Blood Counts

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Home Administration Program 101

In This Issue

Prior to 2009, home administration of blood products and components was limited to patients with urgent medical requirements or significant barriers to accessing care in a hospital environment. Since then, Nova Scotia has recognized the benefit both in cost effectiveness and quality of life for patients in providing an alternative to in-hospital care for chronic conditions requiring blood products or components.

Patients who require regular treatment or prophylactic treatment with products such as blood components, immunoglobulin, or c1 esterase may be eligible for infusion in the comfort of their own home.

Home administration means less time traveling to and from hospitals, less time spent exposed to nosocomial infections, and an increased feeling of autonomy and independence in their personal health care journey.

If appropriate for the program as assessed by their Physician, patients will be referred to a Nurse Educator to receive training on self-infusion, or a VON Care Coordinator for at-home transfusion done by an RN. Whether the patient will self-infuse or have it done by a professional in their home depends greatly on their medical situation, how comfortable they are with the skills needed, and what kind of support they have at home.

Typically once a patient has been trained by the Nurse Educator and has completed one or two successful infusions or injections under his or her supervision, they are then able to pick up a small supply of product from their local blood bank to take home.

Training by the Nurse Educator includes set up and administration of the prescribed product, how to dispose of materials afterwards, adverse event reporting, how to safely transport the product and the safe handling and storage of it once it's in the home environment.

If you have a patient who you feel might be a good candidate for home administration programs, encourage them to speak to their Doctor about their options.

For more information about home administration of blood components or blood products, please visit

http://novascotia.ca/dhw/NSPBCP/clinical-practice-guidelines.asp.

Amber White
Utilization Management Coordinator

Health Canada's New Blood Regulations: Implications for Nova Scotia's Blood Transfusion Services

On October 23, 2013, Health Canada published new regulatory requirements for blood and its components. They come into force on October 23, 2014.

Why do we need new Blood Regulations?

According to Health Canada, the main purpose of this new regulatory initiative is to consolidate existing requirements, currently found in the Food and Drug Act (FDA) and the Food and Drug Regulations (FDR), into clear and comprehensive requirements that are specific to blood.

It was also noted that the FDA/FDR regulations only apply to the blood operators-Canadian Blood Services and Hema Quebec-despite the fact that many hospital transfusion services in the country are performing some of the same tasks as our blood operators. Some are washing, pooling and irradiating blood. Others are collecting or testing autologous blood for transfusion. Others still are running pre-assessed donor programs…..all without any regulatory oversight.

The new Blood Regulations address this issue and provide Health Canada's final response to the Commission of Inquiry on the Blood System in Canada, commonly known as the Krever Report.

Will they apply to Nova Scotia hospitals?

The short answer is "Yes". The new Blood Regulations apply to all establishments in Canada that will process, label, store, distribute, or import blood and its components intended for transfusion. They also apply to any blood that is collected in Canada for the purpose of being manufactured into a drug for human use. Because the new Blood Regulations are applicable to every establishment that handles blood, it is important to understand what the implications are for our transfusion services here in Nova Scotia.

How will these regulations affect our blood transfusion services?

The regulations are not applied in the exact same manner to all establishments; they have been written such that the level of oversight corresponds to the level of "risk" of the activity being performed by any given establishment. Simply put, sites that collect blood, test blood, process blood, and transform blood will have to comply with more "requirements" than a hospital that simply transfuses blood. That being said, there are still several things that Nova Scotia blood transfusion services must be aware of. Most of us already have operating procedures in place for the activities we conduct, maintain good record keeping practices, and appropriately store and redistribute the blood and blood components that we receive from Canadian Blood Services, as per the CSA-Z902-10 Blood and Blood Component Standards. The new Regulations now make compliance with these standards law.

Is there anything in the Regulations that is not covered by adherence to CSA-Z902-10?

The regulations have new legal requirements for error and accident reporting. An "error" is defined as a deviation from an operating procedure or applicable law that could compromise the safety of blood. An "accident", on the other hand, is an unexpected event that is **not** attributable to a deviation from an operating procedure or applicable law but still could compromise the safety of blood.

In a nutshell, if an establishment has reasonable grounds to believe that the safety of the blood may have been compromised by an error or an accident, due to an activity it conducted OR due to an activity conducted by another establishment, the implicated blood must be identified, quarantined, and an investigation into the error or accident must take place. If results of the investigation show that the error or accident could lead to a serious adverse reaction, then reports must be filed with Health Canada.

