TRANSFUSION TODAY

Transfusion Today | **Number 116, September 2018**

Major Incidents, Emergencies and Blood

Hurricane Season in the Caribbean

Toronto Congress Report

AfSBT 2018

New Working Party Chairs

ISBT

Contents

President Martin L. Olsson **Secretary General** Gwen Clarke **Executive Director** Judith Chapman
Design drukkerij Teewes **Photography** Transfusion Today **Advertising** communication@isbtweb.org

Send all correspondence to ISBT - Marnixstraat 317, 1016 TB, Amsterdam, the Netherlands.
T + 31 20 7601 760, communication@isbtweb.org.

Gold Corporate Partners
Abbott BIO-RAD GRIFOLS IMMUCOR
QUOTIENT Roche TERUMOBCT Unlocking the Potential of Blood

Judith Chapman

Editorial

This issue's focus section contains five articles on different major incidents and their impact on the local blood centre or service. The major incidents include hurricane, earthquake, wild fires and a suicide bombing. Almost every one of the articles ends with the importance of a preparedness plan. I worked in a central London hospital blood transfusion laboratory during the time of the IRA London bombings, the London Moorgate train disaster and the Kings Cross fire. We knew the importance of a plan, it helped to ensure that each of us working in the laboratory knew what to do and who we could call on. The plan is a vital cog in ensuring lives are saved.

The 35th ISBT International congress held in Toronto was much appreciated by the delegates including many young professionals, some of whom have written short reports on their experience of attending the congress. A short video highlighting young professionals is also available on the ISBT website. In November 2017 I made a proposal to the Board for ISBT to institute a Young Professionals Council. I am happy to say that my proposal was accepted and the first meeting of the council took place at the Toronto congress. Subsequent telephone conferences have taken place and I am pleased to say that the Council is very active. Members will be seeing the fruits of their discussions later on in the year and at the next congresses. Watch out for a short bio on each of them in the next issue of Transfusion Today, together with a report on their plans for the future.

In the meantime why not start thinking about your abstract for the congresses in Basel in June 2019 and in Bangkok in November 2019. And don't forget to download the ISBT Education App so that you can access lots of educational material on the go.

Gerardo Latoni
Medical Director
Banco de Sangre de Servicios
Mutuos, Puerto Rico

Hurricane season in the Caribbean:

Our experience at Banco de Sangre de Servicios Mutuos, Puerto Rico, during Hurricane Maria, 2017

Banco de Sangre de Servicios Mutuos (BSSM) is the largest blood center in Puerto Rico. It collects approximately 60,000 units of blood per year, distributes 75,000 manufactured blood components per year to 35 hospitals in the island and serves as a centralized transfusion service for 10 hospitals in the San Juan metro area.

On September 6 Hurricane Irma approached the US and the British Virgin Islands as a category 5 hurricane, causing catastrophic damage. Puerto Rico did not receive a direct impact from Irma, however it caused power outages in parts of the San Juan Metro area and the Northeast. Both of our main facilities, distribution and transfusion services and a few of our collection sites, were without electricity.

Two weeks after Irma, Hurricane Maria became a category 5 storm as it approached the Leeward Islands and Puerto Rico. Maria made a direct hit as a powerful category 4 hurricane, entering through the south east coast of Puerto Rico and exiting the island trough the northwest coast. The damage to the island was catastrophic.

As soon as the hurricane warning was issued, we activated our emergency plan. At that time we were still without electricity in both of our main facilities, working 24/7 on power generators. Part of our plan included importing 300 units of PRBC from blood centers in the United States before the airport closed. We also made sure we had supplies for several weeks including fuel and that all the hospitals that we served had enough blood components for several days. All of our buildings and collection sites were secured. Integral to the plan was supplying the staff that manned the facilities during the storm on both of our main facilities with food and water for several days. They were allowed to bring family members to the blood center if they wanted to.

Both of our main sites, distribution center and transfusion service, worked as the storm passed through the island. A few of our carriers had to deliver blood components to area hospitals in the middle of the storm, driving in very bad conditions including roads blocked with debris and non-functioning traffic lights.

After the storm, the entire island was without power. Our main buildings did not suffer any structural damage and continued to operate on power generators. There was no communication, no internet and only a few land line telephones were working on the island. Orders from hospitals were taken in person, door to door. All our staff came back to work as soon as the roads were safe to drive. Everybody helped in any possible way, including in the delivery of blood components to hospitals on the west coast of the island.

The main airport was closed for two and a half weeks. Our main facility resumed the collection of blood as soon as the airport opened. The other collecting sites opened as soon as the electricity came back. Power was restored at our main facility two months after the storm and was restored to the Transfusion Service in February 2018. After the storm, we imported 7,500 units of blood from USA.

The importance to have an emergency plan for catastrophic events was paramount during the crisis. We learned to operate without power, relying on power generators. We found ways to communicate when there were no cell phones or internet. Our staff remained 100% compromised with the work we did and their commitment to the community. We also learned how important it is to make sure our staff and their families were safe and that they had the basic necessities to survive in extreme conditions.

Are we prepared for the next one? I would say yes, we are.

Mario Muon
Centro de Sangue e Transplantação,
Coimbra, Portugal

2017 Wild fires in Portugal and their impact on the Blood Establishment and Hospital Blood Bank of the region

The year of 2017 was the worst year in Portugal so far regarding forest wild fires. On June 17 and October 15 two huge forest fires took place in the central region of the country, resulting in 520 thousand hectares of burned area, more than 100 dead and 325 injured people, something that is haunting everyone's memory.

Given the high number of injured people, contingency plans were immediately put in force either at the hospital level, or at the Portuguese Institute for Blood and Transplant. The great majority of the patients injuries were due to smoke inhalation, traumatic injuries and burns, the most seriously burned patients were sent to the central hospital after assessment and stabilization. There are five National Burns Units in the country, one being located in the Central Region, the area that was most affected by the fires.

To understand the impact of the events in the Regional Blood Establishment of Coimbra, Transfusion Medicine specialist Dr. Cristina Caeiro compared the data of June's and October's incidents to data of those months in the previous year. Despite being in a catastrophic zone, the number of mobile collection sessions, attendees per session and the amount of blood component production and distribution did not decrease significantly, concluding that the impact was low.

Data for the years 2016 and 2017 respectively:
Mobile collections sessions: June (130; 133), October (144; 144)
Production Red Blood Cells (RBC): June (3880; 4047), October (5130; 4702)
Distribution for all region hospitals: June (4981; 3662), October (4377; 2969)
Distribution of RBC units for Central hospital: June (836; 844), October (910; 514).

From the Blood and Transfusion Medicine Department of the Coimbra Hospital and University Center, Dr. Jorge Tomaz and Dr. Marco Matias, Transfusion Medicine specialists, performed an observational cross-sectional study in a single outpatient department during 2017, to explore the impact of fires on blood product consumption and hospital length of stay in the Burns Unit.

The study included 132 consecutive adult patients admitted for fire burns (53,7%) and other etiologies – chemical, electric, boiling liquid – (46,7%) with 2nd and / or 3rd degree burns. Of the total hospitalized patients, 59 were transfused with RBC units. 32,6% were patients burned by fire (mean: 8,3 units) while 12,1% were "other etiologies" (mean: 1,3 units) patients ($p<0,005$). Hence 78.9% of the transfusions that were performed in the Burns unit, were in patients that were burned by fire.

Concerning fresh frozen plasma (FFP) transfusions: 19,7% of patients burned by fire and 3,0% of patients burned by "other etiologies" received FFP transfusions ($p<0,005$)

Preliminary data show that there are statistically significant differences between patients with fire burns and other etiologies.

The aftermath of the incidents was a deep revision and improvement of the implemented preparedness plan by the General Healthcare Directorate and also issuing specific recommendations for the general population concerning exposure to smoke from fires, health risks, impact on the health of smoke inhalation resulting from forest fires, feeding in time of fires and care at the end of the fire.

The Ministry of Health negotiated to reinforce and increase beds in the five Burns Units. In addition, a new pediatric Burns Unit will be created. The need of a vacancy management information system in the Burns Units and Intensive Care Units and critical and primary transport quality of critical patients, including technical requirements applicable to the burns patient, were addressed.

Finally, preparedness is the tool needed to reach the goal of minimizing future damage.

Managing the aftermath:

Transfusion support following the Manchester bombing, 2017

Setting the scene
At 22:30 on the 22nd May 2017 a suicide bomber detonated a shrapnel-laden homemade bomb in the foyer of the Manchester Arena, UK. The blast affected those leaving the concert and those meeting them. Twenty-two casualties died. The number injured was initially reported as 119 but subsequently revised to 250, then 800. Early reports suggested that 112 were admitted to hospital. The scene was cleared of casualties by 02:45 following an agreed healthcare dispersal plan (Figure 1).

The hospital response
Details were available for 75 patients. 52 (69%) patients were female with a mean age of 40 years (range 8 to 66). 79% of all patients were younger than 50 years old and 29 (39%) patients were born after the 1st of January 1996, i.e. eligible for non-UK plasma.

Blood use was assessed for the first 24 hours. Twenty-three patients received red blood cells (RBC), 4 received plasma, and only 2 required platelets and/or cryoprecipitate. The total number of components transfused was 89 units RBC, 4 doses of platelets, 5 single units of cryoprecipitate, 2 pools of cryoprecipitate and 26 units of plasma. The mean RBC use was 3.9 units; the mode was 2. Three of the 23 patients received 44% of the total red cells. The greatest consumption of all blood components was associated with multi-trauma.

Thirty-one units of group O D negative (O neg) RBC were transfused; 28 (90%) of these were transfused as emergency O neg. At least one unit of O neg RBC was transfused to 14 (61%) of the 23 patients.

The Blood Service response
Six receiving hospitals ordered stock from NHS Blood and Transplant's (NHSBT) Manchester centre in a 6.5 hr period from 00.45hr to 06.10hr. The total component order was: 334 RBC (49% O neg; 24% O pos); 58 plasma (48% group A and 41% group AB); 18 platelets packs (67% group A); and 12 cryoprecipitate pools. Red cell issues equated to approximately 10% of normal stockholding at the Manchester centre and approximately 50% of average O neg stocks. The centre was re-supplied and supported through pre-prepared emergency planning.[1]

The donor response
Over 1000 walk-in donors presented at donor sessions within 10 hours, partly prompted by erroneous social-media messages. NHSBT communications encouraged potential donors to register online and keep future appointments. Blood stocks, including O neg, were rapidly restored.

Discussion
Manchester was a mass casualty event (MCE) outside of the capital city. NHSBT met all demands in a timely manner from existing regional stock. Blood was ordered early but was only transfused to 23 patients i.e. 20% of the 112 people initially hospitalised. A few patients received multi-component massive transfusion, however most received two red cell units. The emergency demand and use of O neg red cells may reflect the patient demographics and patient safety measures to reduce incompatible transfusion.

NHSBT planning assumes that blood components may be ordered within the first six hours with a high demand for 'universal components'. Experience has shown that hospitals may order more blood than immediately required i.e. a demand ratio of 2-3 [2-4]. The overall demand ratio for red cells during this event was 3.75, compared to a ratio of 2.9 following the 2005 London bombings[5]. The ratio of O neg red cells ordered to transfused was 5.3.

The transfusion support lessons identified from Manchester are being used to refine current UK planning. Guidance will include: transfusion triage in clinical and laboratory areas and revised blood demand planning assumptions.

Conclusions
Transfusion emergency preparedness is important. An integrated response between blood services and hospitals is required to enable timely, safe and sustainable transfusion support in MCEs.

