# Blood Counts

Volume 10, Issue 1, January 2013

In This Issue



## Upcoming Events

**AATB 37th Spring Meeting** Tucson, AZ April 6, 2013

**Canadian Society for Transfusion Medicine (CSTM) Conference** Edmonton, AB June 6-9, 2013

**AATB 37th Annual Meeting** National Harbor, MD October 2, 2013

**AABB Annual Meeting & CTTXPO 2013** Denver, CO October 12-15, 2013

**"Blood Matters" 4th Annual Transfusion Medicine Conference** Halifax Marriott Harbourfront Hotel Halifax, NS November 8, 2013

## PPP Redistribution in Nova Scotia

A key goal of the NSPBCP is utilization management which involves optimizing the appropriate use of blood and blood products and minimizing wastage. Successful redistribution programs in other jurisdictions and the reduction of red blood cell outdates in Nova Scotia provided the basis to develop a strategy to prevent the outdating of plasma protein products (PPPs).

In 2011/12, all DHAs/IWK began reporting the inventory of PPPs expiring within 6 months to the NSPBCP on a monthly basis. The list is collated by the NSPBCP and circulated back to the hospitals. The NSPBCP liaises with the facilities with the outdating products and facilitates the redistribution process to a hospital within NS where it will be utilized prior to the expiry date.

This initiative has been successful due to the commitment and dedication of the DHAs/IWK blood bank personnel. From January 1, 2012 to December 31, 2012, ***162 vials of PPPs have been redistributed with a net cost avoidance of $135,000***.

**Congratulations on a job well done!!**

*Sue Cairns*
*Utilization Transfusion Practice Coordinator*

# Electronic Crossmatching – The Future of NS Blood Bank Laboratories

Simply stated an electronic crossmatch uses a computer system to assign a unit of blood to a patient by confirming ABO compatibility between patient and donor. Widespread use of electronic crossmatching became possible when the American Association of Blood Banks sanctioned its use in 1993.

The Nova Scotia Provincial Blood Coordinating Program (NSPBCP) was asked by the Transfusion Medicine Quality Specialist's group to aid in the implementation of electronic crossmatching throughout DHAs 1-8. The NSPBCP established a working group consisting of Technical Specialists and Application Specialists from IWK, DHA 2 and CDHA. Having representation from the three laboratory information systems will aid in standardizing the process throughout the province. The working group had its first meeting and focused on the specific items that need to be addressed to enable the development of electronic crossmatch in the Meditech Client Server LIS.

The CSA Standards (Feb 2010) for computer (electronic) crossmatching will be followed while developing processes in Nova Scotia. These standards state that the computer system must have successfully undergone an on-site validation prior to use. It also states that the computer system shall be capable of alerting the user to discrepancies between donor blood component labelling and blood confirmatory test interpretation (required to be performed on each unit received from CBS) as well as incompatibilities between the recipient and the donor blood component. The computer system must be supplied with Donor information including: unit identification number, product name, and ABO/Rh group and recipient blood groups will be tested twice one which must be on a current in-date specimen.

This is a very exciting step forward for technologists working in Blood Transfusion Service Laboratories throughout the province and while this is a big change to current testing practices it has been perceived as a positive change within the IWK, CDHA and PEI Transfusion Laboratories. It proves to save costs and time within the BTS as well as red blood cell savings and improvement in patient care as red blood cells are available quicker for transfusion. The Electronic Crossmatch Working Group will continue to move forward while educating, providing training aids and looking for input from all DHAs on implementation processes to make this a smooth and enjoyable transition for all involved.

