood component should not themselves donate blood for a period of six to 12 months. The requirement for organ transplantation indicates serious underlying disease and such patients should not be accepted as blood donors. For surgical intervention, individuals awaiting a surgical procedure that is likely to result in blood loss should be temporarily deferred so that iron stores are not compromised pre-operatively. Dental procedures, although minor, are associated with transient bacteraemia so many BTSs defer donors for a period between 24 hours and up to 7 days following root canal therapy or extraction.

In conclusion, Dr Dhingra emphasized that donor education is very crucial to encourage self-deferral for donor health and patient safety; donor medical history needs to be assessed using a structured questionnaire and medical interview and safety, risks and supply issues have to be assessed and balanced in relation to donor selection criteria based on donor medical history.

6.4. Donor occupation and lifestyle

Presenter: Dr Christie Reed, Representative Medical Transmission Team, HIV Prevention Branch, CDC, Atlanta

Dr Reed explained that the main principle is to be able to assess risk in order to minimize harm. This can be done as a collaboration between the BTS, healthcare
providers and other agencies to determine the national risk. Review and re-evaluation of selection criteria needs to be based on evidence from haemovigilance and other surveillance data, new lifestyle risks and changes to known risks. Certain risks are related to occupation and others may just be from lifestyle and behaviours that people engage in. A few occupationally related risks like TTI risk for health care workers may be from needle-stick injuries and any other exposure to body fluids and as such may need immunization and post exposure prophylaxis as required. Sex workers also fall under the same category of TTI related risk and on the donor questionnaire and interview, donors need to answer questions relating to their occupation and suitability should be ascertained. Hazardous occupations would include heavy machinery operators, people working at heights as well as pilots. The donor selection staff needs to check that such donors are on their rest periods off work and that the donors understand the risk of vasovagal reactions and if they are going back to work after donating they might get harmed if there is a donor adverse event.

The donor’s travel history needs to be obtained to exclude any risk to TTIs. It is also very important that the donor selection staff be familiar with the geographical distribution of TTIs. Lifestyle and behaviours will exclude certain donors because of the behaviours they engage in. For Men who have sex with men (MSM) the criteria for exclusion are related to behaviour and not the sexual orientation and a lifetime ban or deferral for MSM remains in many countries and only a few countries defer for six months or a year. Regular donors with new or one time partners or partners whose status is unknown get a temporary deferral taking into account the window period risk which may be over a period of several months in the case of HBV and HCV. If it is considered as recurrent behaviour, then permanent deferral may be considered for such donors. Use of injected recreational drugs, including non-prescribed steroids used for body-building was commonly associated with unsafe practices such as the sharing and re-use of needles and carried an increased risk of HBV and HCV. Such donors were permanently deferred because they tended to revert to IV drug use and there was no evidence that they did not. Prison inmates should not donate blood because of the higher incidence of HIV, HBV and HCV amongst the group. The deferral is based on the history of exposure to risk from drug use, injuries and unsafe sexual practices during incarceration. Cosmetic treatments and rituals involve penetration of the skin and carry a risk of TTI infection, especially HIV, HBV and HCV, unless performed under sterile conditions and the risk should be assessed and linked to a temporary deferral.

Dr Reed concluded by stating that the information regarding eligibility for blood donation should be readily accessible, enabling people to self-defer or self-exclude. Staff who conduct pre-donation interviews require education and training to enable prospective donors to be honest and open about very personal behaviour and the process requires a sensitive, non-judgemental approach and an assurance of total confidentiality.
7. Challenges/constraints faced by countries and key strategies to strengthen blood donor selection and counselling programmes

Three parallel working groups were constituted to identify the challenges or constraints faced by countries in their efforts to strengthen blood donor selection and counselling programmes. The names of the participants constituting the three groups were allocated to ensure that there will be no two participants from the same country in one group. There were about twelve members in each group and each working group had three moderators and their role was to introduce the topic, ask for a brief introduction of the group participants, and select a rapporteur and a chairperson or group leader.

A background presentation and approach to the discussion was presented to the groups by Dr Tapko, Regional Adviser Blood Safety, WHO (AFRO). Each group had to structure their discussion on challenges, constraints, strategies and experiences in establishing national systems for blood donor selection and counselling in the participating countries. The groups were also expected to come up with recommendations to WHO, CDC, MOH and the BTSs to support establishing national systems for blood donor counselling in their countries.

To conclude the session, the moderators summarized the discussions and the rapporteurs prepared PowerPoint presentations as brief reports to the plenary group. The three groups had similar challenges like lack of advocacy and policy development; lack of or insufficient educational materials; inadequate or lack of trained staff (to develop systems for blood donor selection and counselling, develop policy and plans for the MOH, conduct situation analyses and develop BTS programmes) and staff recruitment and training. All recommendations from the three groups were collated and were to be used to assist BTSs to get national guidelines developed, implemented and monitored and to make recommendations to MOH to define roles and form collaborative linkages. WHO and CDC would use the recommendations to assist in sensitizing and securing the support of governments as well as to provide advice to policy makers. The recommendations section below has more details on this.