Acknowledgements
The authors acknowledge the contribution of the following whose teams supported patients on the night and who provided the information on actual blood usage:

Deborah Seddon, Haematology and Blood Bank Manager and Lydia Baxter, Transfusion Practitioner, Salford Royal NHS Foundation Trust

Claire Whitehead, Haematology Manager and Louise Polyzois, Transfusion Practitioner, Manchester University NHS Foundation Trust, Oxford Road site

Margaret Evans, Transfusion Laboratory Manager and Emma Milser / Jane Rowlands, Transfusion Practitioners, Manchester University NHS Foundation Trust, Wythenshawe site

Sharran Grey, Principal Clinical Scientist and Clinical Transfusion Lead, Bolton NHS Foundation Trust

Jane Uttley, Transfusion Laboratory Manager, Pennine Acute NHS Foundation Trust

Christopher Poole, Transfusion Practitioner, Stockport NHS Foundation Trust

Tom Cowdrey, Head of Business Continuity, NHS Blood and Transplant

Ruth Moulin, Hospital Services Manager and Jamie Maguire, Hospital Services Supervisor, Manchester Blood Centre, NHS Blood and Transplant

Kate Pendry
Consultant Haematologist
Manchester University Hospitals NHS Foundation Trust and NHS Blood and Transplant
Manchester, UK

Emma Watkins
Senior PA, NHS Blood and Transplant
Birmingham, UK

Heidi Doughty
Consultant in Transfusion Medicine, NHS Blood and Transplant
Birmingham, UK

References:
1. Doughty, H., Watkins, E. and Pendry, K. (2018). Blood service support following the 2017 Manchester concert bombing. Bloodlines 127: 28-32.
2. Dann, E.J., Bonstein, L., Arbov, L. et al. (2007). Blood bank protocols for large-scale civilian casualty events: experience from terrorist bombing in Israel. Transfusion Medicine 17(2): 135-139.
3. Soffer, D., Klausner, J., Bar-Zohar, D. et al. (2008). Usage of blood products in multiple-casualty incidents. The experience of a level 1 trauma center in Israel. Archives of Surgery 143(10): 983-989.
4. Glasgow, S., Davenport, R., Perkins, Z. et al. (2013). A comprehensive review of blood product use in civilian mass casualty events. The Journal of Trauma and Acute Care Surgery 75(3): 468-474.
5. Glasgow, S.M., Allard, S., Doughty, H. et al. (2012). Blood and bombs: the demand and use of blood following the London Bombings of 7 July 2005 - a retrospective review. Transfusion Medicine 22(4): 244-250.

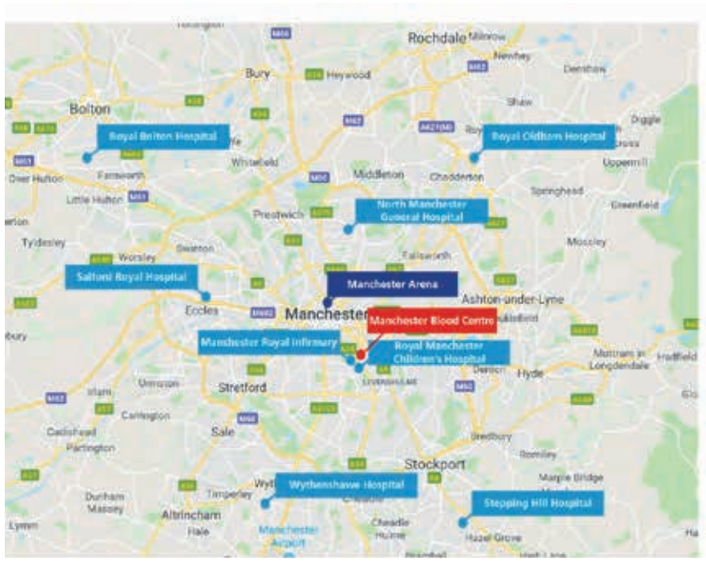
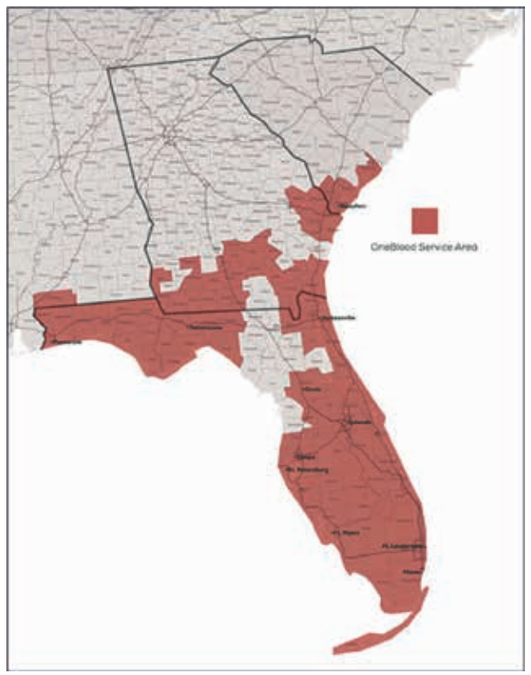


Figure 1. Distribution of patients admitted to hospitals following the Manchester Arena bombing; Salford Royal, Manchester Royal Infirmary and Royal Manchester Children's Hospital are Major Trauma Centres.

OneBlood meets hurricane Irma: A Florida blood centre's experience

Rita Reik
Chief Medical Officer
OneBlood
Ft. Lauderdale, Florida

OneBlood is headquartered in Florida and serves a large portion of the state, as well as parts of Alabama, Georgia and South Carolina with collections of over 700,000 units annually. Hurricanes are a common seasonal phenomenon in the Southeastern U.S. and OneBlood is adept at dealing with them. Hurricane Irma, however, was a monster storm of such deadly destructiveness that the World Meteorological Organization retired the name "Irma". Over the course of its lifetime, the hurricane made seven landfalls and reached Category 5 intensity for sustained periods. Irma resulted in $50 billion in damage and caused 44 direct deaths as a result of wind, rain or surf. In the U.S. there were seven direct deaths, and eighty-five deaths attributed to indirect results of the storm. Eighty of the deaths were in Florida.



Hurricane Irma presented unexpected challenges to the blood center. Fortunately, OneBlood's Business Continuity Plan (BCP) mitigated the storm's destructive effects for both OneBlood and its service area. OneBlood's BCP Core Weather Team began monitoring the weather pattern that would result in Irma as it developed off the coast of Africa on August 26, 2017. Irma was identified by the BCP Team as a clear danger to Florida 10 days before it made landfall on the coast. This exceptional predictive capability allowed time for routine preparations such as checking generators, equipment, supplies, enhancing blood collections, and identifying staff that would stay in the facilities as needed during the storm. On September 6, staff were updated on initial projections for storm impacts and operational plans. Staff members were reminded of emergency contact information, advised to review their departmental hurricane disaster plans and to begin making their personal preparations at home. As the storm approached the southern tip of Florida, its wind strength, speed and trajectory remained fluid and intimidating. Multiple staff notifications were issued throughout the days to follow, as plans for opening and closing the various blood collection regions changed. The blood center was as well-prepared as possible when Irma struck south Florida as a category 3 storm packing wind speeds up to 129 mph on September 10.

At this point, the more challenging aspects of Irma became apparent. The storm initially aimed at the west coast of Florida, with resulting anticipation of dangerous west coast storm surges and flooding. Hospitals located on islands and across closed bridges were unable to safely evacuate and faced isolation, even as staff and families hunkered down at those hospitals to ride out the storm. Evacuations had been mandated for coastal areas, with seaport, road and bridge closures. Four hundred and fifty shelters were opened across the state as 6.5 million people were ordered to evacuate. Roads became gridlocked as evacuees began heading out of Florida and the coastal states in the south. Unexpectedly, the storm bobbled to the west and charged up the center of the state. The size of the storm was such that this course change resulted in hurricane force winds that reached coast-to-coast and impacted nearly the entire state of Florida.

The impact on the blood center was significant. Prior to the storm, enhanced collections bolstered hospital on-site inventories. However the path, size and strength of the storm resulted in widespread curfews and closures of transportation routes including seaports, airports and roads. Hence, OneBlood's collections were curtailed for an unprecedented four days, and its distribution capabilities were severely impaired. Efforts to import blood were stymied by an inability to move products into and around the state. Staffing was challenged, as there were no un-impacted back-up staff from which to draw. All staff were on-call 24/7 throughout the storm, and communications were maintained primarily through cell phones with texting. As the storm headed north, hospitals in the south failed to anticipate the ongoing lack of available blood products and attempted to get back to business as usual, even doubling up on surgical schedules to clear their backlog. Platelets were the most critical need and blood center physicians worked closely with hospital surgeons to advise them how best to prioritize blood usage.

As the skies cleared, damage assessment began, and physical impact on facilities was noted to be minimal, entailing mostly cleanup and minor repairs. Blocked roads, and power/telecommunications outages impaired the return to normal operations for days to weeks after the storm had passed. The BCP-mandated post-event assessment determined the estimated storm-related losses in collections (mobiles and fixed sites) to be 19,334 whole blood and 1767 platelet units. Post-event analysis resulted in recommendations for enhanced capabilities for transport through flooded areas, improved communications regarding road and facilities conditions, better sleeping and accommodations for staff and families in "lock down" at facilities, clearer policies for scheduling staff and designation of charge persons at each facility.

Hurricane Irma and the BCP took OneBlood to the next level of hurricane and disaster preparedness.

As we enter into the 2018 hurricane season we are more ready than ever to handle whatever Mother Nature sends our way.

1. Feltgen D. Harvey, Irma, Maria and Nate retired by the World Meteorological Organization. noaa.gov. April 12, 2018.
2. Holder J. OneBlood BCP Event Report. October 9, 2018.
3. Amadeo K. Hurricane Irma Facts, Damage, and Costs. The Balance (online). March 27, 2018.

Manita Rajkarnikar
Director Central Blood
Transfusion Service
Nepal Red Cross Society

The impact of the 2015 earthquake on the blood service in Nepal

The Nepal Red Cross Society Blood Transfusion Service (NRCS BTS) in the situation of an earthquake
The Blood Service was established in 1966, with its main responsibility to provide blood and blood products throughout Nepal. In total, it consists of 105 blood collection centres in 72 districts across the country. In 2016, 236,799 units were collected nationwide and 337,321 units of blood and blood components were supplied.

On April 25 2015, a devastating earthquake (7.8 magnitudes) took place in Nepal, the epicenter of which was 77km northwest of the capital Kathmandu. The impact of the earthquake was felt in 39 of the country's 75 districts. A series of aftershocks occurred, causing further damage and intensifying pre-existing vulnerabilities. In addition to the loss of lives, the two earthquakes caused extensive destruction and damage to the infrastructure, housing and livelihoods. Several Blood Transfusion Centres were damaged and since the building conditions were very vulnerable, it was difficult to run the service from the affected facilities.

Earthquake situation impact and approach
The impact of these earthquakes resulted in significant and extensive damage to the infrastructure of the Nepal Red Cross Blood Service, in Kathmandu and the district areas. Throughout the country, 19 centres were partially damaged, while 12 centres were fully destroyed, including the one in Kathmandu.

One of the temples in Kathmandu collapsed and the NRCS lost one senior technical staff member and two phlebotomist volunteers. Many blood donors and other people were trapped, injured and lost their lives. District and Hospital Blood Centre staffs were not injured and were providing a service to the needy. Many volunteer blood donors and donor groups from different organizations came to the BTS for blood donation.

