TRANSFUSION TODAY

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Picture courtesy of ICCBBA 2016.

IT in Transfusion Medicine

From our new President

ISBT at AfSBT 2016

World Blood Donor Day 2016

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ISBT

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Correction TT107: The APBN Chair and Secretariat wish to correct the article highlighting the Asia Pacific Blood Network (APBN) contained within the Transfusion Today Issue Number 107, June 2016 – "In Focus: Alliances within the Field of Transfusion Medicine". The current Members of APBN contained in that issue was incomplete, with the accidental omission of the Beijing Red Cross Blood Center. The full and correct current members of APBN are: Australian Red Cross Blood Service, Beijing Red Cross Blood Center, Hong Kong Red Cross Blood Transfusion Service, Japanese Red Cross Society Blood Service, Republic of Korea National Red Cross Blood Service, Macao Blood Transfusion Service, New Zealand Blood Service, Blood Services Group, Health Sciences Authority, Singapore, Taiwan Blood Services Foundation, National Blood Centre – Thai Red Cross Society. The APBN Chair and Secretariat wish to extend their sincere apologies to the Beijing Red Cross Blood Center for this previous omission.

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Judith Chapman

Editorial

This focus section of this issue of Transfusion Today is on IT in Transfusion Medicine and has been compiled by the ISBT Working Party on Information Technology. This Working Party is one of the oldest within ISBT and initially worked on the identification, coding and labelling of blood packs. Their work eventually led to the establishment of the International Council for Commonality in Blood Banking Automation (ICCBBA) and ISBT 128, the global standard for the terminology, identification, coding and labelling of medical products of human origin.

The articles cover the whole spectrum of transfusion medicine and include IT in blood establishments in the developed and developing world, traceability, clinical documentation and the use of RFID.

The Working Party is still very much active and currently its interface task force is working on the development of a standard protocol that will define how devices shall communicate with Blood Establishment Computer Software (BECS). They are inviting all vendor members to engage with the Task Force throughout the process of preparing the Standard Interface Definition. More information and contact names and emails can be found on the IT Working Party page of the ISBT website.

In the regional pages you will find reports of activities in a number of countries on World Blood Donor day 2016 with the theme of "Blood connects us all."

The 34th International congress of the ISBT in Dubai was a great success and ISBT is now preparing for the 27th and 28th regional congresses to be held in Copenhagen, Denmark and Guangzhou, China respectively. The Copenhagen congress website will be available in October. You will be able to find out about submitting abstracts, registration and accommodation as well as view the scientific programme.

The Guangzhou congress website will be available in February 2017. We invite you to submit an abstract and to participate in one of these congresses and to meet and discuss topics of interest with colleagues from around the world.

Rhonwyn Cornell
Jembi Health Systems Npc

Carl Fourie
Jembi Health Systems Npc

It's not just about software:

Factors in the selection/design of IT solutions for developing country blood services

In many ways the selection of an appropriate information technology (IT) solution for a developing countries blood service is similar to that of developed countries, as it is based on universal good practices in IT solution development and selection. The IT solutions selection process begins with the blood service clearly understanding and documenting its business functions. Critical to this process, the blood service needs to articulate their user requirements clearly to convey the need that the IT intervention is looking to address. This documentation is then used by the blood service to understand the expected operations of the proposed solution, as well as the hardware (information technology platform) needed to support the chosen solution's operations. The blood service should also consider the policies and standard operating procedure requirements for ensuring that the system is correctly used within the blood service.

There are other considerations that need to be reviewed by low resource bloods services, which are often of a lesser concern in developed countries where blood services have greater access to resources. Some of the critical areas worth mentioning are:

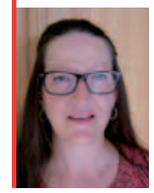
- **Does the system meet the blood service's needs within its physical operating environment?** I.e. if the blood service experiences regular and sever power-outages this will have a significant impact on the design and implementation of an IT solution? What are the connectivity, local and or internet, requirements of a service and does this match the connectivity available within the services or country?

- **What is the availability of accessible hardware and software suppliers?** Access to appropriate hardware suppliers and limited infrastructure is often a challenge in developing countries. Local vendors may be able to supply desktop computers and servers however access to more specialised hardware is often limited and costly, such as label printers and or scanners etc. A key consideration when reviewing the purchasing of hardware is the warranty and maintenance capacity within the country. Procuring and importing goods that do not have local service agencies and warranties may pose long term challenges to the operations of the blood service if there are long lead times between access to service and warrantee agencies. Availability and procurement procedures of supplies and communication needs that accompany information system operations should be considered too, i.e. a system will not operate effectively if there are not printer ribbons, labels or internet connectivity (if required) to support the operations of the service.

- **Does the blood service have internal capacity to use, manage and maintain the system?** The implementation and effective operation of an IT solution requires that the blood service have the internal capacity and processes (SOPs included) to support the implementation of the service. This includes staff that are able to follow and conduct the validation steps (Installation, Operational and Performance Validations) as well as develop SOPs for the use of the solution within the service as well as being able to, either internally or through external sources, support and maintain the infrastructure and software solutions.

In summary, IT for blood services in developing countries should follow universal good practice and should not be too different from the use of IT for services in developed countries. However, it is important in a developing country context to temper the implementation of a solution with the realities of ongoing operation and implementation needs both on the services internal resources and the sourcing of hardware and supplies.

In Focus IT in Transfusion Medicine



Linda Lodge
Chair IT WP Interface Task Force
IT Director, SNBTS, UK

We have a dream...

At a high level, blood establishments the world over carry out the same functions: namely, collection, manufacturing, testing and issuing of safe blood components. At a detailed level, no two organisations carry out the end-to-end process in exactly the same way. Different competent authorities, operating environments, computer systems, instruments, not to mention the human factor, all play their part in creating variations in the way the common end product is created. Some of these differences are necessary and good, they allow us to develop new ways of working and balances and checks to maintain the safety and quality of the component. Unfortunately, some create complexity, effort and cost that could be reduced, if not avoided altogether, releasing valuable resource to be put to better use. Instrument-to-computer system interfacing is one such area.

The WPIT Interface Taskforce dream is to reduce the complexity and cost of instrument interfacing. It has been a long, difficult road but we believe that the first edition of a standard interface for instruments is ready for peer review.