8. Blood donor counselling

8.1. Introduction to the WHO-CDC-IFRC Guidelines on Blood Donor Counselling
Presenter: Dr Kit Lin, Chief Executive & Medical Director, Hong Kong RCBTS

Dr Lin gave an outline of the guidelines which were published in 1994 by the IFRC and the WHO Global Programme on AIDS when the need to protect blood supplies from HIV infection and to provide support to donors who tested positive for HIV was realised. Due to the limited facilities for voluntary counselling and testing (VCT) at the time, many blood donors came to donate purely to get tested for HIV and these concerns are still true. The guidelines emphasize that the scope of counselling by the BTS need not be limited only to HIV but to all TTIs and medical conditions. The objectives of the
guidelines are to assist countries in strengthening and improving blood donor counselling by providing policy guidance on the provision of blood donor counselling. The guidelines provide information and technical guidance to promote donor health and patient safety through counselling and referral services for prospective donors who are deferred from blood donation, or have abnormal test results for TTIs or unusual blood cell serology. The guidelines also highlight the BTS duty of care towards blood donors and recipients including prospective donors who are deferred from donation and those who are subsequently found to have abnormal test results. The other responsibility of the BTS is to provide information, counselling and support to help donors to understand their change in health status.

Dr Lin explained that donor counselling is closely linked to donor selection. It provides an opportunity to offer advice on health and behavioural issues, may lessen a sense of rejection and encourage certain donors to return after a deferral interval. Some of the challenges to donor counselling include lack of political commitment and absence of a clear national policy; inadequate resources; limited training; inadequate infrastructure and facilities which limit the ability of staff to maintain privacy and donor confidentiality; inadequate numbers of staff; insufficient donor information and education materials and a limited donor records system. Effective donor counselling minimizes the unnecessary loss of suitable donors, helps unsuitable donors to self-defer, thus enabling the BTS to reduce costs and contributes significantly to blood safety by reducing the prevalence of TTIs in donated blood. The donor counselling guidelines target all BTS staff involved in blood donor counselling, blood collection, donor education, recruitment and retention, policy makers and MOH.

8.2. Stages in blood donor counselling

Presenter: Dr Christie Reed, Medical Transmission Team, HIV Prevention Branch, CDC, Atlanta

Dr Reed outlined the four stages of counselling as follows:

8.2.1. pre-donation information before an individual registers as a blood donor;
8.2.2. pre-donation counselling during the confidential interview for health assessment;
8.2.3. information during blood donation and
8.2.4. post-donation information and counselling, and referral.

Donor staff needs to secure the donor's informed consent at the pre-donation counselling stage. Counselling is necessary on individuals who fail to meet donor selection criteria because of health conditions; infectious diseases; risky lifestyle behaviour or travel history resulting in temporary or permanent deferral. It is also necessary for those who may be seeking testing for TTIs; or suffer adverse events during or after donation and for donors with special or rare phenotypes. Some BTSs use confidential unit exclusion (CEU) which enables donors to contact the BTS after donating their blood and ask that their blood should be withdrawn. Clear information
and contact details of the BTS are given for the donor to call in case they deem their donated unit not safe for transfusion.

Dr Reed emphasized that counselling should always be conducted privately in a safe and conducive environment that protects the donor’s confidentiality. Counselling should be provided in a language with which the donor is familiar with and in a culturally sensitive manner. It is vital that BTS staff understand that any sensitive information given by donors must be kept confidential and secure at all times due to stigma and discrimination that may arise from having a positive result.

The aims of counselling include to: explain test results, health implications and their eligibility for blood donation in future; encourage donors to divulge sensitive information, including possible source of infection; clarify doubts or concerns; alleviate donor’s anxiety; advise donors on precautions for preventing the transmission of TTIs to others and to refer donors for further investigations, management, treatment and care, if necessary.

8.3. Establishing a national system for blood donor counselling

Presenter: Dr Neelam Dhingra, Coordinator, Blood Transfusion Safety, WHO-HQ, Geneva

Dr Dhingra explained that the management and counselling of blood donors are essential parts of the blood donation process and it is the responsibility of the national health authorities and BTSs to ensure that relevant policies, a legislative frameworks, standards, systems and infrastructure are in place for the counselling of all whole blood and apheresis donors throughout the blood donation process. Every country should have a national blood policy defining principles and strategies for blood donor management including selection, deferral, notification, counselling, referral, blood screening and confirmatory testing. Notification and referral protocols and procedures should be clearly stated in the form of written guidelines.

