National Positions on Plateletpheresis

The following is a compilation of responses received from European Blood Association members in response to an enquiry from the Australian Red Cross Blood Service (ARCBS) for information to inform the ARCBS discussion paper *A National Position on Plateletpheresis*. The information was requested on the understanding that it may be included in a public document.

The discussion paper has been submitted to Australia's Commonwealth, State and Territory Governments to inform consideration of, and advocate for, a national position on Plateletpheresis. Most national figures indicated in the discussion paper were derived from a published source, which allowed a comparison at the same point in time (2006).

ARCBS appreciates the positive response to our request for information and has complied the following from the responses received so that it may serve as a resource for the network.

<table>
<tr><td>Austria</td><td>Austria has a similar plateletpheresis position to Australia (perhaps with slightly higher proportion of pooled platelets).
Contributed by: Wolfgang Mayr</td></tr>
<tr><td>Belgian Red Cross (French speaking)</td><td>The proportions of platelet concentrates distributed in Belgian Red Cross (French speaking) in 2007 were:
- single donor platelet concentrates: 8523 units (61%)
- pooled platelets : 5451 units (39%)
NB. 1 unit = 0.5 X 10e11 platelets.

Contributed by: Véronique Deneys, Directeur Médical, Service du Sang, Croix Rouge de Belgique.</td></tr>
<tr><td>Denmark</td><td>2006 Figures from Denmark are as follows:
A total of 35,604 platelet concentrates, 34,874 (98%) made from BC with PAS (pools of 4) and 730 (2 %) from apheresis.

Contributed by: Jørgen Georgsen</td></tr>
<tr><td>England</td><td>52.9% of platelets are from apheresis (from 2007 ABO Scorecard)
132,886 platelets produced by apheresis
118,303 platelets produced from EB donations</td></tr>
<tr><td>Germany</td><td>In German Red Cross Blood Service Baden-Wurttemberg - Hessen we have 90% buffy coat derived pool platelets and 10% apheresis platelets. Since there is no evidence of superiority of apheresis platelets for routine supply and buffy coats are available without the need of additional donors from ethical and economical point of view it seems mandatory for me to use pool platelets as far as it is possible. Because there is no zero risk for apheresis donors an unnecessary additional risk might be produced to healthy donors without benefit for recipients of apheresis platelets.

Contributed by: Erhard Seifried MD, Executive Director, Blood Transfusion Centre of the German Red Cross</td></tr>
<tr><td>Latvia</td><td>From the Latvian State Blood Service:
<table>
<tr><th rowspan="2">Year</th><th colspan="2">Total amount of platelets distributed</th></tr>
<tr><th>Prepared by apheresis</th><th>Pooled from BC</th></tr>
<tr><td>2006</td><td>3847 units</td><td>1606 units</td></tr>
<tr><td>2007</td><td>2458 units</td><td>1903 units</td></tr>
</table>
Contributed by: Anna Steinerte, Chief Physician of the Latvian State Blood Donor Center</td></tr>
<tr><td>Malta</td><td>Malta is aiming for 80-90% Apheresis by the year 2010.
Contributed by: Alex Aquilina</td></tr>
</table>