The interface standard has been developed for use within the existing Healthcare Level 7 (HL7) v2.x messaging standard (LIS2 is also supported). The rationale supporting this approach is that we do not need another new standard, but there does need to be standardisation in the way existing standards are used – a standard within the standard! The aim of the interface taskforce was to create a transfusion-specific standard within the existing messaging standard that would build on existing investment and knowledge, but reduce the overhead of interfacing instruments. The HL7 and LIS2 standards were chosen because they are widely known and used across the world.

We then set about identifying common events (e.g., collection, TTI Screening, transformation) that allowed definition of common functions and identification of related instrument types (e.g., blood mixer, virology analyser, irradiator). With this done, the taskforce selected blood mixers and virology analysers as our test cases and defined the observations they made, along with the minimum set of data elements required to inform the operator of the outcome of the observation.

The next challenge was to identify the HL7 message structure needed to support the transfer of data for all instruments and observations. The objective was to remain strictly within the messaging standard and define the format and content of the transfusion-specific variable information that can be sent as part of a message. This produced a few false starts and dead ends, however we have persisted and believe that the output is the basis for a workable solution.

To enable the transfusion-specific observation information to be defined and maintained, two reference tables have been created. Initially we have defined only the two instruments used to prove the concept to this stage. As the observations and data sets for additional instruments are defined, these tables will be updated with the necessary entries. The content of these tables is integral to the transfusion standard and we will develop it further as the standard matures. These tables will be registered on behalf of ISBT with the HL7 organisation and maintained by the ICCBBA organisation under the direction of the interface taskforce.

Currently we are in a period of consultation and invite interested parties to give this work fair consideration and feedback comments which will inform the final version publication. The documents are available on the ISBT webpage of the Working Party on IT. (http://www.isbtweb.org/working-parties/information-technology/)

Enterprise architecture and the various software solutions employed by a large blood service

Wayne Bolton
Australian Red Cross Blood Service

Information and Communications Technology (ICT) is central to the operation of the modern large blood service. It underpins improvements in efficiency, safety and automation. In considering the Blood Service ICT landscape, it is perhaps useful to think of ICT systems delivering a range of capabilities that allow the Blood Service to accomplish its business functions, and thus its business objectives.

These capabilities can be obtained in a number of ways, ranging from bespoke developed software, through to commercial off the shelf (COTS) applications. In turn, these may be specific "point solutions" addressing a specific capability requirement, or be a component or module of a larger software suite delivering a large range of capabilities such as Enterprise Resource Planning (ERP) suites that can provide capabilities such as finance, procurement, warehouse, order consumables and human resource management. On another dimension, the hosting and management of the services providing these capabilities can vary from "on premise" hosted ICT services, though externally hosted and managed, to cloud-provisions infrastructure or platforms, or "software as a service".

To address the specific requirements of the blood value chain, Blood Services will often operate dedicated software applications referred to as "Blood Establishment Computer Systems" (BECS) particularly in the US, or "Blood Management Systems" more generally. These systems typically enable the capabilities for recruitment and management of donors, the collection, processing and testing, and then inventory management and distribution and traceability of blood components. The boundaries of BECS systems vary with the commercial offering, and may need to be supplemented with additional capabilities, such as a web-based system to allow customers to place orders, or systems that replace paper-based donor health questionnaires with touch screens.

It is also noteworthy that some blood services may also participate in multiple value chains, distinct from blood including human cells, tissues and cellular and tissued based products, solid organs and other Medical Products of Human Origin. Some of these processes will require capabilities and business processes not supported in BECS systems, such as complex workflow management for tissue banking, or highly specialised algorithms for solid organ allocation. Consequently, additional specialised software systems may manage part or all of these supply chains.

Increasingly, laboratory testing across these value chains will be conducted by a specialist Laboratory Information Management (LIMS) system, which might also use dedicated laboratory device interface "middleware" software to manage the task of connection to laboratory devices, analytical tools and laboratory software systems. Some Blood Services extend their value chain into hospital transfusion services, which extends the software capabilities required, such as additional modules in BECS systems, clinical pathology lab systems, or specialist transfusion service software.

Similarly, the recruitment and management of donors is increasingly a specialised capability often delivered by specialist "donor relationship management" (DRM) systems or modules. Increasingly important is the capability to provide donors with access to self-service options such as managing appointments and service requests via their mobile devices. There will also be a host of business support functions that depending on the size of the organisation will be managed by software systems e.g. human resources, finance, quality systems and office automation.

This "best of breed" approach, where an organisation selects a range of application components and services to best suit its needs, can however present challenges when the enterprise requires these services to interact, and where data needs to be aggregated for business intelligence, analytics and reporting.

Increasingly, integration between applications designed to a Service Oriented Architecture can be done with sophisticated integration engines. For older legacy systems, and less sophisticated components, specific "point to point" interfaces may be required. The complexity of this in an environment with a significant number of systems cannot be underestimated.

The large blood service, with its exquisite dependence on information technology, often represents a complex ecosystem of applications, needed to deliver the range of capabilities the businesses need to operate.

Australian governments fund the Australian Red Cross Blood Service for the provision of blood, blood products and services to the Australian community

Use of Clinical Documentation Architecture

Misha Baker
CDC

The Centers for Disease Control and Prevention (CDC) operates the National Healthcare Safety Network (NHSN), an internet based surveillance system that tracks healthcare-related outcomes and adverse events, primarily healthcare associated infections. NHSN includes several modules which collect data on healthcare-related adverse events, including surgical site infections, central line associated blood stream infections and catheter associated urinary tract infections; vaccination coverage among healthcare personnel; and transfusion-related adverse events through the Hemovigilance Module.
Prior to 2010, there was no national surveillance system which tracked transfusion-related adverse events in the United States. Rather, transfusion reactions were reported to different government agencies and non-government organizations, which precluded efforts to develop national estimates on rate and prevalence. Since 2010, the NHSN Hemovigilance Module has collected information on the occurrence of 12 transfusion-related adverse reactions through voluntary participation and reporting by healthcare facilities. These data are analyzed in aggregate by CDC in order to monitor trends in transfusion reactions, evaluate response to adverse reactions and identify emerging threats to patient safety.