There was an urgent need for testing kits, generators and equipment for blood centres, which were requested in the affected districts. A series of meetings were conducted with all the concerned stakeholders.

As the Central Blood Transfusion building was damaged by the earthquake, it was shifted to the Nepal Police club compound after a few days. There was heavy rain after the earthquake and because of instability, the service was shifted to several places. Gradually the Central Blood Service provided a service from the Emergency set up.

Earthquake support
Support came from many national and international organizations who offered different accessories, equipment, testing kits, blood bags and other items, but also from individual blood donors and motivators.

Thai Red Cross Society supported the construction of a central building for blood services in the same premises where the building and equipment were demolished. The British Red Cross supported the re-construction of the Bhaktapur blood service building and the Belgian Red Cross supported Gorkha with equipment. The American Red Cross supported the Makawanpur and Nuwakot district Blood Services. The International Committee of the Red Cross financially supported the families of the staff and volunteers who had lost their lives.

Conclusion
Blood was well-managed during the disaster time, as many organizations, individual blood donors and motivators showed their support. It was very difficult to manage all blood donors day by day and given that most of the equipment was damaged by aftershocks, equipment adjustment and maintenance was difficult in all blood centres. The NRCS BTS thanks all the supporters and contributors for their help in such an urgent situation and every single individual and organization for their valuable direct and indirect contribution for the entire Nepal Red Cross Society of Blood Transfusion Service.

Dear ISBT members,

Following the successful ISBT congress in Toronto, a new board has now started its mandate period. As Ravi Reddy retired as President of the Society, yours truly took over. It will be a pleasure and great honour to work with all of you during the coming two years to achieve ISBT's goals. In fact, we will start by overseeing these goals and develop new targets during the autumn since the current strategic plan needs to be replaced in 2019. As you know, Ravi has done a stellar job together with the Executive Committee, the rest of the board, and of course the ever-so-helpful staff at our Central Office to get us to where we are today. Thank you!

During my inaugural address at the General Assembly on June 5, I focussed on three areas particularly close to my heart:

Firstly, we will continue to improve the *global outreach* work that has come to define us. Thanks to an increasing number of ISBT Academy activities events, we aim to present the best science and education in transfusion medicine around the world. Through our top-class webinars and journal clubs, we aim to reach you wherever you may be at the moment. To this end, we also just launched the ISBT Education App to make sure all the information you want is at your fingertips when you need it. Download it now if you haven't already, and try it out!

Secondly, we must *rejuvenate* our aging Society and get more fresh blood in. ISBT has many activities with this in mind, including the Harold Gunson scholarships and the I TRY IT program which will now be extended to the Clinical Working Party. During my tenure as Scientific Secretary of ISBT, we started the Young Investigators breakfast at our congresses and my successor on the post, Ellen van der Schoot, added a Young Investigators Session last year. In Toronto, Judith Chapman and I were happy to host the start-up meeting for the newly-started Young Professionals Council, which will advise the new Board and provide suggestions for the future.

Thirdly and finally, we will focus even more on *diversity and transparency*. For instance, our conferences and other activities should always reflect the whole Society on a number of scales (age, gender, geography etc). Our new Scientific Secretary, John Semple, and the Vice-Presidents in charge of the ISBT Academy will keep a steady eye on this going forward. To further broaden our transparency, our Standing Committee on Ethics has been asked to suggest updates for our Conflict of Interest policy and to make sure it covers all relevant roles. I want all members to feel that ISBT is an understandable and open Society.

This issue of Transfusion Today has a serious and important theme, namely that of "Major Incidents, Emergencies and Blood". We can all agree that it has been a turbulent year with numerous reasons to reflect on our roles when the unexpected happens. This summer has seen extreme weather in many parts of the world, and the unfortunate life-threatening consequences thereof, ranging from uncontrollable wildfires to violent flooding due to torrential rain or broken dams. In addition, terror attacks and other man-made incidents may put our organisations under severe stress. As different as they may seem, all these types of emergencies affect our donors, the patients we serve and not least our staff in different ways. In the following series of articles, various aspects of how the threatened blood safety and supply can be safeguarded are discussed. I hope that you find them as interesting as I do.

Thanks for your support of ISBT, the global go-to organisation for high-quality science and education in transfusion medicine!

Martin Olsson

Welcome to our new members

(June 2018 - August 2018)

Africa
- **ALGERIA:** Rachid Hassen-Khodja
- **NIGERIA:** Igbinosa Uwumarongie, Modupe Adebimpe Olaiya
- **BURKINA FASO:** Konseybo Alain
- **GHANA:** Simon Manu
- **RWANDA:** Susanne Mbaka Ngunza
- **TANZANIA:** Elirehema Mfinanga, Ndeonasia A Towo
- **CONGO – BRAZZAVILLE:** Arsene Bikoue
- **ZIMBABWE:** Menard Mutenherwa, George Mavunganidze
- **ZAMBIA:** Joseph Mulenga

Americas
- **ARGENTINA:** Norma Legal, Monica Puppo
- **BRAZIL:** Christiane Araujo
- **CANADA:** Marie-Pierre Pelletier, Mohammad Bahmanyar, Samantha Mcdonald, Yvonne Davies-Read, Widad Abduwahab, Chris Kog, Danielle Grohn, Margaret Roche, Russel Ombao, Hoai-Thuong Nguyen, Tonja Stothart, Gamal Badawoy, Nancy Robitaille, Antoine Lewin
- **COSTA RICA:** Adriana Gamboa
- **MEXICO:** America Jazmin Ramirez Carreno
- **PERU:** Ana Maria Llanos Ochoa, Luz Esperanza Meza Vargas
- **USA:** Kathryn Richards, Eduardo Nunes, Kristen Ruby, Basel Kashlan, Andrew Laughhunn, Eapen Jacob, Katherine Frey, Jane Bryant, Patti Schmidt, Will Kruka, Sansan Lin, Sally Caglioti, Bran Spencer, Lura Baquero, Rita Reik, Emilia Angela Sippert

Eastern Mediterranean
- **IRAN:** Mitra Nekouei Shahraki, Mehdi Yalaly
- **OMAN:** Shadhiya Al Khan
- **TUNISIA:** Sonia Mahjoub
- **PAKISTAN:** Mohsin Khalid Qureshi
- **SUDAN:** Mohanad Altayeb

Europe
- **DENMARK:** Jens Seeberg
- **ESTONIA:** Egeli Keldo, Rahel Reimal, Ruth Pulk
- **FRANCE:** Francois Toujas, Frederic Bigey, Jacques Chiaroni
- **GREECE:** Antonios Angelidis
- **ISRAEL:** Yoni Genzer
- **ITALY:** Daniela Bernasconi
- **LITHUANIA:** Auguste Jelinskaite
- **NETHERLANDS:** Jean-Louis Kerkhoffs, Judith Allen
- **NORWAY:** Sigbjarn Skagestad
- **POLAND:** Ana Rusin-Sondel, Aneta Wrzyszcz
- **PORTUGAL:** Carlos Galamba
- **SERBIA:** Nenad Mladenovic, Dordje Drincic
- **SWEDEN:** Camilla Alvesson, Magnus Langberg, Maria Kvist
- **UNITED KINGDOM:** Richard Tedder, Daniel Boyland, Ashleigh Joseph-Cox

South East Asia
- **INDIA:** Antonio Paul, Sheetal Malhotra, Rajbir Kaur, Anumoy Ganguly, Tuhin Kanti Bhattacharya, Yogini Patel

Western Pacific
- **AUSTRALIA:** Jocelyn Shackles, Carli Shaw, Beverly Tranter
- **CHINA:** Huibin Luo
- **JAPAN:** Naoko Watanabe – Okochi, Kazuhide Mure
- **LAOS:** Vonephet So Inxay, Anonglack Souksakhone
- **VIETNAM:** Quang-Vinh Nguyen, Trang Tran, Ha Nguye

I TRY IT 2019

I TRY IT is a programme for young professionals. It was started by the TTID Working Party and is now run through the ISBT Academy. The objective is to further refine research readiness and provide an overview of key skills that will advance research ability for young investigators. The vision for the initiative is to provide participants a setting where they can discuss new ideas with experts, learn principles of research and scientific studies in general, and reinforce these ideas with a practical aspect focused on writing a research protocol.

Within the training program real research protocols will be drafted and potentially funded by ISBT grants. The training program incorporates a dual lecture and practical model with in-person meetings at the ISBT Congress, eight webinars, one-on-one web-based teleconferences, homework and potential for your first self-structured and self-financed research study funded by a grant.

Research in your country can benefit transfusion medicine locally and contribute to the global body of knowledge in transfusion medicine. There are many 'bright ideas' or research discoveries in the field of transfusion medicine that are waiting for young investigators. So look out for further information on the 2019 I TRY IT programme in November on the ISBT website and by email.

Two hundred years ago, in 1818, the British obstetrician James Blundell performed the first successful human-to-human blood transfusion at Guy's and St. Thomas' Hospitals in London.

In order to celebrate this anniversary, Transfusion Today is dedicating one short article in every issue in 2018 to this topic. In the previous issue we elaborated on how it all began with the first animal-to-human blood transfusion. This article is about the discovery and evolution of our knowledge of blood groups.

In 1901 the Austrian scientist Karl Landsteiner discovered that blood from two different people agglutinated upon contact. On further research he discovered the first three blood groups: A, B, and C (now O) of human blood. He also discovered that blood transfusion between people with the same blood groups did not cause destruction of blood cells. Landsteiner received the Nobel Prize for Medicine for this discovery in 1930.

In 1907 the Czechoslovakian scientist Jan Janský also discovered different human blood groups. He called them I, II, III, and IV, A, B, O, and AB. Because of the discovery of the four blood groups cross matching of donor and recipient was able to be used.

The Rh blood group system was discovered in 1939–1940 as the result of observations made by four people, namely, P. Levine, R.E. Stetson, K. Landsteiner and A.S. Wiener working in two teams in New York. Levine and Stetson described an antibody found in a postpartum woman which reacted with an antigen which was present on the red cells of her stillborn fetus and those of the father. Sir Ronald Fisher proposed the current system of nomenclature in 1944, with three sets of alleles referred to as c and C, d and D, and e and E.

From 1940 onwards more and more blood groups were discovered. As of 2018, there are 36 human blood group systems that have been identified and sequenced and all the polymorphisms are now known. All of the currently recognised antigens within the human blood group systems fall into one of four classifications; systems, collections (200 series), low incidence antigens (700 series) and high incidence antigens (901 series).

The ISBT red cell immunogenetics and blood group terminology advise, maintain and monitor the terminology for blood group genes and the genetic classification for blood group antigens. More information about the terminology and immunogenetics of blood groups can be found at http://isbtweb.org/working-parties/red-cell-immunogenetics-and-blood-group-terminology.

Picture: The Austrian 1000- Schilling note (year 1901) showed Karl Landsteiner working in his laboratory.

New Working Party Chairs

Donors and Donation

Karin Magnussen & Mary Townsend

Karin Magnussen
Hi, I am Karin, a Dane living in Lillehammer, Norway since December 17. In 1990 I started working in department Immunology and Transfusion medicine in Aarhus Denmark and became a specialist in 1996. More than 16 years ago I was approached by the Danish Blood Donor organisation (BID), who wished to have more collaboration between BID and the Blood Centres and since then, I have been a Medical Advisor for BID. Later I became member and president of the IFBDO medical counsellors group, member of the AABB Donor Health and Safety Committee and have also been active in the ISBT Donors and Donation Working Party and the ISBT Haemovigilance Working Party for many years. Professionally working in different blood centres, my focus has been Blood Donor Care and not the least haemoglobin and iron in blood donors.