*Jennifer LeFrense*
*Laboratory Standards Coordinator*

***How to contact us….***

***Marina Hamilton,*** *Program Manager……..473-2121*
***Catherine MacPhee,*** *TOSS Coordinator……..473-2295*
***Erica Paolone,*** *Data Analyst……..473-1247*
***Graham Wile,*** *Senior Systems Analyst……..473-2167*
***Jennifer LeFrense,*** *Lab Standards Coordinator……..473-6459*
***Judi Bell,*** *Data Entry Specialist……..473-8345*
***Peggy Wilson,*** *Transfusion Practice Coordinator/Surveillance …..473-6287*
***Soheil Ramazani,*** *Senior Systems Analyst…… 473-1160*
***Shelley Strickland,*** *Admin Assistant……..473-8207*
***Sue Cairns,*** *Transfusion Practice Coordinator/Utilization……..473-8383*
***Tabassum Ata Quraishi,*** *Utilization Management……..473-6065*
***Tanja Keselj,*** *Database Coordinator……..473-6078*
***Dr. David Anderson,*** *Clinical Advisor……..473-2379*

# Allograft Tissue Use in the Dental Setting in NS

Since 2008, the Nova Scotia Provincial Blood Coordinating Program (NSPBCP) has participated as one of the Public Health Agency of Canada's Tissues and Organs Surveillance System (TOSS) pilot sites.

The NSPBCP convened an advisory group of leading experts in the organ and tissue donation and transplantation communities in Nova Scotia. The TOSS Advisory Group advised the NSPBCP to identify human allograft tissue products imported into Nova Scotia for surgical use.

Working with Risk Managers in the DHAs/IWK, allograft tissue products were identified and products were reviewed for compliance with Health Canada's *Safety of Human Cells, Tissues, and Organs for Transplantation Regulations*. In 2011, we identified that approximately 583 allograft tissue products are imported into Nova Scotia for surgical use each year, at a cost of approximately $821,000. We were also aware that allograft tissue products were in use in dental offices in Nova Scotia.

In collaboration with the Nova Scotia Dental Association (NSDA), the TOSS Coordinator formulated a survey which was sent to all 534 practicing dentists in Nova Scotia. The survey questions are pictured below.

| Survey Questions |
|---|
| **Do you use human allograft tissue products (examples: bone products or acellular dermal matrix) in your practice?** |
| **What types of products do you use?** |
| **From the period of April 1, 2011 to March 31, 2012, how many units of tissue allografts did you use in your practice?** |
| **From which company did you purchase these products?** |
| **Do you currently have a mechanism in place to track the recipients of human allograft tissue products, such as a log book or computerized system?** |

Of the 534 practicing dentists in the province, we had a response rate of 10.7% (n=57). 17.5% (n=10) report using human allograft tissue products in their practice. All of the users of allograft tissues self-report as using tissues from Health Canada registered establishments. Of the ten respondents who report using tissue products in their practice, 30% (n=3) report that they do not currently have a mechanism in place to track tissue recipients.

This pilot study provides useful insight into the use of allograft tissue products in dental practices in Nova Scotia and we look forward to continued collaboration with the dental community.

*Catherine MacPhee*
*TOSS Coordinator*

# Getting It Right - From the Start

The Transfusion Error Surveillance System (TESS) pilot project developed by the Public Health Agency of Canada captures near miss and actual transfusion related errors along the blood transfusion continuum.

Specimen collection errors are the most frequently occurring errors in transfusion medicine in Canada. These are very significant errors as they could result in acute hemolytic reactions. Laboratory personnel limit these errors by only processing specimens that:

- are labelled with all of the required information and
- have a blood group/type that matches the patient's historical group/type.

While these actions avoid serious transfusion reactions, when a specimen is rejected another sample usually needs to be collected which is unfortunate for the patient and increases costs to the health care system.

If you are involved in collecting transfusion samples there are several things you can do to avoid making a collection error:

- have the patient verbally state their full name and date of birth (rather than reading the information to them) to confirm that the patient has the proper armband on,
- always draw the sample in the presence of a witness (in some outpatient circumstances the patient may be the witness),
- label, sign and witness the tube and requisition immediately after the blood is drawn and before you leave the patient's side (only sign as a witness when you actually are present at the patient's side and verified that the patient's name and identification number are the same on the label, requisition and armband) and
- always take a few extra seconds to ensure that you have the right patient and that all the identification information and signatures are correct and legible before you send the sample to blood transfusion services.