The Hemovigilance Module includes a series of data collection forms used by facilities to report the occurrence of adverse events, incidents linked to adverse events and the total number of transfused components each month. In 2015, 266 facilities were enrolled in the Hemovigilance Module and approximately 60% of these actively report data on a regular basis. CDC is working to increase participation and consistent active reporting. Some users have noted reporting burden as a barrier to more frequent and consistent data submission. Additionally, manual data entry into the module can result in transcription errors. To reduce reporting burden and improve accuracy, in January 2017, the Hemovigilance module will implement Clinical Documentation Architecture (CDA) to allow automated data entry from facility electronic health records for quick data upload and submission.
CDA serves as a conduit between two information systems by converting standards, definitions and formats into a series of computer codes developed and reviewed by Health Level International (HL7). NHSN infrastructure supports the use of CDA. Each year, CDC releases an implementation guide to assist programmers in developing CDA compatible system for facilities which report to NHSN. Currently, facilities enrolled in NHSN can use CDA to upload data related to surgical site infections, central line insertion practices adherence monitoring, antimicrobial use and resistance, and dialysis-related adverse events.
This year, developers are working with NHSN and reporting hospitals to allow Hemovigilance Module data to be submitted using CDA software. This will enable users to specifically upload data on the total number of units transfused to the Monthly Denominator Form, a required report. This system would electronically communicate with the facilities' Laboratory Information System (LIS) and patient admission system to upload data to the Monthly Denominator Form using ISBT 128 product description codes. For example, the ISBT 128 code for a particular blood product would be uploaded from facility LIS by CDA to NHSN. Then, the NHSN CDA software would interpret the ISBT 128 product code as its corresponding blood product. This method will be used for all required data and fields with values greater than zero. Facilities will be able to import or export data as a .zip file at any time to review submitted data after the report is saved. Participating facilities can work with their internal information technology office or contract with an external CDA vendor to create software compatible with NHSN. Again, the goal is to make it easier for participants to enter data more easily and accurately.

Additional information about NHSN's Hemovigilance module can be found at the NHSN Blood Safety Surveillance website (http://www.cdc.gov/nhsn/acute-care-hospital/bio-hemo/) or by sending an email to nhsn@cdc.gov with "Hemovigilance' in the subject line.

Citation
Harvey, A. R., Basavaraju, S. V., Chung, K.-W. and Kuehnert, M. J. (2015), Transfusion-related adverse reactions reported to the National Healthcare Safety Network Hemovigilance Module, United States, 2010 to 2012. Transfusion 2015; 55: 709–718. doi: 10.1111/trf.12918

Traceability

Paul Ashford
ICCBBA

The essential need for end-to-end traceability in transfusion medicine is well understood and required by regulation in many countries. But do we really understand what traceability is and what we need to do to ensure effective traceability?

At the simplest level traceability is described as the ability to trace from donor to recipient, and vice versa. Establishing such traceability is a standard feature of transfusion medicine practice and is supported by modern blood establishment computer systems.

However, there are a number of characteristics of the transfusion chain that add complexity and, if not fully addressed, can compromise traceability. These include:

- the involvement of several parties in the transfusion chain and the associated shared responsibility for traceability;
- the pooling and division of products which makes the traceability pathway more complex;
- the need for traceability to be rapid in the event of potential disease transmission;
- the need to retain traceability information for long periods (for example 30 years in the EU).

There tend to be an assumption that if traceability is effective today within one organization then end-to-end traceability will be effective for as long as required. Traceability audits are not common, and the fragility of traceability only becomes apparent during recall. This has been demonstrated by lookback activities in many countries which have shown that not all blood components could not be traced.

In order for traceability to remain effective, it must be actively managed and incorporated within the scope of the quality system and audit programme of all organizations involved in the transfusion chain. Such responsibilities extend beyond the direct sphere of information technology and need to be considered within the wider scope of information governance. In particular, it is important that procedures are in place to ensure:

- there is clarity over the responsibility for traceability information in the event of takeovers, mergers and dissolution of organizations;
- traceability agreements are in place between parties involved in the transfusion chain to specify the boundary of responsibility and the mechanisms for managing the information interface and lookback activities;
- historical traceability information is regularly reviewed to ensure that it remains in a readily accessible format;
- proactive steps are taken to update data storage as required; and,
- regular end-to-end lookback exercises are performed to ensure the effectiveness and timeliness of traceability.

The ISBT Working parties on IT and Haemovigilance are in the process of establishing a Traceability Task Force with the objective of developing guidance on the management of traceability. A call for participants will be made by the working parties during the ISBT Congress in Dubai. Working Party Members interested in participating in this work may contact Paul Ashford (paul.ashford@iccbba.org).

Lynne Briggs
Versiti

RFID in Healthcare and Transfusion Medicine – What Is Needed

When we think about introducing new technologies, or any type of innovation, there are typically three questions that get answered in a deliberate manner, tripped over, fall into place due to a fortunate aligning of the stars, or a little bit of each. These questions include:

- Will the technology/idea create new possibilities or opportunities?
- Will users be interested in it? Does it solve a problem or create an opportunity that people want to pursue?
- Is the innovation viable in the marketplace (e.g, reliable, sustainable, cost effective, adequate ROI)

When considering the state of Radio Frequency Identification (RFID) technology in transfusion medicine and healthcare, these questions may provide insight.

We know that the unique properties of RFID as a data carrying and sharing technology create possibilities. RFID does not requiring line of site to access and read and it supports rewriting data. Studies in transfusion medicine have shown that pain points in blood centers and transfusion services related to reconciliation, inventory visibility and management, product controls (in/out of temperature controls, etc.), are all greatly improved with RFID. While use of RFID in some areas of the hospital increasing somewhat, we have not seen a tsunami of change in use of RFID in transfusion medicine, or in healthcare.

We could speculate that this slow adoption is simply a case of patience. Changing standard operating procedures, retraining staff, trusting the technology to work consistently, and justifying overhead of the technology all take time.

But here are other "viability" factors to consider: competing RFID technology choices, costs, and competing standards that create friction in the forward movement of adoption. Not all RFID is the same. Differences include High Frequency (HF), Ultra High Frequency (UHF), passive and active RFID, differing scanner interface drivers and protocols, and differing data standards. The frequencies, technologies, and protocols are not really interchangeable, so when creating collaborative solutions, alignment is required.