Mary Townsend
Greetings, I am Mary Townsend. The most important thing you should know about me is that I have a passion for all things related to donors, with interests in donor eligibility and donor adverse events. Born in Texas and trained in Obstetrics and Gynecology and Clinical Pathology in Philadelphia, I have been working in donor centers for almost 30 years, working now as Senior Medical Director at Blood Systems in Scottsdale Arizona. Professionally, I have been a member and chair of the AABB Donor History Task Force since its inception in 2000, member of the AABB Donor Haemovigilance Committee and in 2010 received the AABB President's Award for piloting the donor adverse event reporting software, DonorHART.

I served as the Chair of the America's Blood Centers (ABC) Scientific, Medical and Technical Committee and as a member of the ABC Board of Directors. After joining ISBT, I quickly became involved in both the Donors and Donations Working Party and the Haemovigilance Working Party. Throughout my career I have been the beneficiary of the generosity of many great and gracious mentors. Through my work at ISBT I hope to be able to return the favor, by assisting in mentoring the new generation of Blood Donor and Transfusion Medicine specialists, as they seek to bring their own energies and contributions to our field.

We are looking forward to continuing the work with an active working party with its engaged members and also to welcome new active members. Research related to Donors and Donations is important, and we want to stimulate our members to do research and to collaborate, including collaborative research within the Working Group members as feasible. The forum will be energized by posting interesting topics and questions as often as every month, to stimulate the exchange of ideas. We wish to have inspiring meetings at least annually and to increase the visibility of both the ISBT and Donor Care.

Global Blood Safety

Martin Smid
Greetings, I am Martin Smid. I have more than 20 years of experience in blood bank management, transfusion medicine and coagulation. Currently I am the Managing Director of the Sanquin Consulting Services and the Academic Institute IDTM.
My main responsibilities include international cooperation and knowledge sharing in international projects and the management of the Transfusion Medicine programme at the Graduate School of Medical Science of the University of Groningen. He is involved in the WHO Global Blood Safety Network and AfSBT Educational Committee and he also is an advisor of the blood bank of Curacao. Martin has been a member of the ISBT Global Blood Safety Working Party, from the start in 2010.
In recent years the position of the Working Party became a main issue and now it is settled that the focus needs to shift to the visibility of availability and the safety of blood supply globally for ISBT members, and to ways of improving the situation in limited-resource countries.

Red Cell Immunogenetics and Blood Group Terminology

Catherine Hyland & Christoph Gassner

Catherine Hyland
Greetings, I am Catherine Hyland, Australian and blood group aficionado. I obtained a PhD from the University of Queensland, on molecular genetics of the Rh blood group system in 1995. At that time I was in charge of the Viral Serology Testing laboratory for the Red Cross in Queensland, which culminated in leading the NAT project to introduce NAT HCV and HIV for the Australian Red Cross Blood Service in 2000. In the mid-2000s I was approached by clinical collaborators who were eager to work with the Blood Service to establish cell-free DNA technology for fetal RHD genotyping, a collaboration that continues to evolve. Soon after I began working in the R & D team here with Professor Robert Flower and Professor David Irving, the Transfusion Science Program Leader and Director, respectively.

Our research theme included the role for SNP- based blood group genotyping. We quickly found that, while the technique is powerful and accurate, it could not explain the array of blood group diversity in the Australian population: enter blood group genomics which leads today. Our studies now are showing the value for using blood group genomics in the reference laboratory setting to complement blood group serology investigations. It is a privilege to be involved as co-chair in this working party, comprising international blood group experts and for the first time, including a cell-free fetal DNA testing subgroup.

Christoph Gassner
Servus, I am Christoph Gassner, Austrian and a biologist. In 1994, after my thesis on DNA methylation, I had my first professional contact with blood transfusion doing my civilian national service at the Blood Transfusion Service (BTS) in Innsbruck implementing HPA-1 genotyping. I qualified for subsequent employment as head of HLA genotyping. The same day I started the job, Diether Schönitzer approached me and asked "Is there a way to genotype ABO?" His curiosity made me embark on blood group genetics. In 1998, cooperation with Inno-Train led to the first commercially available reagents for blood group genotyping . The millennium, I worked as a Post Doc at the FHCRC in Seattle and with Marco Colonna at the Basel Institute for Immunology on HLA, KIR and LILRB3 polymorphism. Those experiences made me believe, that serious genotyping for blood groups would become reality. Back in Innsbruck I added new alleles to blood group polymorphism, became Associate Editor of <Transfusion Medicine and Hemotherapy>, and moved to the BTS Zurich in 2010. Beat Frey and I had decided to tackle high throughput blood group genotyping. Since then, DNAs of more than 80.000 individuals, representing more than 1% of the Swiss population, passed my hands for blood group SNP and allele typing, genotype deduction and phenotype prediction. Naming the millions of results made me fit for membership within the ISBT working party for blood group terminology in 2012.

As co-chairs from opposite regions of the globe, nonetheless, we are looking forward to working closely together as we prepare for the 'age of blood group genomics'. "A key goal is to curate the blood group antigen and allele tables and ensure these now evolve and adapt for this age.

Figure 1. Downunder yes, but - of course - there are no kangaroos in Austria!

ISBT Toronto Congress

Katerina Pavenski
Physician at St. Michael's Hospital
Toronto, Ontario, Canada

Reflection on hosting the ISBT International Congress

It all began in December of 2014, when I was first approached by the President of our national transfusion society (Canadian Society for Transfusion Medicine) to serve as the Chair of the local organizing committee and to assist with a bid for the 2018 ISBT congress. Of course, I said yes. The last time ISBT held an international congress on Canadian soil was in back in 2002 in Vancouver. Toronto had never hosted an ISBT congress, although we had bid once before, albeit unsuccessfully.

By early 2015, Gwen Clarke, the President of the CSTM, and I, along with the few representatives from Toronto Tourism and Metro Toronto Convention Centre, were hard at work on our bid documents. What followed was a face-to-face presentation in June 2015 in front of the entire ISBT Board. We really hoped that our enthusiasm would convince the Board members that Toronto was an ideal location for the congress. We recited off many facts about Toronto (my city!): easy to travel to, great convention facilities, so much to do and see, one of the most diverse cities in the world, with a small and productive transfusion community.

A few months later we found out that our hard work had paid off. We had been selected! Now the real preparations began. An organizing committee was assembled and intense discussions about the scientific and social programs ensued. We continued to work with our tourism office, the convention centre, the conference organizer, and of course the most amazing ISBT staff! These months of preparation passed by like a blur and I soon found myself welcoming the delegates to the local day on June 2nd.

Not everything went along without a glitch. The weather became unseasonably cold and rainy, but luckily, it didn't seem to stop the delegates from exploring our city, including a harbor boat ride that must have been quite chilly. The congress attendance was not as high as expected, but we had a great diversity of countries represented. The MC for the opening ceremony struggled through some medical terms, but turned out to be an amazing beatboxer!

The talks on the history of transfusion medicine by John Freedman, Sunny Dzik and Douglas Starr were a fitting tribute to the 200th anniversary of the first human-to-human transfusion. We heard about how it all began, marveling at the progress that has been made and reflecting on the darker moments, like the tainted blood scandal. On the other hand, talks on growing platelets in bioreactors and creating artificial cells gave us a glimpse into what the future may hold. The dominant theme of the present was the impact of climate change and human development on the environment, leading to emerging arthropod-borne infections which threaten our health and blood supply.

There were many excellent presentations and many opportunities for debate and networking. In view of the recent world conflicts, it was particularly poignant to host representatives from 94 countries (representing nearly half of all the countries in the world!), who were brought together by the common purpose of making transfusion therapy better and safer. The congress concluded with a party in a venue overlooking the lake and the Toronto skyline. We danced, sampled foods from various Toronto neighborhoods, and shared our impressions about the congress. And just like that, the congress was over.

With the congress now behind me, I would like to give special thanks to Gwen, who worked tirelessly on this congress from that very first meeting in 2014; Gilles, our Congress President; Judith and the ISBT staff; the organizing committee, abstract reviewers and speakers; Alice and the Tourism Toronto team; Barry and the MTCC team; and everyone who made this congress a success. See you in Basel.

What did some of our Young Professionals think about the congress

The first day of the conference started on Sunday with a lunch to meet fellow Harold Gunson winners. It was clear from the beginning that the winners represented every continent in the world. This resulted in various conversations, not only about the culture and history of the country of origin but also about the scientific projects. Informative and critical discussions followed afterwards and some friendships were started. The ISBT and ISBT board made it therefore possible to let me feel welcome from the start.
Meryem Baysan, Clinical Transfusion Research, Sanquin, Leiden, The Netherlands

The ISBT Congress was well organised both the practical setting and the scientific programme was exciting. I like the interdisciplinarity of the topics addressed at the congress sessions varying from basic science research within transfusion medicine, blood donation and supply management to clinical and epidemiological studies.
Khoa Manh Dinh, MD, Ph.D. student, Department of Clinical Immunology, Aarhus University Hospital, Aarhus, Denmark

It is a first time for me to give an oral presentation at an international congress. In order to prepare the lecture, I rehearsed with my professor (Thierry Burnouf), a scientific expert (Chun A. Changou) and laboratory members. I learned various skills for presentation to attract everyone's attention, using 3D animations, and making sure of the logics in the slides organization. I wish to express my thanks for the wonderful introduction and questions handled by the moderators. The audience gave positive feedback that will help me to build up confidence for future talks; key points were raised, inspiring me to think deeply for further studies.
Wu Yu-Wen, Graduate Institute of Biomedical Material and Tissue Engineering, College of Biomedical Engineering, Taipei Medical University, Taipei, Taiwan

The Young investigators breakfast was again an excellent effort to encourage upcoming transfusion medicine specialists to discuss their ideas and interact with the professionals in the field. I found group discussion very useful and made new friends.
Sidra Asad Ali, Section of Haematology, Laboratory, Patel Hospital, Karachi, Pakistan

New research was presented in multiple rooms. It was not difficult to choose from my point of interest which sessions to attend each day since the overlap of related topics was minimal due to good planning by the ISBT committee. I learned about big scientific groups and good research that I did not know of before and the congress widened my perspective and comprehension for transfusion medicine. New research on different aspects of transfusion medicine had a great effect on me and gave me ideas for the future.
Hrafn Hlíðdal Þorvaldsson, Faculty of Medicine, University of Iceland

As a research project progresses, it's important to share your findings with other scientists who may benefit from your discoveries; and to receive feedback from experts in order to take your work to the next level. This is where attending and presenting your work at international scientific conferences such as ISBT is key. Events like this are the best opportunities to gather everyone from the field of blood transfusion - from donor carers, to transfusion practitioners and researchers - and share experiences, challenges and developments. This is also often one of the first occasions to hear of the very latest advances.
Sian Huish, Component Development Lab, NHS Blood and Transplant, UK

EDUCATION

Toronto webcasts
A selection of congress webcasts and interviews with experts (Personal Reflections) that were recorded at the 35th International Congress of the ISBT in Toronto will be uploaded to ISBT Education. The first webcasts and interviews are already available, please find the full schedule of the release dates below:

Sessions	Available on
Academy Day: Immunohaematology	11/07/18
Personal reflections - Role of Transfusion Practitioners	25/07/18
Academy Day: Clinical Transfusion	08/08/18
Personal reflections - Malaria-related blood transfusion challenges and the impact of Malaria on human health	22/08/18
Academy Day: Cellular Therapy	05/09/18
Personal reflections - Neonatal and Paediatric Transfusion	19/09/18
Parallel 1: Donors and Donation	03/10/18
Personal reflections - Genomics and Blood Transfusion	17/10/18
Clinical - Patient blood management	31/10/18
Personal reflections - Challenges of Blood Transfusion in resource-limited settings	14/11/18
Plenary 1: Arthropod borne infections	28/11/18
Personal reflections - Rare donor programmes	05/12/18
Plenary 2: Jean Julliard Prize session	19/12/18
Personal reflections - Donor characteristics and transfusion outcome	02/01/19
Plenary 2: Presidential Awards	16/01/19
Personal reflections - Major challenges of blood transfusion in military settings	30/01/19
Plenary 3: Platelets	13/02/19
Parallel 34: Problems in transfusion medicine	27/02/19
Parallel 38: Blood products - The relationship between donor characteristics and transfusion outcome	13/03/19
Plenary 4: Transfusion Medicine Past, present and future	27/03/19

EDUCATION

ISBT Education

New on ISBT Education: Donor fainting modules

Donor fainting is not only the most frequent complication of donors but it also has a major impact on blood establishments reducing donor return. Therefore, it is of great importance for both donors and staff to learn about donor fainting, its recognition and interventions. The new tutorials were developed by the editorial board of the Syncopedia website (www.syncopedia.org) and they are co-sponsored by ISBT and EBA.

