

## Symposium Report

### IPFA/BCA 2<sup>nd</sup> Global Symposium

#### On the Future for Blood and Plasma Donations

#### Fort Worth (Dallas), TX, USA, 28 – 29 September 2015



The 2<sup>nd</sup> IPFA/BCA Symposium was held in Fort Worth (Dallas) on the 28 – 29 September. We are grateful to our co-organiser BCA (Blood Centres of America) and local host Carter BloodCare for their vision in identifying the need for and importance of the meeting and for their energetic and enthusiastic contributions to its planning and organization.

Dr Sayers, President and CEO of Carter BloodCare, launched the meeting with insights into current issues in the US blood bank industry. Particular pressures on the current donor base and the ability to retain donors were highlighted. One critical metric shows a ‘shift to the right’ in age distribution of apheresis donors, pointing to a short-term future where many of these donors will “age out” of donation eligibility. Additionally, new standards and regulations will make it harder for donors to qualify, namely there is a projection that Carter BloodCare will lose 17% of female platelet-apheresis donors based on new HLA standards from AABB. FDA changes requiring a higher hemoglobin cutoff for males will also have a significant impact on the number of eligible donors.

Ms Demaret shared a moving account of her son’s life and the family’s struggle with his severe combined immunodeficiency (SCID). As the “boy in the bubble”, David Vetter, became the public face of SCID and contributed enormously to raising awareness and to research advancing life-saving therapies available today.

Dr Orange spoke about the demand for immune globulin, individualization of therapy and potential roles for specific preparations. A meta-analysis he conducted shows a lower incidence of pneumonia among patients with higher doses of Ig and higher trough levels. He also presented an overview of the spectrum of variables accessible for individualization for patients receiving Ig therapy. Twelve different variables are analyzed in the paper, including dose, trough, wear-off, delivery, frequency, etc. Dr Orange concluded by saying, “Latent demand for Ig is startling and easily outstrips supply.” The biggest driver in the demand issue is dosage.

In discussing regional variations in clinical demand for immunoglobulins IgG, Mr. Robert described the quantitative and qualitative differences existing between the high IgG consumption and low IgG consumption countries. In the former – the industrialized countries – the average usage ranged between 50 to 200 kilograms per million people, while it was far less in the emerging countries, many under 10 Kg/million people. Close to half of the global demand was in North America, which has only 5% of the world population, while it was 17% in Asia and Pacific, with 58% of the world population. Funding, product awareness and availability, among other factors, explain these differences. For the same reasons, immunoglobulins are mainly prescribed to treat acute conditions in the emerging countries, while they are primarily used for treating chronic diseases in the industrialized countries. Mr. Robert also presented the differences in the demand of specific globulin (Rabies, Rho(D), Tetanus, Hepatitis B, etc.) by region. The inclusion of immunoglobulins into the WHO list of Essential Medicines will contribute to raising awareness and product demand in countries with low usage levels.

Dr Strengers went to review differences in the global community focusing on regional variations in the quality of plasma. There is a documented difference in antibody profiles of donors in different regions of the world. One question raised from the discussion is whether or not the lower antibody levels in certain batches reflects a significant difference in clinical outcomes.

Dr Strengers then led off the 3<sup>rd</sup> session on addressing patient needs for Plasma Derived Medicinal Products (PDMP) by outlining the variety of products for fractionation. He provided an overview of the fractionation process, obtaining cryopoor plasma, extracting Ig and albumin from residual plasma, pathogen inactivation, and immunopurification of FVIII. In response to questions, Dr Strengers summarized the message that clearly there are unmet needs for PDMP and collaboration to increase donations and increase fractionation capacity is the only way to ensure patients receive all products needed.

Mr Healey from Grifols continued the discussion on meeting needs by raising the question of whether categorizing plasma into Source and Recovered Plasma harms or benefits patient's access to PDMP. An argument was made that "bureaucratic" focus on self-sufficiency and restricting donor remuneration is counter to ensuring needs are met. Recent consensus (PLUS) statements were referenced expressing the current feeling among patient advocacy groups that the plasma supply is fragile.

Representatives from BloodSource, Mr Van Tuyle and Ms Edgecomb, then presented practical information on collection strategies designed to directly address the needs of patients. In this presentation they showed their lessons learned, numbers and results.

The remainder of day 1 tackled regulatory issues and harmonization. Ms Carr-Greer discussed the AABB's efforts including the Plasma Task Force to bring some rationality to regulations governing apheresis collections used for further manufacturing. The AABB Plasma Task Force has asked the FDA to provide a pathway so that plasma for further manufacture could be labeled, for example, to indicate storage and freezing conditions. Having some degree of flexibility in freezing time is an important issue since large quantities of blood are collected at mobile sites and requires transport time to reach the freezers. Furthermore, AABB has started a consultation with the FDA to see if harmonization with European requirements is possible.

Dr Weinstein further commented on the benefits of harmonization and streamlining of global development, particularly regarding the development of written and physical standards. He noted that local harmonization is happening with some collection centers "voluntarily meeting EU Pharmacopoeia requirements." This voluntary compliance, however, does not alleviate the economic burden of having multiple audits, duplication of auditor efforts or the lack of auditors to fulfill all current needs.

Mr Skinner from the World Federation of Hemophilia reviewed the impending change by the FDA in deferral of men who have had sex with other men (MSM) to 12 months. US centers providing plasma for further manufacture to countries with a "permanent" MSM deferral period (eg., many EU countries) are advised to review their contracts to ensure the plasma will continue to be allowed for importation or further sale as a finished product by the manufacturers. The LGBT community has advocated extensively for a change in the deferral criteria and likely have an expectation that US blood and plasma centers will implement the policy change immediately upon publication of the final FDA guidance. The disconnect between global deferral policies and the desire for rapid implementation could present public relations problems for blood and plasma centers. He raised a concern this could impact the supply of plasma available for manufacture and finished products available to meet patient need. One of the potential solutions, at least in the near term, could be to implement the new 12-month deferral only on whole blood donation and retain the permanent deferral on source plasma or apheresis. This plasma could then be used for the production of plasma products for the international markets.