Compiled by ARCBS International Services, September 2008

Netherlands	We did a risk analysis for agents like HIV, HCV, HBV and vCJD, specific to our blood recipient data e.g. total donor exposure per recipient, and came to the conclusion that a significant national provision with apheresis platelets instead of pooled (5) buff-coat platelets was not an effective safety intervention. So we do it for HLA and HPA typed platelets and sometimes for supply reasons around holidays etc. Contributed by: Cees L. van der Poel, MD, PhD, Secretary Medical Affairs, Sanquin Blood Supply
Republic of Ireland	In about 1998 the IBTS adopted a policy of moving to 100% apheresis platelets; our standard product at that time was a pool of 4 buffy coat derived platelets. The driver was vCJD: the fewer donors a patient sees the lower the risk. There's an offset: because the apheresis platelet donor panel would be quite small (about 1000 donors for us at that time) and because a platelet donor could donate up to 36 units per year for several years before it became apparent that he or she was incubating vCJD (or any other emerging transfusion transmissible disease) many recipients could have been exposed to infection. In the case of a whole blood donor, the risk was higher that *anyone* would have been exposed, but about tenfold less that *large numbers* would have been exposed. Nevertheless, from the individual patient point of view the truth remains that their risk per transfusion is less the fewer the number of donor exposures. At the time we made the decision to move to 100% apheresis, the national usage was around 8,500 units, but this has doubled over the past ten years, with the result that we are only around 50% - we have not had the ability to expand the programme sufficiently to reach the ever-retreating 100% target. With the waning of the vCJD threat, and the approach of pathogen inactivation, the risk profile may be changing, and the cost imperative may also evolve. However, our plan is still in theory to move to 100% apheresis. If testing of blood donors for vCJD becomes a real possibility, and it might, one strategy might be to filter all red cell units (avoids or diminishes the need for testing these donors) and test only the platelet donors. There is no filter for platelets, and we source all clinical plasma from the US, and dump all our own recovered plasma. This would increase the impetus to implement 100% apheresis. The interim position would be to use SDP for everyone under a certain age while we increased the percentage towards 100. Contributed by: William Murphy, Medical Director, IBTS
Switzerland	The repartition between SDP and PP in Switzerland is 90% vs 10%. Contributed by: Guy Levy, MD, Director Regulatory Affairs, Blood Transfusion Service of the Swiss Red Cross

United States	There is no national US policy on pheresis vs. whole blood (WB) platelets. Product choice is mostly local between the blood centers and hospitals they serve. Nationally (between ABC and ARC), we are at about 80-85% of the doses coming from pheresis collections, but there are several reasons it is that high. (ABC members are about 90% pheresis and ARC is probably at 75%--there is no particular reason for that difference.) First, there was an enormous push in the 1980s and 90s by Fenwal, Gambro and Haemonetics to sell the concept of pheresis platelets being safer (because of less donor exposure), and increasing splits (about a 1.7 national rate right now) made pheresis platelets more economically feasible. Perhaps as or more importantly, until two years ago (with approval of Pall's Acrodose system) we didn't have a pre-pooled platelet product in the US, and in the last ten years hospital blood banks have been downsizing (along with the other labs) and consolidating. So there has been increased interest in pheresis platelets because no pooling was needed before transfusion. So more at the hospital request many centers have gone to 100% pheresis. To give some push behind that idea, two of the biggest producers of WB platelets in the US are the Puget Sound Blood Center (Seattle) and Central Blood Bank (Pittsburgh), which both are also the transfusion service for their hospitals and do their own pooling before transfusion. The other push to pheresis has been bacterial screening. All pheresis (and Acrodose pooled) platelets are cultured but (other than dipsticks) hardly anyone really cultures WB platelets. So there is also the perception that pheresis platelets were safer from bacterial contamination. (An article from the Irish BTS about to be published will blow the lid off that myth.) On the other hand, there is no doubt that pheresis platelets are far more expensive than WB platelets and have made RBCs cost more since you have fewer products to spread the expenses. We won't see a conversion to buffy-coat platelets in the US (like in Canada) because the market really isn't there to warrant such a painful conversion (and no company wants to do FDA clinical trials with such a small WB platelet market to start with). But the automated component separation technology coming from Gambro (Caridian) and Terumo will likely get approved in the US in a few years. Coupled with the approval of the Acrodose system for non-Pall bags, we might see a push in the other direction to WB pre-pooled platelets. In addition, the ability to test a product (pooled or otherwise) for bacterial contamination just before transfusion (using the recently approved Verax test) might help as well—but again, that's a transfusion service-based test, so it's not clear if the staffing will be there to use it (it's also not approved as a substitute for culturing). Pathogen inactivation might also make pre-pooled WB platelets on par with pheresis platelets as far as convenience and perceived safety. Contributed by: Jim MacPherson