The ISBT Working Party on Information Technology, RFID Task Force, anticipated part of this friction and developed an initial guideline that outlined the type of RFID frequency, tag type, and data placement on the tag for blood bags. Like the ISBT 128 bar codes, the technology described in the guidelines can be used by everyone in the direct blood supply chain. The guideline assumes the use of HF technology, however most hospitals use UHF solutions when tracking fixed assets. HF is a short read range, UHF is a long read range (doorway readers, etc.) If a health system has made an investment in UHF, and the blood operation wants to introduce HF, different equipment is required, and additional investment. Not an insurmountable problem, but "friction".

In transfusion medicine, the return on Investment (ROI) for RFID solutions can be elusive. The tag cost becomes a driving factor in ROI, not the infrastructure investment. Measureable benefits exist, but the best way to achieve ROI is see the consumable cost of the tag offset by the spread of benefits from the bag manufacturer to the hospital, not just by a blood center. For hospitals using RFID for other types of "non consumable" asset tracking the infrastructure becomes the driving one-time cost on the ROI. Very different models. So, what does this all mean in terms of RFID adoption in healthcare and transfusion medicine? The ISBT RFID task force will investigate and update knowledge on the current state of RFID in healthcare, and other groups such as the Health Information Systems Society's (HIMSS) RFID working group, continue to pursue the same goal. For transfusion medicine, we know there are benefits, but we will need to consider how to better justify the cost. It is particularly critical in transfusion medicine to adopt a standard that allows RFID technology to be used upstream and downstream in our supply/value chains. There are other benefits that we may not have adequately been measured or considered, such as product management between the blood center and a hospital, which may provide a different equation to ROI.

Ravi Reddy

I assumed the role of President of the ISBT in Dubai and am truly honoured and humbled at being afforded the opportunity. When I started as a technician at Natal Blood Transfusion Service in Durban, South Africa, 31 years ago, the thought of even becoming a member of ISBT was a distant dream. Today ISBT is a truly global organisation with members from 103 Countries.

This edition of Transfusion Today focuses on Information Technology (IT) in Transfusion Medicine and the articles address key issues related to factors to consider when designing and implementing IT solutions in resource limited settings; enabling transfer of information from laboratories to national databases and laboratory instruments to laboratory information systems (LIS's) in a seamless manner; as well as IT options for different Blood Services ranging from "off the shelf "software to "best of breed" software for each step of the value chain.

IT has played a critical role in improving efficiency, enhancing safety and improving processes. Most of these have been internal to the organisation and a major challenge remains integrating with external hospital based systems to increase traceability from donor to patient and improve the look back and haemovigilance programmes. The guidance documents being developed by ISBT IT Working Party for traceability and interfacing will hopefully address what may be perceived as weak links in the Blood Transfusion Value Chain. We also need to remember that while many Blood Services in developed countries have state of the art systems, many resource limited countries, especially in Africa, have very basic systems in place. The work done by Jembi Healthcare Systems in Lesotho and Ethiopia could serve as a model for other countries to adopt.

My heartfelt thanks goes to the outgoing President Celso Bianco, the Board of Directors and Management Office staff for the great work they have been doing. A robust strategic plan has been developed focusing on 6 key strategic objectives and a key focus area during my term in office will be to oversee the successful implementation of the activities linked to each objective. Work has been ongoing on revising the ISBT Code of Ethics and the Standing Committee on Ethics will continue with this important work to complete the revision so that it can be presented to the members for comment.

Expanding our international outreach is important and we will be focusing on more ISBT Academy events, Regional ISBT Meetings and partnering with National and Regional Society meetings to enable greater access to individuals that cannot attend the ISBT congresses. ISBT has innovative e-learning tools and we will be engaging with stakeholders to make this more widely available especially to developing countries.

Ravi Reddy

ISBT Elections 2016

ISBT wishes to thank the members who were willing to stand in the 2016 elections for vacant positions on the Board of Directors and is pleased to announce that the following members were elected:

President Elect:	Martin Olsson
Vice President:	So-Yong Kwon
Treasurer:	Eric Jansen
Regional Director Africa:	Justina Kordai Ansah
Regional Director Europe:	Shubha Allard
Regional Director South East Asia:	Yuyun Siti Maryuningsih Soedarmono
Regional Director West Pacific:	Yoke Lin Fung

Martin Olsson

So-Yong Kwon

Eric Jansen

Justina Kordai Ansah

Shubha Allard

Yuyun Siti Maryuningsih Soedarmono

Yoke Lin Fung

We wish them all success in their new role.

Welcome to our new members

(June 2016 - August 2016)

Africa

- **ALGERIA:** Fatma Zohra Zoulai
- **SOUTH AFRICA:** Lavendri Govender, Wendy Sykes, Trevor Vroom, Michael Lennards
- **UGANDA:** Wambi Wilson, Sarah Muyanja, Frank Kakuba, Gilbert Sunday Rumanywoha, Gaston Miramura
- **ETHIOPIA:** Abiy Belay Ambay
- **GHANA:** Lucy Asamoah-Akuoko

Americas

- **UNITED STATES:** John Hackett Jr, Baia Lasky, Morvarid Moayeri, Arthur Bracey, Tahir Mehmood, George Schlauder, Martin Cannon, Monica Freire, Marisa Saint Martin
- **PERU:** Roxana Regalado
- **BRAZIL:** Juliana Pires Marafon Franz
- **COSTA RICA:** Mariángela Vargas Arroyo

Eastern Mediterranean

- **PAKISTAN:** Rehan Hafeez, Muhammad Noorulamin, Saba Jamal, Akhlaaq Wazeer, Muhhammad Anwar, Nida Anwar, Erum Khalid, Aamir Saeed, Uzma Ata, Fatima Meraj, Bilal Ahmed Khan Tareen, Muhhamad Arshad, Naila Tariq, Shomaila Sohail, Farrukh Hasan, Fahdel Sheikh
- **EGYPT:** Lamiaa Samir Borhan, Lamia Yehia Osman, Mai Khaled, Faten Moftah
- **JORDAN:** Jamil Abuhammad, Mohammad Bani-Ahmad, Mohammad Masadeh, Mohammed Alorjani, Suha Rabie
- **KUWAIT:** Somaya Al-Shatti
- **OMAN:** Khalid Al Habsi, Maimouna Al Mahrizi, Arwa Al-Riyami
- **UNITED ARAB EMIRATES:** Nada Nsier, Safiya Alshamsi