Dr Dhingra elaborated on an effective ‘SMART’ counselling process as being:

**Specific:** counselling should be focused on the matter that concerns the donor most, discussing more than one topic may result in confusion;

**Measurable:** counselling should be consistent and accurate, leaving no doubt about the message provided to the donor;

**Appreciative:** the counsellor should be objective and have the empathy to appreciate fully the donor’s situation and feelings;

**Realistic:** counselling should fit within the cultural setting and should ensure confidentiality at all times; and

**Time-sufficient:** adequate time should be allowed for counselling.
Some of the requirements for blood donor counselling are suitable infrastructure and facilities; adequate numbers of qualified and trained staff; a good quality system that will have a donor deferral registry and donor records system; effective confirmatory testing strategies; and availability of information and education materials for blood donors. Establishing a blood donor counselling system requires financial and staff resources. Cost elements of donor counselling include personnel, training, space, donor information materials and donor records.

Dr Dhingra further explained that the media can be a valuable tool and plays an important role in helping to overcome unwarranted fears and unfounded stigma by presenting positive information about blood donation and transfusion. If blood donor counselling is not provided properly in a professional manner, any donor incident or complaint exposed to the media can be reported negatively. It is therefore important that BTSs maintain an open and transparent media policy while respecting and honouring its commitment to donor confidentiality and privacy.

8.4. Providing counselling services to blood donors

Presenter: Dr Kit Lin, Chief Executive & Medical Director, Hong Kong RCBTS

Dr Lin explained that the fundamental information that the donor needs to get includes key health requirements of safe blood donors; infections that may be transmitted through blood transfusion; lifestyles associated with high risk of acquiring transfusion-transmissible infections; the blood donor selection and deferral process; the blood donation process; components that may be derived from donated blood for clinical transfusion; and tests that will be performed on donated blood, notification and assurance of confidentiality of test results and availability of donor counselling and care, including referral to other health-care agencies. BTS should establish a system with the appropriate capacity and expertise to counsel blood donors and may use the direct model of counselling because they conduct the counselling to their donors but, this comes with certain challenges like lack of proper facilities, lack of adequately trained staff and lack of adequate time to give effective counselling.

Some BTSs may use the collaborative model where BTS involves health-care facilities, counselling services and community organizations in working together to establish a network of post-donation counselling services. Other BTSs may choose to use the notification and referral model which is where BTS takes responsibility for notifying blood donors of the results of blood screening and refers them to other health-care providers for counselling and, where appropriate, further investigations, treatment and care. Most BTSs use all three models.

Dr Lin reiterated that the BTS may adopt different channels to inform donors about different results, for example, test results of serious infections, such as HIV, are only divulged to the individual concerned on a face-to-face meeting in a safe and conducive environment with proper counselling facilities, whereas for example hepatitis B, might be notified by a standard letter. It is highly important that the information provided to donors should be accurate and consistent and donor confidentiality should be maintained at all times. Small blood donation facilities including mobiles have the same
responsibilities as larger units regarding confidentiality and the provision of information to donors.

8.5. Training Requirements for Donor Care and Counselling Staff
Presenter: Dr JB Tapko, Regional Adviser Blood Safety, WHO (AFRO)

Dr Tapko presented the goal in training requirements for donor care and counselling as to equip staff with the skills needed to establish a donor care and donor counselling programme and to ensure effectiveness in conducting counselling for persons who present themselves for blood donation or have already donated blood. Training ensures that all staff and volunteers involved in the counselling process: understand the rationale for blood donor counselling and the importance of confidentiality; acquire knowledge and skills in the blood donor counselling process; and follow established procedures at all times. All the staff that provide donor care and counselling to donors like all donor staff, doctors, technicians and volunteers need to be trained. It is a participatory activity that can be provided to individual staff members, small or large groups and allows them to engage in presentations and to ask questions.

The main components of counselling are knowledge; relevant skills; personality traits and qualities like empathy, self-awareness, interpersonal communication skills, critical and analytical thinking and being non-judgemental. BTS counsellors should have in-depth knowledge of TTIs; the ability to conduct a counselling session to deliver or disclose both negative and positive test results; be able to listen carefully and answer donors’ questions, providing information about lifestyle risks and the prevention of high-risk behaviour, and facilitating referrals to outside facilities for additional treatment and care services.

Dr Tapko emphasized that using encouraging words while the donor is speaking encourages them to continue as well as the use of attentive behaviours like nodding the head and eye contact were effective. The counsellor needs to ask open-ended questions to clarify what the donor has said. Counselling is aimed at giving constructive feedback; assessing the risk of the condition for which the donor is being counselled; enabling the donor to understand their own responsibilities in ensuring that blood is safe for the recipients of transfusion; assisting donors in behavioural change to protect their own health and/or prevent the further transmission of a TTI, and keeping correct documentation. Competency of the staff can be ensured by regular staff meetings and case discussion and by conducting regular external quality control proficiency testing.

