

## Difficult blood donor choices: dance, feast or donate blood?

Celso Bianco

Scientific Consultant, Transfusion Medicine

An article in this issue of the *Revista Brasileira de Hematologia e Hemoterapia* addresses one of the most difficult management challenges in blood banking: balancing supply and demand of blood and blood products collected from volunteer, non-remunerated donors<sup>(1)</sup>. It looks specifically at the distribution of weekly blood collections at three major Brazilian blood centers participating in the Retrovirus Epidemiology Donor Study-II (REDS-II) research program supported by the National Heart, Lung and Blood Institute of the U.S. National Institutes of Health from January 2007 to December 2010<sup>(2)</sup>. These centers are the Pro-Sangue in the State of São Paulo, Hemominas in the State of Minas Gerais and Hemope in the State of Pernambuco. The authors observed seasonal declines in the number of donations during the holiday weeks of Carnival and Christmas with consequent shortages of blood components available for transfusion in each of the analyzed years. The decline during Carnival was more evident in Recife and Belo Horizonte than in São Paulo but the three blood centers experienced shortages during the Christmas week. The authors recommend attention and preparation for these predicted shortages in their collection planning and donor campaigns.

There are many factors that need to be considered when addressing seasonal variations in blood donor behavior. First, holidays are predictable and occur every year, differently from other major disasters, flu epidemics or competing events such as mass vaccination campaigns (as mentioned by the authors) that may affect supply and demand. Second, blood components have a limited shelf life. Red blood cells can be stored for up to 42 days and platelets for only 5 days. Plasma can be frozen for up to a year. Third, other holidays occur during the year including summer school vacations that can also interfere with blood collections. These phenomena are not unique to Brazil or to blood collections and have been addressed by prior REDS studies in Brazil<sup>(2)</sup> and in the United States<sup>(3)</sup>. Temporal variations have also been noted when weekdays and weekends were analyzed in Hong Kong<sup>(4)</sup>.

For many years, blood bankers have relied on public campaigns and urgent appeals in order to increase the supply of whole blood and components in times of shortage or as an attempt to prevent shortages. These campaigns often emphasize the dangers associated with limited supplies of this precious liquid. "Lives may be lost!", "What will happen if there is an accident and there is no blood on the hospital shelves?" Unfortunately, these appeals not infrequently fall on deaf ears. People have their priorities, and despite being committed to helping other people, they do have a life, family and obligations. These campaigns create anxiety in donors and in the general population, and reinforce donation behaviors that are not ideal and unlikely to smooth the shape of the curve of blood donations throughout the year.

The following are some of the consequences of blood appeals and campaigns that address specific shortages. They

- Encourage urgent donations to cover desperate needs because someone may die if blood is not available today, instead of support for a steady supply of components for all patients all the time, for the transfusion dependent (e.g. sickle cell and thalassemia patients, the chronic kidney disease patients, those undergoing chemotherapy, those with hematologic diseases, etc.), patients scheduled for major surgeries and the smaller proportion of trauma patients in emergency rooms.
- Promote donations in response to blood appeals instead of regular, scheduled donations that maintain a solid blood supply.
- Encourage equally both, first time and regular repeat donors to donate. The rate of deferrals and discards among first time donors is much higher than that of regular repeat donors because of higher prevalence of ineligibility in medical history and positive infectious disease markers.
- As documented during the tragedy of September 11, 2001 in the U.S., often donors who donated at the time of major disasters do not become regular donors<sup>(5)</sup>
- Induce regular repeat donors to advance the date of previously scheduled donations, extending the shortages to other periods of the year not necessarily associated with vacations or holidays

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### Corresponding author

Celso Bianco, M.D.  
Consultor Científico, Medicina de Transusão  
6524 Elgin Lane  
Bethesda, MD 20817-5400 USA  
celso@txmedicine.com

www.rbhh.org or www.scielo.br/rbhh

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One important step has been taken by the authors of the manuscript being discussed here and by other REDS supported studies<sup>(6)</sup>: exhaustive collection and detailed analysis of donor and donation data. Other measures include better understanding of population perceptions about blood donations and fear of needles, easy access to donation sites and, most importantly, recognition programs. Volunteer donors need to be recognized and thanked for the contribution they make to their community. They must feel proud of their continuous commitment to support patients in need.

Donor recruitment and retention is a well-developed specialty in North America, in Europe and in several countries in Asia. Free resources have been made available by the European Union at its *Domaine* web site<sup>(7)</sup> including a manual of donor management available in several languages, including Portuguese from Portugal<sup>(8)</sup>. Many resources are available from other organizations like the U.S. Association of Donor Recruitment Professionals (requires membership)<sup>(9)</sup>. Other recruitment approaches that became very popular in the U.S. in recent years are telerecruitment to scheduling appointments and reminders, inclusion of mobile phone numbers in the donor database with prior authorization to call during recruitment efforts, and communication through social media, using Facebook, Google+, etc.

Finally, the effectiveness of these recruitment efforts requires the measurement of results of the different approaches in different areas with different groups and surveys assessing donor satisfaction. It is important to emphasize that there is no conflict between volunteer non-remunerated donations and professionalization recruitment efforts in order to achieve a solid blood supply that fulfills the needs of all patients in the community.

## References

1. Oliveira CL, Almeida-Neto C, Liu EJ, Sabino EC, Leão SC, Loureiro P, et al. Temporal distribution of blood donations in three Brazilian blood centers and its repercussion on the blood supply. *Rev Bras Hematol Hemoter.* 2013;35(4):246-51.
2. Almeida Neto C, Mendrone A Jr, Custer B, Liu J, Carneiro-Proietti AB, Leão SA, Wright DJ, Murphy EL, Sabino EC; NHLBI Retrovirus Epidemiology Donor Study-II (REDS-II), International Component. Interdonation intervals and patterns of return among blood donors in Brazil. *Transfusion.* 2012;52(4):722-8.
3. Schreiber GB, Sanchez AM, Glynn SA, Wright DJ. Increasing blood availability by changing donor patterns. *Transfusion.* 2003; 43(5):591-7.
4. Poon CM, Lee SS, Lee CK. Variation of motivation between weekday and weekend donors and their association with distance from blood donation centres. *Transfus Med.* 2013;23(3):152-9.
5. Glynn SA, Busch MP, Schreiber GB, Murphy EL, Wright DJ, Tu Y, Kleinman SH; NHLBI REDS Study Group. Effect of a national disaster on blood supply and safety: the September 11 experience. *JAMA.* 2003;289(17):2246-53.
6. Carneiro Proietti AB, Sabino EC, Sampaio D, Proietti FA, Gonzalez TT, Oliveira CD, et al. Demographic profile of blood donors at three major Brazilian blood centers: results from the International REDSII study, 2007 to 2008. *Transfusion.* 2010;50(4):918-25.
7. Donor management in Europe [Internet]. The Netherlands: *Domaine* ; 2013 [cited 2013 June 15] Available from: <http://www.domaine-europe.eu/Home/tabid/36/Default.aspx>
8. *Domaine* Manual in Portuguese [Internet]. The Netherlands: *Domaine* ; 2013 [cited 2013 June 15] Available from: <http://www.domaineurope.eu/Manual/Portugueseversion/tabid/127/Default.aspx>
9. Association of Donor Recruitment Professionals [Internet]. [cited 2013 June 15]. Available from <http://www.adrp.org/>