The session was rounded out with a thorough explanation of the ABO Risk Based Decision Making Framework by Mr McDonald of Australia. The framework is free and open for use by blood operators and can be accessed here: [www.allianceofbloodoperators.org](http://www.allianceofbloodoperators.org).

The second day was fronted by manufacturer's presentations moderated by Dr Sayers. Mr Nikel shared Haemonetics' latest integrated data management system for connecting devices to BECS and handheld devices while wirelessly managing a donation from presentation of the donor to final product.

Mr Haring, representing Thermo Fisher Scientific, then outlined their new technologies for improving throughput and product integrity such as their new blast freezer (XBF40D). The new XBF blast freezer allows for rapid freezing prior to long-term storage in accordance with AABB guidelines and features simple “plug-and-play” installation, enhanced security, and flexible storage configurations.

Session 6 focused on plasma-specific responses to the Ebola outbreak in West Africa with Dr Wood giving WHO’s perspective and outlining the discussions that culminated in guidelines for collecting convalescent plasma from survivors. He also briefly described the three clinical trials conducted, one each in Liberia, Sierra Leone and Guinea. Further the lessons learned from this outbreak were presented. Dr Hoover then offered specifics on the Clinical RM led clinical trial in Liberia. The trial faced many challenges, from logistics to staffing/training, and finally to a winding down of the epidemic just as plasma became available. Dr van Hasselt, who also worked on the trial in Liberia, raised specific questions regarding Ebola survivors suitability as plasma donors. He suggested that fitness to donate should not only take medical/metabolic status into account but also consider and closely monitor social impacts of donation as Ebola survivors reported stigma and rejection in many communities. Finally, Dr El Ekiaby from Egypt provided an update on a system presented at last year’s symposium that allows for local preparation of small batches of hyper immune globulins. Trials thus far hold promise that immune globulin concentrates could be produced at a local level in future outbreaks. CE marking of the medical device is expected in 2016.

Launching the discussion on Source Plasma collection and donor conversion, Mr Noël showed how Établissement Français du Sang evaluated, benchmarked and ultimately targeted under-performing collection centers for closure. Doing so has increased the performance of blood centers under supervision and is improving the financial balance.

Carter BloodCare’s Ms Maul presented a marketing program implemented to attract apheresis donors to their new Source plasma collection program. The common barriers of plasma donation are time commitment, pain, the unknown process, misconceptions and inconvenience. To overcome these issues for the donor, training materials were developed and a marketing campaign on education and awareness was launched.

Rounding out the session, Prof. Dr van Ham from Sanquin showed data on the efficacy of antibody induction and maintenance in voluntary donors who have been hyperimmunized against tetanus toxoid. It was discussed how the insight in the boosting-induced dynamics of anti-tetanus antibody responses in the donors could be applied to optimize the plasmapheresis schedules of these donors.

For the final session of the program, four speakers provided perspectives from different corners of the world on increasing patient access to PDMP. Mr Smit, from the comfort of his own home in the Netherlands, joined the meeting by video conference to portray his personal experience as a patient dependent on PDMP. He gave an overview of the available treatments throughout time and talked about the setbacks (HIV and hepatitis). He advocated a gradual decrease of paid donations which was a good basis for a lively discussion. After this, Dr Wood joined the podium one more time to offer WHO's stance on the barriers to access and progress being made. Strengthening regulatory systems for blood products and building technical capacity of national and regional blood regulatory authorities is seen as the key to assure global availability of blood and plasma products. To illustrate this Dr Wood presented two projects, first the Achilles project in Indonesia and second the WHO workshop on blood regulatory systems in Johannesburg, South Africa.

Mr Béchon from LFB reasoned that restrictions on import of non US Plasma are an irrational impediment to meeting the demand for all PDMP. Allowance of non US source plasma will increase product availability and will lead to lower costs. The Transatlantic Trade and Investment Partnership (TTIP) might be a good opportunity to progress this issue.

Mr Trifunov charted Canadian Blood Service's potential strategy for reaching self-sufficiency and meeting patient needs in the country. It was stated that the immunoglobulin production from domestic plasma should be increased to be less dependent on import. To achieve this the supply of source plasma for fractionation needs to be expanded, meaning that the current apheresis plasma program within Canadian Blood Services needs to be optimized and/or new collection facilities should be developed.

IPFA and Carter BloodCare were delighted to have been able to offer "Fellowships" to enable the following people to attend the meeting:



- Dr Richard Malan (Argentina)
- Dr Gabriela Varela (Argentina)
- Prof. Osires de Melo (Brazil)
- Dr Rocio del Pilar Parra Galvis (Colombia)
- Dr Greg Bellairs (South Africa)
- Dr Luiz Amorim (Brazil)

Their individual reports and impressions from the meeting are available on the IPFA website. We were pleased to welcome them to the meeting and thank them for their valuable comments and insights.

We are deeply indebted to all who contributed to the success of the meeting including our commercial sponsors without whose support the meeting would not be possible.

### **IPFA/BCA 3<sup>rd</sup> Global Symposium**

Arrangements for a 2017 Symposium on the Future for Blood and Plasma Donations are underway. Watch for Save-the-Date information, as we plan to head to Nashville, Tennessee, USA, in September 2017.