8.6. Ethical and legal considerations in blood donor counselling
Presenter: Dr Neo Moleli, Lead Consultant Donor Services, SANBS

Dr Moleli expounded on the rights and obligations of the BTS and blood donors as some of the ethical and legal aspects to be considered when developing blood donor counselling guidelines. The rights and obligations of the BTS and blood donors are that donors must be clearly informed about: the blood donation process; the tests done on donated blood, and the components derived from donated blood; and the potential adverse reactions related to blood donation; and about the possible risks for the
recipients of blood or blood products. Prospective donors must be made aware that they can self-defer i.e. they have the right to withdraw at any stage of the donation process. Donors must inform BTS about health conditions that may pose a risk to the donor’s own health including history of possible exposure to TTIs that may pose risks to recipients of blood; they must know their HIV status and other TTIs; and to inform BTS of any doubts about their suitability or ill-health following a donation being assured of the confidentiality of all personal information given by donors to the BTS.

Dr Moleli stressed that confidentiality and privacy is the other consideration never to be deviated from by the BTS. Strict confidentiality of personal information and test results should be constantly ensured. Medical data is only to be shared with other health-care workers and may never be shared without donor’s consent. Anonymity between blood donors and blood recipients should be ensured except in special circumstances. Confidential treatment of TTI test results is really crucial because of the stigma and discrimination of a positive diagnosis. Health-care workers have an obligation to respect privacy and it is mandatory that blood donor counselling be provided in a setting designed to assure reasonable privacy. The practice of confidentiality and privacy contributes to a safe blood supply by reinforcing donors’ confidence that personal information revealed to BTS staff will be protected. Training BTS staff and volunteers should therefore include how to respect privacy and confidentiality.

Once information on the donation process, related benefits, potential adverse events and tests performed on donated blood has been given, the donor may give informed consent. Voluntary partner notification and counselling for HIV and other TTIs needs to be enforced by BTS. If positive for a TTI, the donor has an ethical obligation to inform his or her sexual partner and BTS should encourage the donor to do so and the positive donor should be referred to a site that can offer partner counselling.

In some countries there are special considerations for adolescent blood donors. National laws vary as to legal age of consent for blood donation so legislative frameworks and policies should be in place to allow confidential notification and counselling of these donors.
8.7. Monitoring and evaluation of blood donor counselling

Presenter: Dr Christie Reed, Medical Transmission Team, HIV Prevention Branch, CDC, Atlanta

Dr Reed outlined the objectives of monitoring and evaluation as to: ensure compliance with SOPs as part of the quality system; enable the BTS to assess its capacity and evaluate the impact of donor counselling on the important long-term goal of building a VNRBD population; improve the quality and relevance of counselling activities; help refine counselling training; and to produce reports. Both the qualitative and quantitative methods of monitoring are important for donor satisfaction surveys; review of processed data; and for periodic observation by a supervisor. Qualitative observation of a counselling session addresses the quality of the counselling and identifies any improvements that can be made to training and to procedures. Quantitative evaluation is conducted e.g. by timing the length of counselling sessions to determine an average.

Dr Reed further explained that an evaluation mechanism should be incorporated within the initial development of blood donor counselling services and the evaluation plan must be reviewed annually to ensure that it is still relevant. Interviews are important where completed donor questionnaires can be reviewed with donors with reactive TTI test results to determine whether they were aware of any behavioural risks.

Monitoring and evaluation of the performance of BTS blood donor counselling should be implemented through a system of regular audits. The performance indicators that are used to assess whether the donor counselling was effective include the number of deferrals; number of deferred donors provided with counselling; prevalence of TTIs among donors; discard rates due to confidential unit exclusion or TTIs; return rate of temporarily deferred donors; number of referrals of deferred donors for medical care; number of adverse donor reactions, and the return of suitable donors with adverse reactions.

In conclusion, Dr Reed emphasized that review of data and reports by senior management must be shared with all staff as changes undertaken by one part of the organization may influence outcomes in other parts.

9. Development of draft country action plans for the implementation of a donor selection and counselling programme

Each country developed draft country action plans for donor selection and counselling programmes that they presented and shared at the workshop. The same plans would be implemented in the respective country BTSs and WHO and CDC will monitor the progress. WHO and CDC also encouraged countries to seek technical support should the need arise and to also make use of the networks formed at the workshop to source for more information and expertise. The main purpose of developing the action plans was to have countries put forth their challenges and come up with a practical approach or strategies on how they were going to overcome the challenges and create a better approach to develop and implement national guidelines on donor selection and counselling.
10. Recommendations

Following the deliberations of the inter-regional workshop and consultations, the participants identified major stakeholders in ensuring effective screening and counselling services for blood donors in BTSs. These include WHO and CDC, national health authorities and BTSs. Key recommendations which emerged from the discussions were addressed to these stakeholders.