Europe

- **AUSTRIA:** Gerda Leitner
- **BOSNIA AND HERZEGOVINA:** Miroslava Vasic, Bozana Djukelic Selak
- **DENMARK:** Andreas Stribolt Rigas, Bente Fredborg Nielsen, Birgit Kaja Christensen, Jakob Hjorth von Stemann, Lise Wegner Thoerner, Margit Hørup Larsen, Tanja Tellier, Vera Munk, Jens Svanholt Seeberg, Susanne Egstrand, Sabina Ulf Christensen, Kristoffer Soelvsten Burgdorf
- **FRANCE:** Slim Azouzi, Benjamin Corgier, Yves Colin, Caroline Le Van Kim, Gilles Mougin, Johann Guegan, Guillaume de Saint Martin
- **GREECE:** Sofia Ioannidou, Eftychia Kontekaki, Christina Papa, Georgios Martinis
- **IRELAND:** Paul Mckinney
- **KAZAKHSTAN:** Zhandos Burkitbayev
- **LITHUANIA:** Rasa Oginskien
- **MACEDONIA:** Violeta Jovanoska
- **NETHERLANDS:** Yolentha Slootweg
- **NORWAY:** Mona Reksten Bruun, Kristin Gjerde Hagen, Bente Anita Grande Karlsen
- **ROMANIA:** Corina Posea
- **RUSSIA:** Burhonidin Bakhovadinov, Dmitrii Pevtcov, Abdulbasir Ganapiev, Galina Lukina, Boris Baryshev, Mariia Estrina, Petros Pirumyan
- **SERBIA:** Slobodanka Lisulov, Sonja Jankovic, Zdravko Gulan
- **SWITZERLAND:** Nadine Trost
- **TURKEY:** Yasemin Heper, Berrin Uzun, Ugur Arslan, Melda Özdamar, Arif Colak, Hamit Göktepe, Onur Kavukcu
- **UNITED KINGDOM:** Rekha Anand, Angela Brazier, Rachel Hawes, Tatiana Bailey

EDUCATION

Dubai webcasts

The 34th International Congress of the ISBT was held from the 3rd till the 8th of September, 2016 in Dubai. We have recorded a selection of inspiring talks of the Academy Day as well as of the plenary sessions, which will be available soon on the ISBT Academy ePortal. Furthermore, webcasts with the Jean Julliard Prize winner Gustaf Edgren on “Big data in transfusion medicine” and the talk of the Presidential Award winner Harvey Klein entitled “Of Dogs and Men” will also be available.

The webcasts include the following topics:
- Autoimmune haemolytic anaemia
- The global epidemiology of arboviruses and zika
- Treating sickle cell disease
- Improving delivery and prevention of maternal mortality
- Cultured blood cells for transplantation

New feature: podcasts

The Dubai meeting was a great opportunity to record a number of short talks or “podcasts” with experts. These podcasts represent a new feature on the ISBT Academy ePortal, which aim to give an overview on the current standpoints and the new developments of important areas on relevant blood-transfusion-related topics. Moreover, these podcasts will also include interviews where young investigators ask experienced specialists about their memorable and difficult steps during their scientific career.

Immunohematology Case Studies

The Working Party on Immunohematology aims to provide educational opportunities by introducing the Immunohematology Case Studies, which give the opportunity to analyse cases that the participants may not see often but should be able to identify and to learn new practical approaches that may be used in their institution.

Twelve members of the Working Party on Immunohematology will share 1 case study each. These cases will hopefully be valuable as learning tools for all levels of those interested in immunohematology. The Case Studies are available on the website of the Immunohaematology Working Party at http://www.isbtweb.org/working-parties/immunohaematology/case-studies-topics-1-12/.

Patient Blood Management Resources

Patient Blood Management (PBM) aims to optimise blood transfusion by addressing critical patient care issues of pre-operative optimization of haemoglobin and haemostasis, reducing surgical blood loss and optimizing the patient’s physiological reserve in relation to anaemia. The Clinical Transfusion Working Party, under the leading of Working Party chair Shubha Allard assembled a resource to support the wider application of PBM. It contains 20 chapters on various aspects of PBM from a number of countries and are available on the website of the Clinical Transfusion Working Party: http://www.isbtweb.org/working-parties/clinical-transfusion/introduction/.

ISBT ACADEMY

Juan Gabriel Cubillos B.
Congress President – Acobasmet
2014 -2016

ISBT Academy Session

Colombian Association of Blood Banks and Transfusion Medicine – ACOBASMET - Medellin - Colombia

The Colombian Association of Blood Banks ACOBASMET held from 26 to 29 May his XVI Iberoamerican IX Colombian Congress of Blood Banks and Transfusion Medicine and III Symposium Tissue Therapy in the city of Medellin. It was attended by over 900 people including physicians and lab technician’s blood services from Colombia, Ecuador, Perú, Panamá, Argentina, Uruguay and others.

In this opportunity, the Colombian Association requested the support of the ISBT (the world’s leading academic institution) to give a session focused on the safety of the blood donor and experiences of other countries structuring hemovigilance.

On May 27th, the academic session of the ISBT was held by Dr. Anne Eder of the Health National Institute from the Department of Transfusion Medicine, Clinical Center, United States; Dr. Pierre Robilard of Hema- Quebec- Canada and Dr. Peter Van Den Burg, Chairman WP Donors and Donations at ISBT. They talked about the importance of the right selection of blood donors within blood safety worldwide.

Attendees were able to know an overview of the different countries difficulties to ensure the right selection of blood donors. They also learnt about the history of blood transfusion from the 1600s when these were done with animals’ blood until nowadays with all advances from current transfusion. For attendees it was of great interest to remember the importance of altruism in blood donors. This altruism becomes one of the best strategies to reduce the spread of infections.

The visitors could also appreciate the United States point of view about the haemovigilance, understanding the donor safety as a main pillar of the process.

The conference also gave an approach to the Quebec system, that has more than 16 years of experience and it has become one of most important blood transfusion referees at the international context.

At the end of the session attendees could make general questions to the speakers making even more interesting the talk.

