

# News in Transfusion Medicine: Regulations & Technologies



**Sergey Sidorov**  
Executive Director of the Russian  
Transfusionist Association

**The 16<sup>th</sup> conference on News in Transfusion Medicine: Regulations and Technologies was held at the Pirogov National Medical and Surgical Centre. With over 130 experts from Russia, Kazakhstan, England, France and Scotland the conference was well attended. Prof. Zhiburt opened and informed the audience about protocols for transfusion of red blood cells, platelets and plasma that were discussed earlier.**

Transfusion protocols are important for i)facilitating the work of the physician, ii)ensuring necessary diagnostic and therapeutic measures, iii) controlling traceability of blood. These protocols have been developed as Standards of the Russian Transfusionist Association (RTA, [www.transfusion.ru](http://www.transfusion.ru)). With the increasing volume of surgical and emergency care, the Transfusion Therapy Department (TTD) within the Arkhangelsk City Hospital has grown. The need for red blood cell transfusion increased by 70 %. Elena Sitnikova from this Hospital informed the audience about successfully following national regulations in order to establish a fully staffed TTD ( ~15 FTE).

Sergey Bobovnik talked about important recommendations for professionals in the field he found when consulting the European Society of Anaesthesiology “Management of severe perioperative bleeding” (2013) guidelines, with the following recommendations:

1. application of algorithms incorporating predefined intervention triggers based on point-of-care coagulation monitoring assays to guide haemostatic intervention during cardiovascular surgery.
2. patients at risk of bleeding are assessed for anaemia 4–8 weeks before surgery.
3. target haemoglobin concentration of 7–9 g/dl during active bleeding.
4. repeated measurements of haematocrit/ haemoglobin, serum lactate, and base deficit in order to monitor tissue perfusion, tissue oxygenation and the dynamics of blood loss during acute bleeding. These parameters can be extended by measurement of cardiac output, dynamic parameters of volume status (e.g. stroke volume variation, pulse pressure variation) and central venous oxygen saturation.
5. labile blood components used for transfusion are leuko-depleted.

6. multiparous women to be excluded from donating blood for the preparation of FFP and for suspension of platelets in order to reduce the incidence of transfusion-related acute lung injury.

Due to ISBT Academy support, two foreign speakers were invited. Angus Douglas (DGP) talked about European Blood Alliance (EBA), established in 1998 with a dual purpose: to create a network of blood organisations and contribute to the safety and security of the blood supply across Europe. First, EBA has achieved a European Blood Safety and Tissues and Cells Directive. Second, a safe and secure blood supply across Europe, Standard Operating Procedures, quality, optimal use of blood, enhancing Supply Chain (donor to patient) and good practice, emergency planning.

Third, benchmarking and co-operation on procurement and validation. And fourth, preparedness for ‘foreign’ diseases (SARS) as well as global co-operation (identifying common issues). Nicole Thornton (NHSBT) also presented, she is head of the Red Cell Reference in IBGRL, which is based in Filton Blood Center - the world’s largest blood center (> 900,000 donations/year). The following deferrals are common:

- 1) suspected antibody to high frequency antigen (HFA)
- 2) Low frequency antigens – in HDN or due to incompatible crossmatch
- 3) rare phenotypes – donors and patients
- 4) phenotype discrepancy problems – especially Rh

Antibody characteristics are important for identification. Determining antibodies to HFAs depend on reactivity (technique, temperature), enzyme, (chemically) modifications (papain, trypsin), agglutination or ability to induce in vitro haemolysis.

IBGRL Red Cell Reference includes the International Rare Donor Panel (IRDP) which currently has 5264 donors listed, from 26 countries. Much information has been created for donors, but at the same time, potential blood recipients are in an ‘information vacuum’. Therefore, the Conference decided to request the RTA to develop leaflets for allogeneic and autologous blood recipients. The 17th Conference “Standards and individual approaches in clinical transfusion” will be held in the Pirogov center (December 17-19, 2014).