10.1. Recommendations to WHO and CDC

10.1.1. Advocacy and policy development

10.1.1.1. Support countries in developing national blood policies, legislative frameworks and regulatory oversight addressing the areas of donor selection, confirmatory testing for TTI and pre- and post-donation counselling

10.1.1.2. Provide advice and advocacy to policy makers at global, inter-regional, regional and national level to develop systems for donor selection, confirmatory testing for TTI and pre- and post-donation counselling

10.1.1.3. Assist in sensitizing and securing the support of governments in putting in place efficient and cost-effective systems for donor selection, confirmatory testing for TTI and pre- and post-donation counselling

10.1.1.4. Advocate development of BTSs as autonomous or semi-autonomous institutions under the ministries of health to facilitate the implementation of policy and guidelines in donor selection, confirmatory testing for TTI and pre- and post-donation counselling

10.1.1.5. Provide guidance, support and resources for developing adequate infrastructure and national systems for donor selection, confirmatory testing for TTI and pre- and post-donation counselling

10.1.1.6. Identify and support the strengthening of regional and or national reference laboratories for confirmatory testing for TTI

10.1.1.7. Encourage and support countries to utilize WHO materials and tools on 'Quality Management' and 'Developing a Voluntary Blood Donor Programme'

10.1.1.8. Disseminate and share information with countries on endemicity of TTIs across the world

10.1.2. Material development and dissemination

10.1.2.1. Disseminate and translate the guidance documents on donor selection and donor counselling

10.1.2.2. Develop specific training materials on blood donor counselling

10.1.2.3. Develop animated or simulated IEC video materials for wider dissemination and translations for donor education and selection, and to encourage self-deferrals
10.1.3. **Capacity building**
10.1.3.1. Provide guidance and support in developing structured guidelines, SOPs and donor questionnaires
10.1.3.2. Provide guidance on developing algorithms for confirmatory testing for TTI
10.1.3.3. Provide guidance and support for developing quality systems in BTSs and blood banks
10.1.3.4. Provide training on developing systems for blood donor selection and counselling
10.1.3.5. Provide training to develop special skills for staff directly involved in donor selection and pre- and post-donation counselling

10.2. **Recommendations to Ministries of Health**
10.2.1. **Policy and plans development**
10.2.1.1. Develop/revise national blood policy with national legislation to incorporate donor selection, confirmatory testing for TTI and pre- and post-donation counselling
10.2.1.2. Develop sustainable nation-wide systems for donor selection and blood donor counselling
10.2.1.3. Define clear roles and responsibilities to develop and implement nation-wide systems for donor selection and counselling
10.2.1.4. Develop mechanisms of formal linkages with institutions/agencies within the national health system (supported within a legal framework or through MOUs) for laboratory reference facilities, counselling and referral services, at national, provincial and local levels
10.2.1.5. Develop public private partnerships
10.2.1.6. Develop and monitor indicators for assessing the impact of donor selection and counselling at national level

10.2.2. **Guidelines and capacity building**
10.2.2.1. Develop national guidelines on blood donor selection and counselling
10.2.2.2. Train blood bank inspectors for licensing and regulation

10.3. **Recommendations to blood transfusion services**
10.3.1. **Situation analysis and programme development**
10.3.1.1. Conduct a national situation analysis and needs assessment for establishment or strengthening national systems on donor selection and counselling
10.3.1.2. Develop SOPS covering all steps in donor selection, and pre- and post-donation counselling
10.3.1.3. Develop a system of competency assessment of the donor counselling staff
10.3.1.4. Develop a mechanism for community education
10.3.1.5. Translate all educational material into local languages
10.3.1.6. Develop top down approach with priority to WHO implementation guidelines for blood donor counselling
10.3.1.7. Create a national steering committee of competent and motivated professionals, including blood transfusion leaders to be made familiar with the basics and the application of pre- and post-donation counselling in donor selection and its application

10.3.2. **Staff recruitment and training**
10.3.2.1. Recruit a sufficient number of qualified staff with aptitude for blood donor selection counselling; assess possibilities of multitasking
10.3.2.2. Recruit counsellors from local regions
10.3.2.3. Determine training needs and prepare training plans to train all staff involved in donor selection and counselling

11. **Conclusions**
While the demand for blood is growing, the national blood supplies are rarely sufficient to meet the existing requirements in developing countries. The challenge is even more complicated by the prevalence of HIV and other TTIs and medical conditions that might lead donors to be deferred from donating blood and as such leading to a shrinking donor base. The BTS needs to have a rigorous process to assess the suitability of prospective donors and it is therefore essential to protect the safety and sufficiency of the blood supply, safeguard the health of recipients of transfusion and blood donors themselves, while ensuring that suitable donors are not unnecessarily deferred.

Each BTS should have the selection and counselling of blood donors undertaken in accordance with national criteria for donor selection and counselling and these should be developed, implemented and consistently applied to all categories of donors whether they are voluntary non-remunerated donors, family/replacement donors or paid donors. In developing such criteria, the BTS should take account of the health and demography of the country’s population, the epidemiology of infection and disease, the local culture, the organization of its health services and the available resources and relevant legislation and regulatory requirements. Many countries still need to properly implement systems on donor selection and counselling.
The challenges in the development and implementation of the national guidelines for donor selection and counselling need to be addressed in the respective countries and support from other agencies, governments and public private partners will contribute to the development of effective national systems.