From left to right.
Dr. Johanna Vargas – Vice president Colombian Association Blood Banks
Dr. Pilar Palacios – Secretary Colombian Association Blood Banks
Dr. Guillermo Orjuela – Academy Coordinator Colombian Association Blood Banks
Dr. Peter Van Den Burg - Chairman WP Donors and Donations at ISBT
Dr. Anne Eder - National Institute of Health, USA
Dr. Marco Antonio Páez – President Colombian Association Blood Banks
Dr. Ina Noelia Perez Huaynalaya. – Regional Director for South América – ISBT
Dr. Juan Gabriel Cubillos – President of congress –ACOBASMET
Dr. Pierre Robilard- Director Hema – Quebec

Nabajyoti Choudhury
Secretary General, AATM

ISBT Report on

Joint Congress of Asian Association of Transfusion Medicine (AATM) & Blood Bank Transfusion Services of Turkey (BBTST)

The Asian Association of Transfusion Medicine (AATM) is a transnational organization from Asia. The primary objective of the Association is to accelerate scientific progress and to improve quality in Blood Transfusion Services (BTS) from member states in the Asian region. AATM also takes an active interest in implementation of total quality management, manpower development, skill improvements for blood transfusion services (BTS) from member. It has various programs for its members which are fellowship program (full board and travel grant); wet and dry workshops; EQAS program; publications (Global Journal of Transfusion Medicine, a peer reviewed journal and newsletter) and annual congresses. AATM has 'country chapters' in fourteen countries and AATM programs are implemented independently by country chapters. It also has MoUs with various international organizations for improving BTS in this part of the world.

One of the major activities of AATM is the organisation of annual congresses in various member countries every year. The XIIth Annual Congress of AATM was jointly organized with Blood Bank and Transfusion Services of Turkey (BBTST) in Antalya, Turkey from 2nd to 6th April, 2016. There were about 750 delegates from eighteen countries and scientific programs were conducted in two parallel halls. There were three plenary sessions and one of the plenary sessions was organized by International Society of Blood Transfusion (ISBT). The meeting commenced on 3rd April with a plenary session of AATM where the status of respective BTS was presented the country chapter chairpersons from Bangladesh, Bhutan, India, Iran, Maldives, Mongolia, Nepal, Pakistan, Sri Lanka, Turkey and AATM partner organization, India Immunohematology Initiatives (III). The sessions were interactive and discussions on improvement in BTS in Asian countries were discussed in panel discussions. All speakers were given a format for presentation to understand the improvements made by various country chapters during the last five years. The contents and discussions were highly appreciated by participants. There were other scientific sessions on 'immunohematology', 'pathogen inactivation', 'blood donors', 'blood groups' in two parallel halls. The day ended with an Annual General Body meeting (AGM) of AATM.

The second day started with a plenary session of American Association of Blood Banks on 'accreditation and cellular therapy'. There were other sessions on 'education and quality management', blood components and fractionation', 'patient blood management' and hemovigilance', 'apheresis and 'stem cells'. The ISBT plenary session was held on 5th April in the morning on 'patient blood management/ clinical transfusion'. Three learned speakers delivered lectures on a) Hb triggers and single unit transfusion (Dr. Astrid Norgaard, Denmark); clinical trial evidence on Transfusion alternatives in elective orthopaedic surgery (Dr. Cynthia So-Osman, Nederland) and implementation of PBM in the UK (Ms. Rebecca Gerrad, UK). The session was very informative and interactive and all participants appreciated the high scientific calibre of the session. As this session was supported by the ISBT Academy, feedbacks from all participants were obtained. Other sessions on that day were 'blood bank regulations', 'TTI/ blood screening', transfusion reactions' transfusion practices'.

This joint congress opens up an opportunity for international organizations working in the field of Transfusion Medicine to hold joint congresses in various parts of the world. It helps members of one society to understand problems faced by BTS workers from other parts of the world and to find out common solutions. It also exposes BTS workers to different cultures, regulations, social make up on voluntary donations, TTI issues etc. The best example in this joint congress was superb cultural functions in all three evenings. All delegates were dancing to the tune of music, whether it was Turkish or Indian, without knowing the meaning of the lyrics. It proves we are one and we can do better if we join hands.

ISBT ACADEMY

ISBT Academy Day at the 8th Congress of AfSBT in Kigali, Rwanda June 2016

Tonderai Mapako
Planning, Information and Research Manager, National Blood Service Zimbabwe

ISBT in collaboration with AfSBT held a successful Academy Day on 31 May 2016 in Kigali, Rwanda. This session was attended by about 200 delegates from 19 countries. The agenda had six thematic areas, moderated by an international panel of experts: Judith Chapman (ISBT), Imelda Bates (LSTM), Dora Mbanya (Cameroon), and Claude Tayou Tagny (Cameroon). The following key issues were addressed:

Challenges to research work in blood transfusion in Africa
Three Africa-based international transfusion medicine researchers presented on various challenges that affect blood transfusion research in Africa. Dora Mbanya emphasised the need for blood to be safe at all levels of blood safety chain. Research contributes immensely to these blood safety achievements; however, there are several difficulties and challenges associated with research activities, especially in resource-limited settings. These range from the absence of policies, legislation and government commitment, to financial, logistics, structural and organizational issues. Shirley Owusu-Ofori (Ghana) emphasised home-grown research in sub-Saharan Africa and the role of a transfusion research agenda. Without home-grown expertise to initiate and carry out high quality research, the capacity of blood services in sub-Saharan Africa to produce context-specific evidence to inform policy and practice is limited. Tonderai Mapako (Zimbabwe) provided details of a novel framework for research capacity review in blood services in Africa. The eight areas covered by the framework comprise: research strategies and policies, institutional support services and infrastructure, supporting funding applications, project management and control, research careers and promotions, development of skills and knowledge for research, external promotion of research, and national research uptake. This was successfully implemented in Zimbabwe and Ghana and there is need to transfer this to other blood services.

Role of the T-REC project in Africa
Imelda Bates and Oliver Hassall who led a successful T-REC project (2011-2015) described in detail the concept, implementation, success, and challenges of implementing a multi-national research project. A competitive application to the European Union for the T-REC project was catalysed by the Mombasa workshop. The application was successful and the 4-year T-REC project started in April 2011 with a budget of 1.7M euros. The overall aim of the T-REC project was to increase research in blood services in Africa and to create a research culture within blood service organizations. T-REC had five main components, all aiming to enhance linkages between local and EU universities, and the Ghanaian and Zimbabwean blood services. The T-REC research projects generated many useful outputs, and some have changed practice in the blood services.