The donor fainting tutorials are intended for all professionals, e.g. physicians and nurses, involved in blood collection. The tutorials are freely available on the internet and can easily be used and referred to in educational programs.

Applications for financial support, ISBT logo or endorsement of educational courses

Since its establishment in 2011, the ISBT Academy has supported numerous applications for education activities from all over the World, including the UK, France, Mexico, Peru, Ghana, Pakistan, South Korea and Australia, either financially, by the ISBT logo or by endorsing educational courses in the field of transfusion medicine.

Anyone can apply for funding of an educational activity, for the use of the ISBT logo or for endorsement of educational courses. Applications should be filled in thoroughly and all requested supporting documentation should be included.

All applications are reviewed by the Advisory committee. There are two deadlines during the year for receipt of applications: April 1 for events to be held in June-November, and October 1 for events to be held in December-May.

The ISBT Education app will allow you to watch great presentations on your mobile device anytime.

Pieter van der Meer
Editor-in-chief, ISBT Science Series

News from the ISBT Science Series

And ... did you enjoy the ISBT congress in Toronto? I certainly did! I enjoyed talking to my colleagues, discussing about science during the poster sessions and I enjoyed the lectures! I heard some really interesting presentations, relevant to my daily work as a researcher at the blood bank. Did you know that many presentations are summarized as congress reviews, that are published in the ISBT Science Series? These publications are a useful resource for new knowledge and insights in the field of Transfusion Medicine. It is an online-only journal, which means that publications are available for downloading very soon, once they are accepted for publication. For you as an ISBT member, the journal is freely accessible through the ISBT web portal!

In addition to congress reviews, we publish original researches. All papers are peer-reviewed, which means that expert colleagues have a critical look at all the submitted papers, thereby improving the overall quality of the articles. If you have done research that you wish to share with the blood transfusion community, please consider submitting your paper to the ISBT Science Series. We receive papers from every aspect of blood banking and blood transfusion and we have a special focus on developing countries. We are not Medline indexed yet, but we are working very hard to achieve this goal. However, all our papers can be found using Google. With more than 5,000 downloaded papers per month, people know how to find us, and I am pleased to see that these numbers increase significantly every year.

Last but not least, I want to whet your appetite for the issue that will appear in November. This themed issue focuses on donor studies and includes papers on the health profile of old and young donors, blood donations and the changing blood demand, the emotional impact of temporary donor deferral among other topics. Guest editor Eva-Maria Merz selected top-authors to write these papers, so this issue will contain the state of the art of donor studies.

So many reasons to visit the journal's website! Sign up for the content alerts, so you will get an e-mail whenever a new paper is published online.

Faten Moftah
President of the Egyptian Society of Blood Transfusion
Cairo, Egypt

ISBT ACADEMY

ATMF 13th Congress in Tunisia

ATMC2 was held in Tunisia in December 2005 and we were delighted to go back again and be hosted by the Tunisian National Blood Transfusion Centre. The event was very much appreciated by health authorities in Tunisia; the Minister of Health was personally there to launch the congress activities. Major local media channels covered the event and highlighted its main sessions.

The Arab Transfusion Medicine Forum (ATMF), previously - Arab Transfusion Medicine Courses (ATMC), was established in 2004. The idea started during the ISBT congress in Istanbul in 2003, when many candidates attended an Eastern Mediterranean Region session. The forum aims at bringing Arabic speaking transfusion professionals together to discuss their experiences, learn from each another, be exposed to international and regional up to date information and present local achievements in a relaxing atmosphere. It also aims to enhance the professional development of transfusion medicine specialists and scientists in our region.

It has been very difficult to hold the event in many countries since 2011, the start of the Arab spring political unrest. Our perseverance in getting together, is clear evidence that our conviction with our values aims to improve the quality of the services given to our fellow citizens. It also indicates that our professional bond is able to overcome, with resolve, all the difficulties that our region is going through.

The theme of this year's course was "Recent updates in Transfusion Activities". Experts from the Arab region as well as international ones, conveyed the program with speakers from nine countries. Dr. Ahmad Gharehbeghian, the regional director for the EMR, represented the ISBT and gave a presentation about ISBT educational activities.

Young generation professionals were given the opportunity to share seven workshops in lecturing and moderating and did great work. 50 of 53abstracts received were accepted as posters. Ten posters were shortlisted and presented to a four-member committee of independent speakers, who in return chose the best three posters. The three winners were given the chance to present the abstract as an oral lecture in the last closing session.

144 participants attended the event, from across the region and beyond. Participants had the opportunity to interact actively in two sessions dedicated to seven workshops. Over the last fifteen years, a hardworking group of devoted local transfusion specialists initiated and organized thirteen courses.

The Local Executive Team and the Steering group under the leadership of Professor Slama Hmida, conducted ATMC13 and achieved a very successful course and an enjoyable stay in Tunis, Tunisia's beautiful capital city.

International Consensus Conference for patient blood management

24th - 25th April 2018, Frankfurt, Germany

Preoperative anaemia, red blood cell transfusion triggers and implementation of patient blood management (PBM) were on focus at the first International Consensus Conference on PBM, held in Frankfurt, Germany, on 24 and 25 April 2018. The conference was initiated by the European Blood Alliance and co-organized by Professor Erhard Seifried of the Goethe University of Frankfurt and supported by a scientific committee of 17 international experts in the field of hemotherapy and Transfusion Medicine. Patient representatives and 200 recognized medical experts from the areas of transfusion medicine, surgery, anaesthesia, haematology and other disciplines, representing 40 countries on 4 continents, worked intensively to make evidence-based consensus recommendations to care for patients who might need a blood transfusion.

In these three focus areas of patient blood management, 17 specific PICO (Patient, Intervention/ Risk, Comparison, Outcome) questions were formulated by an international Scientific Committee. The Centre for Evidence-Based Practice (CEBaP) of the Red Cross Belgium then looked for scientific studies around these questions. Based on a rigorous process in close collaboration with the Scientific Committee and search strategies in 4 different biomedical databases (Pubmed, Embase, Cochrane Library and Transfusion Evidence Library), the CEBaP screened approximately 18000 publications to include 142 studies in the evidence summaries.

The consensus development format used engaged the Scientific Committee, three multidisciplinary decision making panels and the expert participants of the conference in the process. On the first day, the evidence summaries were presented and critically discussed in three parallel sessions. After these public sessions, the expert panels retreated and drafted their first recommendations, based on the available evidence and the discussions throughout the day. These draft recommendations were presented to the full audience on the second day of the conference and were then discussed and voted on to assess the support of all the participants. Experienced rapporteurs recoded the discussion and justifications of the recommendations to GRADEpro software securing a fully transparent process according to the evidence-to-decision framework.

This conference was unique in two aspects: first due to the rigorous way the GRADEpro was used throughout the consensus conference with a chair and a methodologically qualified co-chair in each of the panels and second to its international nature. The Consensus Conference was a collaborative scientific activity co-sponsored by the American Association of Blood Banks (AABB), the International Society of Blood Transfusion (ISBT), the German Transfusion Society (DGTI), the French Society of Blood Transfusion (SFTS), the Società Italiana di Medicina Transfusionale e Immunoematologia (SIMTI), the Centre for Evidence-Based Practice (CEBaP) and the European Blood Alliance (EBA).

ISBT Academy

Willemijn Kramer
Communications and Administrations Officer
European Blood Alliance

Kari Aranko
Executive Director
European Blood Alliance

Furthermore, there were several other international partners* providing multidisciplinary expertise. Prof Erhard Seifried, President of the ICC-PBM 2018 and Executive Director of the Red Cross Baden Wurttemberg Hessen Blood Service was very pleased with the collaboration: “The global spread of the co-sponsors ensured broad support and made sure we were able to get a wide variety of experts and opinions before and at the conference”, he noted. The collaboration of the ISBT was very helpful for the conference organisation, he explained: “We were able to rely on the expertise of the ISBT staff and in particular during the pre-conference period, when we had to engage with several medical associations around the world”.

The expert panels and rapporteurs of the conference are finalizing the conclusions and recommendations based on the evidence and discussions at the consensus conference to publish the results in the following months. Developments can be followed through the ICC-PBM website

*Australian Red Cross Blood Service (ARCBS); Canadian Blood Services (CBS); International Collaboration for Transfusion Medicine Guidelines (ICTMG); International Society on Thrombosis and Haemostasis (ISTH); National Blood Authority, Australia (NBA); Österreichische Gesellschaft für Blutgruppenserologie, Transfusionsmedizin, Regenerative Medizin und Immungenetik (ÖGBT); French Society of Anesthesia and Critical Care (SFAR)

Conference President Erhard Seifried opening the ICC-PBM 2018 (picture: Stefan Holtzem)

Masja de Haas
Vice President of unit Health Care
Sanquin Diagnostic Service
Amsterdam, the Netherlands

Leendert Porcelijn
Head laboratory platelets leukocyte serology
Sanquin Diagnostic Services
Amsterdam, the Netherlands

The XVth European symposium on platelet and granulocyte immunobiology 2018

The biennial European Symposium on Platelet and Granulocyte Immunobiology started in 1990, with the aim of sharing knowledge and experience in the field of relatively rare platelet and granulocyte antibody-induced diseases.

The symposium is a platform to share the progress made in studies focusing on fetal and neonatal alloimmune thrombocytopenia and neutropenia, platelet and granulocyte autoimmune diseases and transfusion and medication side effects, like transfusion related acute lung injury (TRALI) and heparin induced thrombocytopenia (HIT). Working together on the ongoing innovation of laboratory technologies for platelet and granulocyte antigen typing and for the detection of allo- and autoantibodies targeting these antigens. Sharing rarely available reagents among laboratories and learning from each other's performances, has fastened/accelerated? the introduction of new technologies. Every two years, this meeting is hosted by one of the partners of the international scientific committee of the Symposium.