*Peggy Wilson*
*Surveillance Transfusion Practice Coordinator*

# Dosing IVIG Based on Adjusted Body Weight

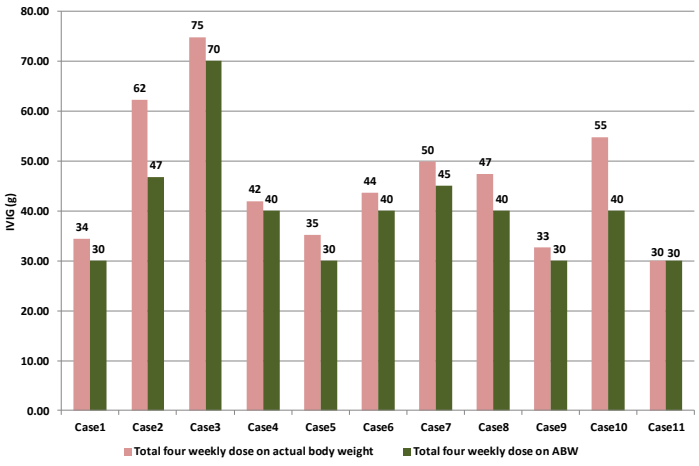
The Nova Scotia Provincial Blood Coordinating Program (NSPBCP) leads the Atlantic Blood Utilization Strategy (ABUS) which optimizes the utilization of intravenous immuneglobulin in the Atlantic Provinces. ABUS has recommended the implementation of dosing IVIG based on adjusted body weight in patients with hematological, immunological, and neurological conditions (excluding Guillain Barre).

Actual body weight (which includes the weight of adipose tissue of the patient) is used for calculating the dose of fat soluble drugs. As immunoglobulin is not lipid soluble an adjusted body weight is appropriate to use for dosing. The pilot implementation of dosing by adjusted body weight in Prince Edward Island, Newfoundland Labrador and Nova Scotia involved 131 patients and revealed an estimated average savings of 66 grams of IVIG per patient. At a cost of $58.97 per gram, this would be an annual average savings of $3,892 per patient.

Capital District Health Authority began piloting dosing by Adjusted Body Weight in March 2012 and transitioned eleven patients. Over a 12 month period, these eleven patients will use 779 less grams of IVIG. This has an associated cost avoidance of approximately $45,000 and is achieved while maintaining the desired patient outcomes.

The figure below shows the comparison of IVIG grams in patients when dosing IVIG based on adjusted body weight with dosing based on actual weight in Capital District Health Authority during March 2012.

Figure 15: Comparison of dosing IVIG based on Adjusted body weight with dosing IVIG based on actual weight in CDHA March 2012




*Tabassum Quraishi*
*Utilization Management Coordinator*

# Blood Matters – Transfusion Medicine Conference

The Nova Scotia Provincial Blood Coordinating Program (NSPBCP), Canadian Blood Services (CBS) and the QEII's Perioperative Blood Management Program (PBMP) collaborated to host its 3rd annual Blood Matters transfusion medicine conference on November 2, 2012. 110 Medical Laboratory Technologists, RNs and LPNs, physicians and residents from Nova Scotia, Prince Edward Island and New Brunswick attended. Attendees received 5.75 CMEs from Dalhousie Continuing Medical Education.

The theme for the day was Waves of Change – Oceans of Opportunity and the audience was engaged as ten speakers presented topics related to transfusion medicine such as the new oral anticoagulants, CMV negative vs leukoreduction, transfusing 1 unit of RBCs at a time, fibrinogen and bleeding, and the RBC 30 minute rule.

Barb Fry was keynote speaker and provided a reflective, provocative and humorous presentation that inspired individuals and staff groups to thrive as professionals in their challenging and changing world of work. Attendees were also presented with interesting case studies, a demonstration of dosing IVIG based on adjusted body weight, short circuiting discards and solvent detergent plasma.

Mark your calendars for our 4th annual Blood Matters transfusion medicine conference - **November 8, 2013**. Due to the overwhelming response of registrants in 2012, we have surpassed the occupancy of the current facilities. Blood Matters 2013 will be held at the Halifax Marriott Harbourfront Hotel and based on the evaluations from previous years; we anticipate all participants will enjoy another informative day. If there are any topics that would be of interest, please let us know by emailing nspbcp@cdha.nshealth.ca

*Marina Hamilton*
*Program Manager*