12. Closing remarks
On the fourth and last day of the Inter-regional Workshop on 'Blood Donor Selection and Donor Counselling' for Priority Countries in the African and Eastern Mediterranean Region, Dr Dhingra, the Coordinator, Blood Transfusion Safety, WHO-HQ, Geneva thanked all for the hard work and effort that they had put into the workshop. The workshop was a success and all inputs and contributions had been valuable and would definitely assist WHO to improve on certain aspects that were raised at the workshop.

Copies of CDs that had been made of the workshop with all the presentations and activities of the workshop were given to the participants wishing all successful implementation and developments back in their respective countries.
Annexes:
Annex 1: Agenda

Inter-regional Workshop on 'Blood Donor Selection and Donor Counselling' for Priority Countries in the African and Eastern Mediterranean Region


Organized in collaboration with WHO-AFRO, WHO-EMRO and Kenya National Blood Transfusion Service

AGENDA

1. Welcome and opening address
2. Objectives of the workshop
3. Rationale for donor selection and counselling
4. Steps in the donor selection and counselling process
5. Establishing a national system for blood donor selection and counselling
6. Role of donor care staff and counsellors in ensuring donor safety and blood safety
7. Challenges/constraints faced by countries and key strategies to strengthen blood donor selection and counselling programmes
8. Introduction of blood donor selection and counselling materials:
   • WHO/CDC/IFRC implementation guidelines "Counselling Blood Donors"
   • WHO "Recommendations on Blood Donor Selection"
9. Collaboration and partnerships
10. Development of draft country action plans for implementation of a donor selection and counselling programme.
11. Conclusion and recommendations
12. Closing address
# Programme of Work

**Inter-regional Workshop on 'Blood Donor Selection and Donor Counselling' for Priority Countries in the African and Eastern Mediterranean Region**

**27-30 June 2011, Nairobi, Kenya**

Organized in collaboration with WHO-AFRO, WHO-EMRO and Kenya National Blood Transfusion Service

## Programme of Work

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<td><strong>Opening Session</strong></td>
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| **09:00 – 09:45** | Keynote and Opening Address  
Welcome Addresses:  
- MOH  
- WHO  
- CDC  
- Kenya National Blood Transfusion Service | Representatives from the Organizations |
| **09:45 – 10:00** | Introductions | Participants |
| **10:00 – 10:30** | Workshop Objectives  
Adoption of the Agenda and Programme of Work  
Selection of Chairperson(s) and Rapporteurs | Dr Neelam Dhingra  
Dr Christie Reed |
| **10:30 – 11:00** | Tea/coffee break & Group Photograph |
| **Session 1: Country Situational Analyses in Blood Donor Selection and Counselling**  
Chair: Dr JB Tapko |
<p>| <strong>11:00 – 11:15</strong> | Experiences from Kenya NBTS | Dr Margaret Oduor |
| <strong>11:15 – 13:00</strong> | Country Presentations on Donor Selection and Counselling (about 10-12 Minutes per country including discussion) | Country representatives |</p>
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<td><strong>Session 2:</strong> Introduction to Blood Donor Selection</td>
<td>Chair: Dr Jane Mwangi</td>
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<td>16:00 – 16:15</td>
<td>Introduction to the &quot;WHO Recommendations on Blood Donor Selection for Assessing Suitability for Blood Donation&quot;</td>
<td>Dr Neelam Dhingra</td>
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<td>16:15 – 16:30</td>
<td>Rationale for Blood Donor Selection and Steps in the Donor Selection Process</td>
<td>Dr Neo Moleli</td>
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<td><strong>Session 3:</strong> Establishing a National System for Blood Donor Selection</td>
<td>Chair: Dr Neelam Dhingra</td>
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<td>Requirements for a National System for Blood Donor Selection</td>
<td>Dr Christie Reed</td>
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<td>16:45 – 17:00</td>
<td>Developing National Guidelines on Blood Donor Selection</td>
<td>Dr JB Tapko</td>
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<td>Assessing the Suitability of Prospective Blood Donors</td>
<td>Dr Kit Lin</td>
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<td>Chair: Dr Daniel Kimani</td>
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<td>General Donor Assessment</td>
<td>Dr Neo Moleli</td>
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<td>09:45 – 10:30</td>
<td>Donor Medical History I</td>
<td>Dr Kit Lin</td>
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<td>11:00 – 11:45</td>
<td>Donor Medical History II</td>
<td>Dr Neelam Dhingra</td>
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<td>Donor Occupation and Lifestyle</td>
<td>Dr Christie Reed</td>
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<td>Introduction to the Group Work</td>
<td>Dr JB Tapko</td>
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**Day 3 - Wednesday, 29 June 2011**

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<tr>
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**Session 6: Blood Donor Counselling**