This year's symposium was held in Ede, the Netherlands, from May 24 to 26 and hosted 130 participants from Europe, Canada, Australia and the USA. The program started with a thorough discussion about the results obtained in the granulocyte serology and genotyping workshops of 2017 and 2018. Over the years, the performance of all participating laboratories improved to stable high scores. Currently, different platforms may be used, for serological and molecular typing. This leads to an interesting point, namely that there is a need for distribution of knowledge on the pitfalls of the platforms and the interpretation of test results!

The discussion also opened a window for opportunities to find close collaboration in the resolve of remaining questions on the expression of certain granulocyte blood group antigens, such as HNA-2. During the meeting, lectures by invited speakers on topics within the field of platelet and granulocyte immunobiology were scheduled, next to short presentations. In total, 30 of such short presentations gave young investigators the opportunity to present their data. The various roles platelets play in inflammation and as indicators of diseases such as cancer or even neurological diseases were highlighted. There was ample opportunity to reflect on the progress made to improve the care of pregnancies that have been complicated by anti-platelet antibodies. Several European clinical research projects and the progress made by the NAITgam consortium, working together with the industrial partner Prophylix, showed nice examples of how national and international collaboration will lead to missing knowledge to judge on the value of early platelet antibody screening in pregnancies.

The open atmosphere of the symposium and the interaction between the participants definitely served the start of new collaborations and hopefully also as a welcome and stimulant to scientists, clinicians and laboratory specialists, to further advance this part of the Transfusion Medicine field. It was very nice that the ISBT contributed to this meeting by sponsoring the organization of the symposium.

So-Yong Kwon
Director of the Jungbu Blood Laboratory Center
Korean Red Cross

2nd Asian session during the 37th annual congress of the Korean society of blood transfusion (KSBT)

As an initiative to promote collaboration of research and knowledge sharing among transfusion medicine professionals in neighboring countries, last year the Korean Society of Blood Transfusion (KSBT) started to organize a session with invited speakers from the Asian region. The 1st Asian Session, which was supported by the ISBT Academy, dealt with issues on rare blood donors and was very well received by participants. Encouraged by the success of the 1st Asian Session, the 2nd Asian Session dealing with transfusion-transmitted infections was organized as a concurrent session during the 37th Annual Congress of the KSBT.

Four speakers from Japan, Singapore, Hong Kong and Korea participated in the session. During the past few years, HEV has emerged as a new threat to the blood supply and several countries in Europe have started universal ID-NAT screening. In his talk entitled "Transfusion-transmitted hepatitis E: to screen or not?", Dr Masahiro Satake (Japanese Red Cross Central Blood Institute) gave a comprehensive overview of the global status of HEV and the situation in Japan. When making decisions on this issue, several factors including HEV prevalence in the general and blood donor population, frequency of HEV-viremic blood donors and transmissibility of HEV through transfusion, have to be considered. Japan, where 20-minipool HEV NAT screening was started in 2005 in Hokkaido, plans to implement universal HEV ID-NAT screening in the whole country in two years.

Ms Sally Lam (Blood Services Group, Health Sciences Authority, Singapore) gave a presentation on "Zika and Dengue in the Asia Pacific region". One year after the Zika virus outbreak in Brazil, cases of locally acquired Zika virus infections were reported in Southeast Asia, among which Singapore, Thailand and Viet Nam were most heavily affected. In Singapore, universal ZIKV NAT screening was implemented in 2017. For Dengue, even though more than 17% of global Dengue infections are reported from Asia, no screening has been introduced yet. Ms Lam concluded that vector control is the most effective strategy to contain the spread of Zika and Dengue.

In July 2017, Hong Kong reported the world's first case of transfusion-transmitted Japanese Encephalitis in a post-lung transplant patient. Dr. Cheuk Kwong Lee (Hong Kong Red Cross Blood Transfusion Service, Hong Kong SAR, China) discussed the cons and pros of several measures like donor exclusion, development of JEV screening tests, and pathogen reduction, technology to mitigate the risk of future occurrences of JEV infections through blood transfusion.

In Korea, minipool NAT for HCV and HIV was implemented in 2005. In 2012 HBV NAT was added and the test format was switched into individual testing. Samples that are reactive in the multiplex assay are subjected to discriminatory testing. During the past three years about 0.05% of the donations showed non-discriminatory results (NDR) and compared to the general donor population, anti-HBc reactive rate was higher in the NDR group. Mr Jae Won Kang (Blood Transfusion Research Institute, Korean Red Cross), discussed possible reasons for NDR results and how anti-HBc testing can be applied for further management of donors with NDR.

The Asian Session attracted nearly 120 participants representing a wide range of professions, including medical doctors, laboratory technicians, research officers, nurses, as well as representatives of regulatory authorities. Lively discussions followed each presentation and the feedback of the participants was very positive. The KSBT would like to take this opportunity to thank the ISBT for their continuing support.

ISBT ACADEMY

ISBT Academy day during the 9th international congress of the AfSBT, Arusha, June 2018

Haemovigilance was the theme for the ISBT Academy Day held at the 9th International Congress of the Africa Society for Blood Transfusion (AfSBT) Congress in Arusha, Tanzania. ISBT sponsored forerunners in the field to share their expertise with approximately 350 delegates, many leaders in transfusion in Africa.

A historical perspective was presented by Jean-Claude Faber, Immediate Past President, International Haemovigilance Network (IHN). He shared the origins of haemovigilance in France (1994) which followed the HIV scandal affecting haemophiliacs and other recipients of blood products. The UK, the second groundbreaker, developed the Serious Hazards of Transfusion (SHOT) programme in 1996. The World Health Organization (WHO) contributed

Table 1: The various organisational models of national haemovigilance systems

1. Centralised or non-centralised
2. Stand-alone or linked
3. Active surveillance versus passive surveillance
4. Voluntary versus mandatory reporting
5. Punative versus non punative systems
6. Anonymous versus identified
7. Comprehensive versus limited

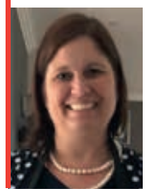
significantly with "A Guide to Developing a National Haemovigilance System", available online in the public domain. André Loua, representing the WHO Africa Regional Office for Blood Products and Transfusion Safety, delivered a practical presentation on establishing a national haemovigilance scheme. He stressed that different organisational models can be used to implement a haemovigilance programme (Table 1) and that countries should use a model that best suits their local health system or environment.

The President-Elect of the ISBT and President of IHN, Erica Wood, shared initiatives and developments from various countries, which may differ in approach to the implementation of a haemovigilance programme. She indicated that there is no "right way" to "do" haemovigilance; some countries include only serious adverse reactions related to tranfusion, others only confirmed adverse reactions and some choose to include fractionated products and donor reactions. Erica invited interested parties to join the ISBT Working Party (WP) on Haemovigilance to share data and experiences and become involved in global benchmarking, education and data analysis. She emphasised that the ISBT is willing to assist with education and have funds for this purpose.

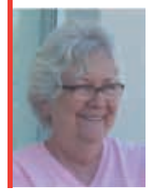
Jo Wiersum, former chair of the ISBT WP on Haemovigilance, presented the role of a multidisciplinary team in haemovigilance. Jo mentioned that haemovigilance is about both monitoring and improving safety throughout the various stages in the transfusion chain. Role players in each stage (Table 2) are responsible for ensuring that haemovigilance is effective. Notably, something should be done with the results of a haemovigilance report.

Table 2: Steps in the transfusion chain where effective reporting and monitoring is necessary to improve transfusion safety

1. Safe blood components
2. Prescribing and safe administration of blood components
3. Haemovigilance of adverse recipient reactions
4. Haemovigilance of errors and incidents
5. Traceability
6. Audit and appropriate blood use
7. Donor haemovigilance
8. Assessing the reports which come in
9. Analyses – annual haemovigilance report
10. Doing something with the results



Claire Armour Barrett
Editor-in-Chief
Africa Sanguine



Beryl Armstrong
Business Manager
Africa Sanguine

ISBT ACADEMY

Britta Lohrke, Medical Officer in the Namibian Ministry of Health, shared her experience of developing a National Haemovigilance Programme. Lack of knowledge was identified as a challenge and education remains difficult in a country with long distances between towns, especially when coupled with government beaucracy, time and resource constraints. Partnership with hospital transfusion committees, effective communication and audits have helped to identify and overcome some challenges in their programme. At times, it was necessary to "Namibianise" interventions, which is acceptable and part of adapting the haemovigilance programme to a country's local infrastructure and health system.
Swaibu Katare, Medical Director of the Rwanda Biomedical Centre, shared that Haemovigilance is a Quality Driver and Measure of Transfusion Safety and a measure of customer satisfaction.

The highlight of the day: the afternoon workshops where delegates divided into four groups based on language and regions in Africa; the Southern African Development Community (SADC), East African Countries of Africa (EAC), French-speaking African countries and Maghreb, together with the Economic Community of Central African States (ECCAS) and the Economic Community of West African States (ECOWAS). Each group was asked to consider the same questions, which were prepared by the organisers. A chairman facilitated, while a rapporteur documented discussion and gave a presentation following the breakaway sessions.

Questions for breakaway session:

1. What are the three main advantages of a blood service for the haemovigilance programme? Prepare a 100-word statement.
2. How do members from the represented countries rate the importance and stage of development of a haemovigilance system in their own countries?
   a. Not a high priority, not in place, and no firm plans to introduce at this stage.
   b. At the early stages of development (less than 2 years since being initiated)
   c. Guidance and partners would be helpful (state support necessary)
   d. Haemovigilance has been implemented but information gathered is sketchy
   e. Haemovigilance reports are published and provide focus for addressing transfusion hazards
3. What does the group identify as the three most serious hazards of transfusion?
4. What does the group identify as the three most common hazards of transfusion?
5. What important actions should be taken to introduce, maintain and constantly improve a haemovigilance system?

A lucky draw, for the book Practical Transfusion Medicine – 5th Edition, Michael F. Murphey (Ed), David J. Roberts (Ed), Mark H. Yazer (Ed), was sponsored by ISBT.
Speakers from the Academy Day have been invited to prepare articles for publication in Africa Sanguine, the scientific publication of AfSBT. A summary of the feedback from the breakaway session is being prepared as a report for the same publication.
AfSBT is most grateful to ISBT for supporting again, a successful Academy Day.

David Akinbo Bolaji
Lecturer and Medical Researcher
College of Medicine and Health Sciences
Afe Babalola University, Ado-Ekiti (ABUAD) Nigeria

My experience of the 9th international congress of AfSBT, Arusha, June 2018

The International Society of Blood Transfusion (ISBT) sponsored me to attend the 9th International Congress of Africa Society for Blood Transfusion (AfSBT) in Arusha, Tanzania where there were numerous presentations on the general role of safe blood transfusion in reducing maternal and newborn mortality. Attending this conference provided me with a full opportunity to acquire some new competencies and have constructive dialogues, since my research is about blood transfusion safety in sickle cell disease and other chronic non-communicable diseases. The conference included about 300 participants and 46 invited speakers from different countries all around the continent, who presented their recent work on various roles of safe blood transfusion in reducing maternal and neonatal mortality. The congress was a valuable learning experience to me, as it offered an excellent opportunity to interact with blood transfusion researchers and practitioners from other countries, exchange research findings and views during conference sessions, coffee breaks and the various conference dinners.