ISBT ACADEMY

Practical aspects of carrying out research
The facilitators, Oliver Hassall, Imelda Bates and Claude Tayou Tagny took participants on the journey of a research project. This included formulating a research question, defining the research process, study design, types of studies, ethics and informed consent, variables, confounding factors, sample size and statistical issues, and were well received by participants.

How to prepare a congress abstract and write a scientific paper
Eszter Herczenik (ISBT) guided participants on successful abstract preparation which must answer the following questions: (1) What was your research question? (2) What kind of methods did you use to answer the question? (3) What data have you collected? (4) What are your findings and conclusions? The presentation also discussed some important points to allow the writer to prepare a well-structured and comprehensive manuscript for publication.

Ethical aspects of research
Claude Tayou Tagny emphasized the Declaration of Helsinki (1964) as essential in defining and monitoring respect of ethical principles for medical research involving human subjects.

ISBT Academy ePortal, Young investigators forum and the T-REC database
Judith Chapman shared on the ISBT Academy ePortal, young investigators (YIs) forum and the T-REC database. The Academy ePortal is a resource library for educational materials. The goal of the YIs forum is to encourage dialogue between YIs about the successes and challenges related to their research. A T-REC database of researchers in Africa was established and at the end of the project ISBT became the custodian of the database, which contains over 300 contact details.

The author thanks all facilitators and presenters. This report was developed based on their abstracts and presentations. Appreciation also goes to the AfSBT Management Office for organizing the Academy Day. The ISBT funding support is forever cherished.

EUROPE

World Blood Donor Day 2016 Launch, Amsterdam

Imke Sikkema
Blood donor marketing
Sanquin, The Netherlands

During World Blood Donor Day donors are thanked for their help and international attention is given to the importance of voluntary and unpaid blood donation. The need for the safe donation of blood and blood products is also highlighted. The Netherlands was chosen as the global launch country and Sanquin and the World Health Organization (WHO) worked together on the international campaign.

The official celebration was held in the Royal Concert hall in Amsterdam, The Netherlands in the presence of His Royal Highness King Willem-Alexander. More than 400 blood and plasma donors and representatives of international organisations including ISBT were present. Guests were greeted with coffee and macaroons and had the opportunity to chat with each other. The morning session began with the formal speeches and then became real with a story from a Ewald Lausberg, a patient who required much transfusion support during treatment for cancer. His story was followed by the viewing of the three promotional videos which were accompanied live by the Dutch harpist Remy van Kesteren. During the lunch break King Willem-Alexander met representatives of three of the four Founding members of World Blood Donor Day, WHO, FIODS, ISBT and blood and plasma donors. The afternoon included a story told by Tjibbe de Louwere, 8 years old with the help of his mother; Tjbbe requires very regular plasma donations to keep as healthy as possible. Tjbbe's moving story was followed by some fun interactive questions with the use of a mobile App, a presentation about testing of donor blood and a performance by an illusionist. The celebration concluded with some drinks and everyone was presented with a box of Dutch tulip bulbs.

Blood is life, give blood

The theme of the international campaign 2016 was Blood connects us all. 'Imagine that the people who you have saved, know who you are?' Worldwide there are millions of people who are grateful for blood donors and enjoy their lives thanks to them. That gratitude is expressed to blood donors on World Blood Donor Day. Normally patients don't get to know their donor, but imagine bumping into your saviour on the street – what would happen? At a time like this we get very close in a relationship that is anonymous, but at the same time very intimate. These moments between two people are bound to be magical. The patient who needed the blood and the donor who gave it so freely. By capturing these moments on film, we literally show the value of the lifesaving gift granted by the blood donors. They see the results of their selflessness. The successful Dutch harpist Remy van Kesteren was responsible for the music that accompanied the international World Blood Donor Day campaign. The music comes from his most recent album 'Tomorrow Eyes'.

https://youtu.be/pdb3txuWqUU - Butterfly
https://youtu.be/njZfIVhRpDM - Super hero
https://youtu.be/1av99MkddhA - Tulip

The international online campaign was adopted by many countries all over the world. They used the campaign material provided to thank blood donors. The campaign was created by the WHO in collaboration with the host Sanquin. The campaign was used all over the world and reached over 554,971,607 people. Also in the Netherlands this was the most successful WBDD campaign to date. There was an overwhelming amount of attention from the press. Sanquin welcomed over 7,000 new donors and 3,500 donors who wanted to come back to donating.

EUROPE

World Blood Donor Day In Croatia – Haiku

Irena Jukic
CITM

Blood connects us all" was the theme of the World Blood Donor Day this year. In Croatia we celebrate this day every year but this year we really hit the goal.

Croatian Institute of Transfusion Medicine (CITM) started with our campaign at the end of autumn last year. We organized an international competition for haiku poems with the theme: BLOOD DONATION. The language was English and deadline was 30th November, 2015. Authors sent their haiku (max 3 unpublished poems) via e-mail: blood.donation.haiku@gmail.com.
The contest was closed on 6th December, 2015. The Judges (the Jury) were four members: one from England, one from Germany and two from Croatia. It was not easy to choose the best poems because we received 659 haiku poems from 253 authors from 35 different countries!

The results were published on CITM website in February 2016. Selected haiku were printed in joint collection in Croatian and English in the book which was promoted on World Blood Donor Day in CITM. A lot of authors are blood donors, some of them were recipients.

The award-winner who fulfilled all criteria was Rosie Roumeliotis from Greece. She wrote the following haiku:

blood donor –
an unclenched fist
full of sunlight

As one of judges wrote in an explanation in the book introduction: *„The „unclenched fist" unexpectedly indicates the moment after the donor got the injection needle inserted into a prominent vein on the inside of his elbow. Now his open hand is holding hope symbolized by the sun, universal hope for all fellow creatures in health trouble."*

We had the honour to read so many beautiful poems from authors from all over the world. From New Zealand to Canada, from Japan to USA, from Ghana to Denmark and so forth. All authors have beautiful ideas, excellent themes and all together they conncected the world

We are proud to be the first in history to mark the World Blood Donor Day like this. We are proud because we didn't know what theme would comprise the WBDD this year, regardless we really hit the goal. We are very proud to connect this creative bloodstream of goodness from all over the world.