**Chair: Dr Daniel Kimani**

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<td>Introduction to the WHO-CDC-IFRC Guidelines on Blood Donor Counselling</td>
<td>Dr Che Kit Lin</td>
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<td>Stages in Blood Donor Counselling</td>
<td>Dr Christie Reed</td>
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<td>Establishing a National System for Blood Donor Counselling</td>
<td>Dr Neelam Dhingra</td>
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<td>Providing Counselling Services to Blood Donors</td>
<td>Dr Kit Lin</td>
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<td>Training Requirements for Donor Care and Counselling Staff</td>
<td>Dr JB Tapko</td>
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<td>11:50 – 12:10</td>
<td>Ethical and Legal Considerations in Blood Donor Counselling</td>
<td>Dr Neo Moleli</td>
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<td>Monitoring and Evaluation</td>
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**Session 7: Challenges, Constraints, Strategies and Experiences in Establishing National Systems for Blood Donor Counselling**

**Chair: Dr JB Tapko**

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<td>08:45 – 09:00</td>
<td>Report of day 3 Rapporteur</td>
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<td>09:00 – 09:15</td>
<td>Introduction to Development of an Action Plan</td>
<td>Dr JB Tapko</td>
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<td>09:15 – 10:30</td>
<td>Group work: Development of Action Plans for Establishing Donor Selection and Counselling Programme</td>
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<td>10:30 – 11:00</td>
<td>Tea/Coffee Break</td>
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<td>11:00 – 11:30</td>
<td>Group work: Recommendations</td>
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<td>11:30 – 13:00</td>
<td>Presentation of the Action Plan and Recommendations</td>
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<td>13:00 - 14:00</td>
<td>Lunch</td>
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<td>14:00 – 14:30</td>
<td>Presentation of Action Plan cont. and Discussion</td>
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<tr>
<td>14:30 – 15:00</td>
<td>Recommendations, Priorities for Action and Conclusion</td>
<td>Dr Neelam Dhingra</td>
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<td>Dr Christie Reed</td>
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<tr>
<td>15:00 – 15:30</td>
<td>Closing Remarks</td>
<td>MOH, Kenya NBTS, CDC and WHO</td>
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<td>15:30 – 16:00</td>
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</table>
# Annex 3: List of participants

## Inter-regional Workshop on 'Blood Donor Selection and Donor Counselling' for Priority Countries in the African and Eastern Mediterranean Region

27-30 June 2011, Nairobi, Kenya

Organized in collaboration with WHO-AFRO, WHO-EMRO and Kenya National Blood Transfusion Service

### List of Participants

<table>
<thead>
<tr>
<th>Participants</th>
<th>Afghanistan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr Enayatullah Hashemi</td>
<td></td>
</tr>
</tbody>
</table>
General Manager Diagnostic  
Ministry of Public Health  
Central Blood Bank  
Senama Pamir Central Blood Bank  
Postal code 0093  
Kabul, Afghanistan |