This conference presented an ideal platform for early results of my work because it was an international forum, of experts in blood transfusion practice. The congress also acted as a strategic think tank to enhance a constructive dialogue and collaboration on relevant blood transfusion safety themes and to present the latest research results in all areas of blood transfusion safety and availability. The highlight of the congress for me was the ISBT academy day, where various speakers gave insights and perspectives in the inception, challenges and role of haemovigilance as a quality indicator and propellant of blood transfusion safety; a key area yet to be fully optimized in Nigeria. I made a poster presentation of one of my works titled “Elevated Immunosuppressive Acidic Protein Correlates with Hepatic Enzyme Levels in Patients Receiving Allogenic Blood Transfusion”, while I also had the opportunity to learn about other aspects of blood transfusion researches from the numerous other poster presenters.. The dinners alsopresented a quiet environment to connect and network with numerous other researchers and experts from other parts of the globe.

Finally, I would like to express my profound gratitude to the ISBT for giving me the opportunity to attend this prestigious congress of the AfSBT The conference was very interesting and enriching, as it enhanced my experience with a plethora of information, knowledge and confidence. I have also been able to establish connections with a lot of colleagues and blood transfusion practitioners through my attendance at this conference, many of which have started yielding positive results. My appreciation also goes to Judith Chapman and Mildred Kada for their guidance and swift responses when it mattered most.

Zahida Qasim
Consultant Haematologist
Teaching Hospital
Mirpur, Pakistan

National strategy and algorithms for screening of blood for transfusion transmitted infections

The Divisional Headquarters Teaching Hospital Mirpur organized a 2-day practical workshop on National Strategy and Algorithms for Screening of Blood for Transfusion Transmitted Infections, in collaboration with the Al-Shifa Blood Bank Foundation in Mirpur, Azad Jammu and Kashmir. The participants included managers and technical staff of the blood banks (public and private sector) and postgraduate trainees who are actively involved in the daily work routine in their respective blood banks.

The welcome address and workshop background were presented by Dr. Zahida Qasim, Consultant Haematologist at the DHQ Teaching Hospital. She said Pakistan has recently developed the national screening strategies and algorithms for TTI screening. The adoption of these screening strategies and algorithms can contribute significantly to ensuring blood safety. However, there are many challenges associated with the execution of the proposed strategy, ranging from structural (policy, law) to operational (staff training, developing quality assurance protocols) and technical challenges. According to WHO recommendations, every facility in which screening is performed should have a suitable infrastructure and quality system to perform effective blood screening for transfusion-transmissible infections. Similarly, all staff involved in blood screening should be trained to perform their functions to nationally required standards. The subject training workshop is thus planned with this objective in mind.

The technical session included presentations on key topics including vein to vein transfusion chain, existing and emerging pathogens as TTIs, an overview of screening assays, routine and emergency screening, national screening strategy and algorithm, screening for HBV, HCV, HIV, malaria and syphilis, principles of ELISA, CLIA and NAT, blood quarantine and release and quality control in TTI screening as per national guidelines. The participants performed hands-on demonstration on screening by ICT rapid devices and ELISA. Every participant had the opportunity to do the rapid testing individually and the ELISA testing in batches. The participants, from different parts of the Mirpur division, were able to obtain valuable practice in key areas of blood screening and to carry out ELISA and rapid screening tests by the end of the workshop. There were also discussions on the false positive, false negative and borderline screening results.

Quality control and quality assurance has been a growing area in TTI screening in the past decade due to blood safety system reforms in the country. Participants in the training were keen to enhance skills in this area of transfusion medicine to prevent errors and ensure blood safety. Some of the participants were surprised to see how little quality control is currently performed in their blood banks.

Pre- and post-course assessment was done to have a systematic collection and analysis of information to improve participants' learning. The participants were provided with a questionnaire of fifty multiple-choice questions at the beginning and at the end of the training. Overall, the knowledge after the post-course assessment was raised from 43% to 77.8%. The programme was rated as excellent by most participants in response to a post-workshop evaluation questionnaire, with requests for longer and regular capacity building workshops. Dr. Farooq Ahmed Noor, Medical Superintendent at the DHQ Teaching Hospital in Mirpur, appreciated the ISBT support to conduct the subject training workshop, in his concluding remarks and encouraged the participants to implement the skills and knowledge acquired in the workshop in their respective blood banks.

AFRICA

Gavin Evans
Executive Director of the Global Blood Fund
London, UK

Heidi Goubran
Communication Manager at AfSBT
Arusha, Arusha, Tanzania

Unlocking the potential for blood adequacy in Africa

The 9th Africa Society for Blood Transfusion (AfSBT) Congress in Arusha, Tanzania, saw a re-launch of Post-School Donor Club activity in Africa, with the claim that this has the potential to transform blood collection across the continent.

Delegates heard that young donors are critical to the collection strategies of most African countries, often constituting 70% or more of a country's donor base. Indeed, such is the dependence on schools as points of access to this demographic cohort, that many blood services face regular shortages when schools are closed. Disappointingly however, retention after graduation from high-school is typically poor, with a majority of young blood donors lost to the system during the post-school transition. This, despite the fact that an approach variously known as Club 25 or Pledge 25 - expected to positively impact the high attrition rates amongst young donors - has been embraced by a number of African countries since the late 1990s.

Reasons proposed to explain this relative lack of success in retaining young donors, include only sporadic adoption of the Club 25/Pledge 25 approach, as well as the lack of a coherent programme identity and the varying programme definitions adopted by practising countries. Indeed, it was suggested that the Club 25/ Pledge 25 concept had, in many instances, become little more than short-hand terminology for "youth marketing", rather than a distinct, coherent programme targeting those leaving education. It was also mooted, that efforts to share best practise for the collective good over the years, had been sub-optimal.

Formally adopting "Pledge 25 Club" as the new brand and 25 donations by the age of thirty as the programme standard, AfSBT committed itself to taking a long-term leadership position on this important issue. Working with support from the charity Global Blood Fund, a new suite of tools and support was unveiled at the congress, including:

- a new corporate identity for the programme, emphasising the post-school focus of the concept and configurable to each participating country.
- a new how-to publication "Unlocking the Potential for Blood Adequacy in Africa", distributed free of charge to attendees. Written by Zimbabwean expert Edington Muchokwani, the book draws from the experience of leading practitioners and describes how to set up and run a successful Pledge 25 Club programme. Detail includes how to integrate post-school donor clubs with existing in-school peer promoter initiatives and offers forms and templates to help newly-adopting blood services to quickly get up-and-running.
- a new website www.pledge25.club featuring functionality for potential members to search for a club in their country and submit personal details online. Additional digital tools include Facebook, Twitter and Instagram to better enable communication within and between clubs, enhancing the collegiate experience.
- an Africa co-ordinator appointed to act as a point of reference for both the public and blood banking professionals, encouraging adoption of the new approach.

As claimed in the book, "a blood service that strengthens its recruitment function at the expense of its retention capabilities is likely to suffer the same fate as that of a settlement with a large rainfall catchment area but a very small reservoir". With Africa's already sizable youth population expected to double by 2055, the continent has an opportunity to resolve long-standing blood sufficiency challenges within its grasp. The AfSBT recognises this and is helping to place renewed emphasis on the sometimes neglected discipline of donor retention through the Pledge 25 Club. Further details from contact@pledge25.club

FOR POST-SCHOOL BLOOD DONORS PLEDGE 25 CLUB

EUROPE

Transfusion and Wikipedia

Lise Escourt
Director of NHSBT Clinical Trials Unit, Clinical Tutor, NHSBT NHS Blood and Transplant, Oxford, UK

Fifty-four percent of the world's population now use the internet, with the most dramatic recent increases in use in Africa, the Middle East and Latin America.[1] Wikipedia is one of the most popular global websites and is used by over 500 million people per month.[2] It is an online, open- source encyclopaedia that anyone can edit and is available in more than 280 languages.[2] It contains over 45 million articles, equivalent to nearly 2700 volumes of the Encyclopedia Britannica.

The internet is used as a source of medical information by 59% of adults in the United States and by 71% of adults under 30 years of age.[3] It is not only used by patients, but also as a source of health care information by between 50% and 90% of physicians and 94% of medical students[4,5] , because it is easy to understand, consumer- friendly and easy to access.[5] It is often used as a starting point to either provide initial information on an unfamiliar subject, or as a jolt to the memory.[4] In January 2014, Wikipedia was referred to as "the single leading source of medical information for patients and health care professionals" by the Institute of Medical Science (IMS) Institute for Healthcare Informatics and had more medical page views than any of the other major health websites (e.g. WebMD, WHO, National Institute for Health (NIH)).[3] In June 2018, the single Wikipedia page "blood type", had 150,000 views.

Wikipedia is an important source of information in low income countries. The biggest single source of information for patients in Ebola affected countries during the Ebola outbreak in 2014, was Wikipedia. This source is continuing to work, to provide free access to information to the world and is available as part of the "internet-in-a-box" scheme that provides resources to schools and communities who are not yet connected to the internet.

However, not all Wikipedia pages are reliable and some information does not yet exist on Wikipedia. Wikimedia UK (the UK affiliate of the Wikimedia Foundation) and Cancer Research UK (CRUK) worked together to improve the information on Wikipedia related to cancer. CRUK released medical images and diagrams on an open licence, as well as creating new articles and improving existing content. Now these images have been used to illustrate articles in more than 30 languages and receive, in total, approximately 2 million page-views per month. Cochrane is also working with Wikipedia to improve the quality of Wikipedia articles by adding information from Cochrane reviews. Between May and October 2017, volunteers updated 330 Wikipedia pages and these pages have already received nearly 32 million views.[6]

The amount and accuracy of transfusion information on Wikipedia was poor, when the ISBT Clinical Transfusion Working Party first reviewed the situation in 2017. With this in mind, our working party has started to improve the clinical transfusion knowledge on Wikipedia by updating and creating new pages with transfusion information. We are starting with the subjects that we have already created webpages for on the ISBT website, and will develop further information as time goes on.
ISBT is the obvious place to help improve transfusion information on Wikipedia. It has a large membership of people interested in transfusion from around the world, who could help to improve and maintain information on transfusion in English and other languages. If you have ever used Wikipedia to look something up, why not consider improving its transfusion content?7 Dr Lise Estcourt is the lead of the Wikipedia sub-group of the ISBT Clinical Transfusion Working Party and is happy to be contacted if you want to know more.

References

1. Internet World Stats, internet and usage statistics. [Accessed 14 July 2018] https://www.internetworldstats.com/stats.htm.
2. Heilman JM, West AG. Wikipedia and Medicine: Quantifying Readership, Editors, and the Significance of Natural Language. J Med Internet Res 2015;17(3):e62. DOI:10.2196/jmir.4069
3. Fox S. Health topics: 80% of internet users look for health information online. Washington, DC: Pew Internet & American Life Project; 2011. Feb 01, [Accessed 13 July 2018]. http://www.pewinternet.org/files/old-media/Files/Reports/2011/PIP _ Health _ Topics.pdf.
4. Poulter M. Doctors use, but don't rely totally on, Wikipedia [Accessed 15 July 2018] https://blog.wikimedia.org.uk/2012/04/doctors-use-but-dont-rely-totally-on-wikipedia/.
5. Usaid K. Allahwala, Aniket Nadkarni & Deshan F. Sebaratnam (2013) Wikipedia use amongst medical students - New insights into the digital revolution, Medical Teacher, 35:4, 337, DOI: 10.3109/0142159X.2012.737064.
6. Cochrane Wikipedia Initiative – keeping Wikipedia content up to date [Accessed 20 July 2018] https://community.cochrane.org/news/cochrane-wikipedia-initiative-keeping-wikipedia-content-date.
7. Wikipedia introduction to medical editing [Accessed 20 July 2018] https://en.wikipedia.org/wiki/User:JenOttawa/Introduction _ to _ Medical _ Editing: _ Cheat _ Sheet

Hospital networking:
An initiative towards haemovigilance in Indonesia

Teguh Triyono
Clinical Pathology Department,
Faculty of Medicine
Universitas Gadjah Mada/
Sardjito Hospital Indonesia.