EUROPE

80-year anniversary of Krasnoyarsk Blood Center

Nataliya Filina
Head of Krasnoyarsk Blood Center

A professional conference dedicated to the 80-year anniversary of the Krasnoyarsk Blood Center took place in the city on the Yenisei-River. Colleagues from all over Russia arrived to celebrate this event and remember the major historical events that influenced the development of transfusion medicine in the Siberian region.

The speakers talked about the first episodes of blood transfusion that were carried out by enthusiast doctors in 1926, about experience of vein-to-vein transfusion, so from donor to patient due to impossibility of blood conservation in the past, and about wide-spread blood transfusion practice since the foundation of the Krasnoyarsk branch of the Central Blood Transfusion Institute (Moscow) in 1936.

During the Great Patriotic War women overcame important vital and technical difficulties and increased the volume of blood collection from 70 to 540 litres per year to provide military hospitals with donor blood. Despite paid donorship in that time, noble compatriots refused take money and transferred the money to other needs.

In post-war years many regional hospitals started to collect blood independently.

Further progress of blood service is bound to lead to a development of surgery and hematology in the Siberian region, and changes in the Russian health care system. In 1962 Krasnoyarsk Blood Bank already produced red blood cells, platelet concentrates, dried plasma, fibrinogen, red blood cell powder, absorbable gelatin sponge, and antiseptic pasta. Red blood cell storage in liquid nitrogen, plasma exchange, cryoprecipitate and albumin were performed since 1972.

Despite of a donorship crisis between 1980-1999 the renaissance of Blood Service took place from 2000 onwards. Due to reorganization, the process of blood component production was centralized and provided with modern high-tech equipment. Finally two Blood Centers with 4 branches in large cities

were organized.

Regional programs for the support and development of health care and the priority national project «Health» were realized in 2009, and today Krasnoyarsk blood service can present:

- 100% volunteer donorship (annually 35 000 donors, 67 000 donations);
- comfortable and safe conditions for donors (100% automated preparation of blood components, donor insurance);
- availability (mobile blood donor centre in the evening and weekends).

Professor Eugene Zhiburt underlined safety guarantees for transfusion recipients in Krasnoyarsk. Besides universal leukodepletion all issued platelet concentrates are pathogen reduced including all plasma after quarantine (60 %) or pathogen inactivation.

The conference's social program allowed participants to enjoy Siberian rivers and mountains.

At the end of the conference there was a solemn laying of a historical capsule with a message to the future generation of blood donors in the park of the 400th anniversary of Krasnoyarsk on the Square "Honorary donor".

AFRICA

Somali Blood Donation Volunteers Blood Drive

Omar Habeb
Founder and Chairman Somali Blood Donation

The Somalia Blood Donation Volunteers are continuing their campaign to save lives by hosting blood donation drives. One Friday in May,the well organized volunteers,visited the most respected places in Mogadishu. The most popular being the Mogadishu Peace Garden: a well-known location for local people.

Almost 700 people came together on the Friday of the blood drive. The Somalia Blood Donation organisation had the chance to meet all people and to advertise their campaign and give information on blood donation. The campaigners took their time with local people who donated blood of every blood type.

The Chairperson of the campaigners, Dr Omar Abdirahman, talked with the people and explained about the organisation. He told them all about who they are, how they work and what they want from the people. Everyone on seight was ready to donate blood to save lives. Members and volunteers of the Somalia Blood Donation volunteers started collecting every drop.Everyone on the scene was ready to donate their blood to save a life and the members of Somalia Blood Donation volunteers started to take the blood.

While the blood donation was going on almost 200 people had their blood taken so that they could know their blood type.

All people on sight were very excited to see such young doctors working for the survival of their nation's patients and for those who need to have emergency blood transfusions. At the end of the successful campaign, volunteers from Somalia Blood Donation closed the day with a thank you for all their kind support.

SOUTHEAST ASIA

World Blood Donor Day 2016 Celebrations in Pakistan

Hasan Abbas Zaheer
National Coordinator, Safe Blood Transfusion Programme, Government of Pakistan

The World Blood Donor Day 2016 celebrations were enthusiastically conducted on a large scale by the Safe Blood Transfusion Programme, Pakistan, in the weeks leading to June 14. The Programme coordinated with a number of educational institutions and other stakeholders to celebrate the Day in a befitting manner. The involvement of the youth, particularly the university and college students, in these celebrations was overwhelming. A series of diverse activities including: sports events, hiking tours, essay and poster competitions, seminars, press briefings, etc., were conducted to acknowledge the sacrifice of the anonymous voluntary donors who donate blood regularly and save countless lives. These events and competitions were participated by a very large number of spirited youth who got an opportunity to express their talent and gain recognition. Moreover,create awareness about the noble cause of blood donation. The impact of these celebrations have resulted in increasing awareness about voluntary blood donations and the numbers of voluntary blood donors is steadily increasing in the country. The high level participation of the Government representatives in the WBDD activities demonstrates the government's commitment to promote blood safety in the country. The WBDD activities in Pakistan are receiving more and more coverage in the print and electronic media, which is a reflection of the sustained and committed efforts of the Safe Blood Transfusion Programme, Government of Pakistan. A special message on the occasion of WBDD 2016 was released by the Pakistan Ambassador for Blood Safety, Ms. Sharmeen Obaid-Chinnoy, who is a renowned international film maker from Pakistan and has won two Oscar Awards.

2016

October 20, 2016
3rd Congress of Controversies in Thrombosis and Hemostasis (CiTH)
Moscow, Russia
www.cith2016.ru

October 22 - 25, 2016
AABB Annual Meeting
Orlando, USA
http://www.aabb.org/Pages/default.aspx

October 28 - 30, 2016
21st Annual Congress of Asia Pacific Blood and Marrow Transplantation Group 2016 (APBMT 2016)
Singapore, Singapore
http://www.apbmt2016.org/

2017

April 20 - 21, 2017
Sanquin Spring Seminars 2017 on 'Iron metabolism and anemia'
Amsterdam, The Netherlands
http://www.sanquin.nl/en/research/sanquin-spring-seminars/

June 17 - 21, 2017
27th Regional Congress of the ISBT
Copenhagen, Denmark
More information will be published soon

November 25 - 28, 2017
28th Regional Congress of the ISBT
Guangzhou, People's Republic of China
More information will be published soon

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