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<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Ms Halima Saad</td>
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</table>
Head of Blood Donation Department  
Ministry of Public Health  
Senama Pamir Central Blood Bank  
Postal code 0093  
Kabul, Afghanistan |
<table>
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<tr>
<th>Country</th>
<th>Name</th>
<th>Title/Position</th>
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<tbody>
<tr>
<td>Egypt</td>
<td>Dr Faten M. Moftah</td>
<td>Director-General</td>
<td>National Blood Transfusion Service</td>
</tr>
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<td></td>
<td></td>
<td></td>
<td>Ministry of Health and Population</td>
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<td>51 Wezaret Elzeraa Street</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Aguza Giza, Cairo, Cairo, Giza, Egypt</td>
</tr>
<tr>
<td></td>
<td>Dr Nehad Mohamed Mosad</td>
<td>Deputy of NBTS</td>
<td>National Blood Transfusion Services</td>
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<td>Giza Cairo, Egypt</td>
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<tr>
<td>Eritrea</td>
<td>Dr Yifde-Amlak Tesfamariam Baraki</td>
<td>Director, NBTS</td>
<td>National Blood Transfusion Service</td>
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<td></td>
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<td></td>
<td>Medical Services Division</td>
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<td>Denden street 80</td>
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<td></td>
<td></td>
<td></td>
<td>P.O. Box 212, Asmara, Eritrea</td>
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<tr>
<td></td>
<td>Mrs Senet Awolker Ibrahim</td>
<td>Quality Manager</td>
<td>National Blood Transfusion Service</td>
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<tr>
<td>Ethiopia</td>
<td>Dr Girma Tesfaye Debella</td>
<td>Director, Ethiopian Red Cross Society</td>
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<tr>
<td></td>
<td>Mr Alemayehu Belete</td>
<td>Officer, Federal Ministry of Health</td>
<td>Medical Services Directorate</td>
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<td>Gambia</td>
<td>Mrs Aminatta Sarr-Bojang</td>
<td>Programme Manager</td>
<td>Ministry of Health and Social Welfare</td>
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<tr>
<td></td>
<td>Mrs Mamjarra Nyabally Sonko</td>
<td>Senior Blood Donor Recruiter</td>
<td>National Public Health Laboratories</td>
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<tr>
<td>Ghana</td>
<td>Dr Lucy Asamoah-Akuoko</td>
<td>Senior Medical Officer</td>
<td>National Blood Transfusion Service</td>
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<tr>
<td></td>
<td>Mrs Helen Hatia Mahama</td>
<td>Head- Donor Care</td>
<td>National Blood Transfusion Service</td>
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<tr>
<td>Kenya</td>
<td>Dr Titus Ngulungu</td>
<td>Director, Regional Blood Transfusion Centre</td>
<td>Medical Services Ministry, Government of Kenya</td>
</tr>
<tr>
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<td>Kenya</td>
<td>Dr Maingi Sylvester Mulli</td>
<td>Medical Director</td>
<td>Regional Blood Transfusion Centre, EMBU</td>
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<td></td>
<td>Dr Debasish Gupta</td>
<td>Program Director, Blood Safety</td>
<td>CHF International Kenya</td>
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<tr>
<td>Lesotho</td>
<td>Ms Maleqhoa Grace Nyopa</td>
<td>Manager</td>
<td>Lesotho Blood Transfusion Service</td>
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<td>Ms Lerato Mamakhelelise Ncheke</td>
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<td>Lesotho Blood Transfusion Service</td>
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<td>Mrs Lwopu M. Bruce</td>
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<td>Dr Bridon M'Baya</td>
<td>Medical Director</td>
<td>Malawi Blood Transfusion Service</td>
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<td>Ms Mercy Kokha</td>
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<tr>
<td><strong>Pakistan</strong></td>
<td>Professor Raziq Fazle</td>
<td>Professor of Haematology and Focal Person</td>
<td>Safe Blood Transfusion Project</td>
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<td>Professor Mahfooz-Ur-Rahman</td>
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<td><strong>Sierra Leone</strong></td>
<td>Mr Musa Kabba</td>
<td>Regional Donor Recruitment officer - East</td>
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<td>Dr Samuel Baker</td>
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<td>Dr Maxwell Solomuzi Ngcobo</td>
<td>Medical Officer</td>
<td>South African National Blood Service</td>
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<tr>
<td></td>
<td>Mrs Cynthia Sims</td>
<td>Haemovigilance Professional Nurse</td>
<td>Medical (Transfusion Transmitted Infection Donor Counselling)</td>
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<tr>
<td>Swaziland</td>
<td>Prof. Hosea Sukati</td>
<td>Technical Director</td>
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<td>Mr Stanley Mtemeri</td>
<td>Quality Assurance Manager</td>
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<td>Tanzania</td>
<td>Dr Efesper Nkya</td>
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<td></td>
<td>Mrs Judith Charle</td>
<td>Head of Blood Donation Department</td>
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<tr>
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</tbody>
</table>
| Uganda | Dr Dorothy Kyeyune Byabazaire  
National Programme Manager / Director  
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Nakasero Hill road, Nakasero  
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|                     | Hong Kong Red Cross Blood Transfusion Service  
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|                     | Chine (République populaire de) |

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|             | South African National Blood Service  
|             | Medical  
|             | 2 Constantia Boulevard  
|             | Constantia Kloof  
|             | Roodepoort  
<p>|             | South Africa |</p>
<table>
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<th>National Blood Transfusion Service (NBTS)</th>
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<tr>
<td>Dr Margaret Oduor</td>
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<tr>
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<tr>
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<tr>
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<tr>
<td>Mr. Benard Kassam</td>
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<td>In charge Donor Notification Program</td>
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<tr>
<td>Mrs Seline Ooku</td>
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<td><strong>Centers for Disease Control and Prevention</strong></td>
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<tr>
<td>Dr Daniel Kimani</td>
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<tr>
<td>Technical Advisor, Blood and Injection Safety</td>
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<tr>
<td>Dr Jane Mwangi</td>
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<tr>
<td>Branch Chief</td>
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| **USA** | Dr C Christie Reed  
Medical Transmission Team  
HIV Prevention Branch  
Division of Global AIDS  
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| | Ms Alice Ngereso  
Secretary  
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| **AFRO** | Dr Jean-Baptiste Tapko  
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Regional Adviser  
Blood Transfusion Safety, Laboratory Imaging & Clinical Technologies  
WHO Office for Eastern Mediterranean (EMRO)  
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| | Mohammed ZAHRAN  
NPO Blood Transfusion Safety  
World Health Organization  
Khartoum  
Sudan |
| **HQ** | Dr Neelam Dhingra  
Coordinator  
Blood Transfusion Safety  
Essential Health Technologies  
Geneva,  
Switzerland |
| | Ajantha Ranajeewa  
Team Secretary  
Blood Transfusion Safety  
Essential Health Technologies  
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Annex 4: Group photo