Yuyun SM Soedarmono
National Committee for Blood Services
Ministry of Health of Indonesia

Introduction

As a clinical procedure, blood transfusion has various risks in addition to the many benefits that are gained. Transfusion procedure is a long process chain since donor recruitment, donor blood drawing, component processing, blood storage, pretransfusion testing, blood administration to patients, up to transfusion monitoring. The risk of transfusion side effects can occur throughout the process, both on the donor and the patient.

In Indonesia, there are 2,633 hospitals and 413 blood centers, spread all over the country. The patients' need for blood in the hospital, is managed by the hospital blood bank, who gets blood from a blood center, both belonging to the government or the Red Cross. Some referral government hospitals have their own blood center, to fulfill their own need of blood. So far, the incidence of transfusion side effects in Indonesia is not known with certainty. It is likely that transfusion-related events are still largely unknown because they have not been detected as adverse events, reporting media have not been available, or have been unreported, or have been intentionally not exposed with certain considerations. This related information is indispensable for patient safety.

Haemovigilance is an integral part of the patient safety program and is aimed for identifying, monitoring and preventing transfusion reactions, incidents and transfusion- related side effects both on donors and patients (from 'venous to veins').[1,2,3] It requires blood services and a hospital to reveal the problems themselves on their own initiative, which needs an atmosphere of tolerance and learning from errors.[4] Some big hospitals have made efforts to record the incidence of transfusion reactions in their own hospital to make the hospital transfusion policy. There has not been a national system that regulates the haemovigilance yet.

Hospital Networking

Sardjito Hospital Yogyakarta, one of tertiary hospitals in Indonesia in collaboration with the National Committee of Blood Services, tries to initiate the spirit of haemovigilance, by conducting internal surveillance efforts in hospitals which are then developed to be nationwide. Starting in August 2017, socialization and website creation are accessible to all hospitals. McQuilten et al. suggests that the development of haemovigilance networks would be easy using LIS (Laboratory Information Systems)[5]. Laboratory Information Systems can present reliable data on the use of blood components to patients in a hospital.

Other hospitals all over the country are welcome to send all transfusion reaction information through this website voluntarily. Then some hospitals are actively involved in this program. The collected data will be compiled annually and become the initial national data to realize the haemovigilance system. The haemovigilance system is intended to detect, report, analyze and follow up on transfusion side effects. Haemovigilance information will be instrumental in improving patient safety, by providing related information and feedback on preventive measures, alerting hospitals about the risks of side effects of blood use, informing policies and developing standards.[2,6,7] Wood et al. (2014) stated that in implementing the haemovigilance program, the following points should be considered: 1) defining objectives clearly; 2) sharing of individuals, groups, and institutions about their experiences; (3) monitoring and review periodically; 4) giving feedback so that the participants will understand the benefits; 5) eliminates the source error stigma[2].

Challenges

Some aspects still need to be improved continuously in Indonesia, for example the awareness increase of all stakeholders about understanding the principle of haemovigilance, network development not only between hospitals but also nationally with blood centers and the preparation of national guidelines. In our opinion, open communication between stakeholders is an important aspect, as Satake (2018) mentioned that whatever structure is established within a country, smooth communication and the free exchange of information among stakeholders, are essential[8].

REFERENCES

1. Wood EM, Stevenson L, Bielby L, Wiersum-Osselton JC. 2014.Haemovigilance:concepts and frameworks. ISBT Science Series.9:86-90.
2. de Vries RRP, Faber JC, Strenger PFW, Members of the board of the International haemovigilance Network.2011. Haemovigilance:an effective tool for improving transfusion practice.Vox Sanguinis;100:60-67.
3. Dhingra N, Hafner V, Xueref S.2003.Haemovigilance in countries with scarce resources-a WHO perspective. Transfusion Alternative in Transfusion Medicine;Vol.5;1:277-284.
4. Xie Y & Zhu Z.2018. Haemovigilance in China:experiences, challenges and strategies. ISBT Sciences Series;0:1-4.
5. McQuilten ZK, Schembri N, Polizzotto MN, Akers C, Wills M, Cole-Sinclair MF, Whitehead S, Wood EM, Phillips LE.2011.Hospital blood bank information systems accurately reflect patient transfusion:results of a validation study.Transfusion;51:943-948.
6. Faber JC.2003.Haemovigilance:definition and overview of current haemovigilance systems.Transfusion Alternative in Transfusion Medicine;Vol.5;1:237-245.
7. Nel TJ.2008.Clinical guidelines, audits and haemovigilance in managing blood transfusion needs.Transfusion Alternative in Transfusion Medicine:61-69.
8. Satake M.2018. Experience of Haemovigilance in Japan. ISBT Sciences Series;0:1-4.

WESTERN PACIFIC

Haemovigilance programme in a quaternary hospital in Hong Kong: Sharing on a decade of experience

Rock Leung
Division of Haematology, Department of Pathology, Queen Mary Hospital
Hong Kong, China

Queen Mary Hospital (QMH) is a quaternary hospital with more than 1700 hospital beds in Hong Kong. In addition to provision of highly specialized multidisciplinary clinical services such as haemopoietic stem cell and organ transplant & major cardiothoracic surgery, QMH is also a research and teaching hospital of the Hong Kong University. With this background, the hospital-based haemovigilance programme, established in 2007, plays an essential role in keeping up the quality of the hospital transfusion service in QMH.

The hospital-based haemovigilance programme aims to drive quality improvement of the hospital transfusion service through monitoring and active following up of reported adverse transfusion events and transfusion incidents. Adverse transfusion reactions and transfusion incidents are reported on a voluntary basis via an electronic platform. The investigation and follow up actions of the reported cases are coordinated by the Transfusion Safety Officer (TSO). The cases are reviewed by the Expert Panel which comprises clinical haematologists, blood bank haematopathologists, scientific transfusion officers and TSO. Each case is classified according to the ISBT guideline. The programme also provides capacity building opportunities for service providers, users and relevant stakeholders in respect of high quality hospital transfusion service.

In the past decade, the implementation of the programme has achieved the following:

1. Establishment of a database on adverse transfusion reactions in QMH

Before the implementation of the programme, there was no standardized approach on investigation and classification of adverse transfusion reactions. Under the haemovigilance programme, reported cases were reviewed and categorized systematically by the Expert Panel. Cases identified to be not related to transfusion were excluded. These allowed generation of genuine data regarding the incidence of adverse transfusion reactions and a standardized mechanism to define and categorize adverse transfusion reactions.

2. Enhancement of transfusion safety through re-engineering of blood bank operation

(A) Reducing issue of blood component of inappropriate ABO Blood group for nenonatal transfusion

Incidents on transfusion of inappropriate ABO blood group on neonates, which notoriously involved complicated workflow for blood issue, were reported from 2007 to 2012. As a result, the blood bank workflow was modified and the blood bank information technology system was enhanced accordingly in 2012 in order to facilitate the process. Since then, no such case has been reported.

(B) Reducing blood component issue of discrepant type or number of units

In 2016, the hospital clinical request system- blood bank laboratory information system interface was introduced. Information regarding blood component requisition (type and number of units requested) can be automatically transferred to the blood bank LIS, in order to mitigate the risk of issuing the wrong type or the wrong number of blood components.

3. Driving change in transfusion-related policy

A first local well- documented case of transfusion-related acute lung injury (TRALI) was reported in 2007 in QMH, at the initial implementation of the haemovigilance programme. The case was reviewed with preventive strategies formulated on a corporate level. In the subsequent year, the Hong Kong Red Cross Blood Transfusion Service established the new policy of using only male donors for the production of plasma-containing components for clinical transfusion.

4. Feedback and capacity building

Haemovigilance data and training (including lessons learned from the incidents, and measures for quality improvement) were shared to clinical stakeholders twice a year on a forum. Moreover, Transfusion Tips were published and disseminated through emails to highlight pertinent operational issues and practical tips on transfusion safety among stakeholders.

To conclude, the hospital- based haemovigilance programme in QMH has consolidated the quality framework management for the hospital transfusion service. It has also actively engaged different key-stakeholders to the implementation of new policy and capacity building and has the important function of nourishing new initiatives for continuous and sustainable quality improvement in hospital transfusion service.

2018

October 2 - 4
The 4th International Congress on Transfusion Medicine & XIV Annual Congress of Asian Association of Transfusion Medicine (AATM)
Teheran, Iran
ibtc4.tmi.ac.ir

October 13 – 16
AABB Annual Meeting
Boston, Massachussetts, USA
www.aabb.org

October 21 - 24
Blood 2018
Brisbane, Australia
www.blood2018.com

October 31 - November 3
HEMO 2018
Sao Paolo, Brazil
www.hemo.org.br

November 5 - 6
5th Molecular Blood Group Forum Frankfurt
Frankfurt, Germany
www.inno-train.de

November 7 - 10
6th Transfusion Medicine Congress of Serbia
Belgrade, Serbia
www.udruzenjetransfuziologasrbije.org

November 12 - 13
ECOWAS Regional Conference of the African Society for Blood Transfusion (AfSBT)
Accra, Ghana
www.afsbt.org

November 22-23
Royal College of Pathologists Biennial Symposium on Advances in Transfusion Medicine
London, United Kingdom
www.rcpath.org

November 23-25
TRANSMEDCON 2018
Kochi, India
www.transmedcon2018.com

Future ISBT Congresses

Basel
Bangkok
Barcelona

29th Regional Congress of the ISBT, Basel, Switzerland, June 22-26, 2019
30th Regional Congress of the ISBT, Bangkok, Thailand, November 16-19, 2019
36th International Congress of the ISBT, Barcelona, Spain, June 6-10, 2020

When emerging pathogens pose a risk to the blood supply,

The INTERCEPT™ Blood System is ready.

INTERCEPT is the only US FDA approved pathogen reduction system for platelets and plasma.

Pathogen reduction has been called upon to help maintain a safe and adequate blood supply as part of epidemic preparedness planning. Examples include:

- 2005 Chikungunya (CHIKV) epidemic on Ile de La Réunion, France[1]
- 2014 Chikungunya (CHIKV) and Dengue (DENV) outbreaks in the Caribbean region[2]
- 2016 Zika (ZIKV) outbreak in Puerto Rico[3]
- 2016 WHO[4] and US FDA guidances[5] offer pathogen reduction as one option to mitigate risks related to ZIKV outbreaks
- 2017 Chikungunya (CHIKV) outbreak in Italy[6]

Be Ready – Sii Pronto – Estar Listo

INTERCEPT BLOOD SYSTEM

For more information on availability in your country, please visit www.interceptbloodsystem.com

[1] Rasongles P, et al. Transfusion 2009;49:1083-91. [2] Rico, S et al. Treatment Use Study of INTERCEPT Platelet Components in Response to the Chikungunya and Dengue Epidemic in Puerto Rico: TRUE Study. Poster presented at BMT Tandem Meeting; February 2016. [3] Cerus Corporation Press Release (March 3, 2016) [4] WHO Interim guidance WHO/ZIKV/HS/16.1 February 2016. [5] FDA Guidance for Industry February 2016. [6] Outbreak Chikungunya: Misure di prevenzione della trasmissione trasfusionale modalità organizzative in regio Lazio. Insalaco et al. ABS190 43° Convegno Nazionale di Studi di Medicina Trasfusionale. No pathogen inactivation system has been shown to inactivate all pathogens.

CERUS