What scenarios could result in such a report being generated?

Erroneous test results discovered after blood is distributed and /or transfused, the use of expired or inappropriate wash solution when washing RBC, or a mislabeled product could all fall into this category.

Katherine Simpson, B.Sc MLT
Laboratory Standards Coordinator

Immune Globulin Inventory in Nova Scotia

Exposure to viruses such as hepatitis A and B, measles, rubella and varicella, may cause acquisition of those diseases with the possibility of long lasting health issues to exposed persons or to the unborn child in unimmunized or non-immune individuals. GamaSTAN® S/D (IGIM), HyperHEP B® S/D (HBIG) and VariZIG™ (VZIG) are immune globulins distributed by Canadian Blood Services (CBS) which, when administered to individuals in a timely manner, may prevent or reduce the severity of infection caused by these viruses.

These products have been available through a number of locations including several hospitals and Public Health (PH) offices in Nova Scotia. The Nova Scotia Provincial Blood Coordinating Program (NSPBCP) identified the availability of these products exceeded the demand, leading to outdating and wastage of the products. In 2013, the NSPBCP, PH, CBS and select members of the Transfusion Medicine Quality Specialists Working Group developed a process to reduce or eliminate the discard of these valuable products. Following consultation with PH, it was decided the PH offices will not routinely inventory IG products. *When a requirement for these products arises within a healthcare facility, the products can be accessed through the hospital blood bank. For instances where PH is involved and an individual is identified as requiring IGIM, HBIG or VZIG, the product will be ordered from CBS. Based on the urgency, arrangements will be made for the product to be distributed to the:*

- *Provincial Biodepot (the main office for distribution of biological products to the PH system) for further distribution* ***or***
- *district PH vaccine depot* ***or***
- *local hospital blood bank.*

The following are the indications for these products.

GamaSTAN® S/D (IGIM)

Indication:

IGIM is used to prevent or reduce the severity of infection by hepatitis A, measles, chickenpox and rubella in susceptible people. IGIM is also used to prevent or reduce the severity of other infections in individuals with immunoglobulin deficiencies. IGIM is not recommended for exposure to Rubella (German Measles).

HyperHEP B® S/D (HBIG)

Indication:

1. Prevention of Hepatitis B recurrence following liver transplantation in HBsAg-positive liver transplant patients
2. Post-exposure - Prophylaxis of susceptible individuals in the following settings:
   i. Acute percutaneous or mucosal exposure to blood containing Hepatitis B virus
   ii. Perinatal exposure of infants born to mothers with acute or chronic hepatitis B virus
   iii. Sexual contacts of individuals with acute or chronic hepatitis B
   iv. Household exposure to persons who are carriers of hepatitis B

VariZIG™ (VZIG)

Indication:

1. Pregnant women.
2. Immunocompromised patients, such as those with congenital or acquired immunodeficiency.
3. Newborn infants of mothers who have varicella that began during the 5 days before to 48 hours after delivery.
4. For the management of significant varicella exposure in a neonatal or pediatric intensive care setting, consultation with the infectious diseases/infection control specialist regarding the potential use of VariZIG™ is advised.

References:

1. Cangene Corporation. (2005) *VariZIG™ Product Monograph.* Winnipeg, Manitoba
2. Cangene Corporation. (2012) *HepaGam B® Product Monograph.* Winnipeg, Manitoba
3. Grifols Canada Ltd. (2012) *GamaSTAN® S/D Product Monograph.* Mississauga, Ontario
4. Grifols Canada Ltd. (2012) *HyperHEP B® S/D Product Monograph.* Mississauga, Ontario
5. Public Health Agency of Canada (2006) *Canadian Immunization Guide* Ottawa, Ontario http://www.phac-aspc.gc.ca/publicat/cig-gci/index-eng.php
6. NS Department of Health and Wellness (PHS) (2003) *NS Communicable Disease Control Manual* Halifax, NS http://novascotia.ca/dhw/cdpc/documents/cdc_manual.pdf

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Upcoming Events

CSTM 2014 Quebec City, QC May 1-4, 2014

AATB 38th Annual Meeting San Diego, CA
September 16-20, 2014

AABB Annual Meeting & CTTXPO 2014 Philadelphia, PA
October 25-28, 2014

"Blood Matters" 5th Annual Transfusion Medicine Conference
Halifax Marriott Harbourfront Hotel Halifax, NS
November 28, 2014

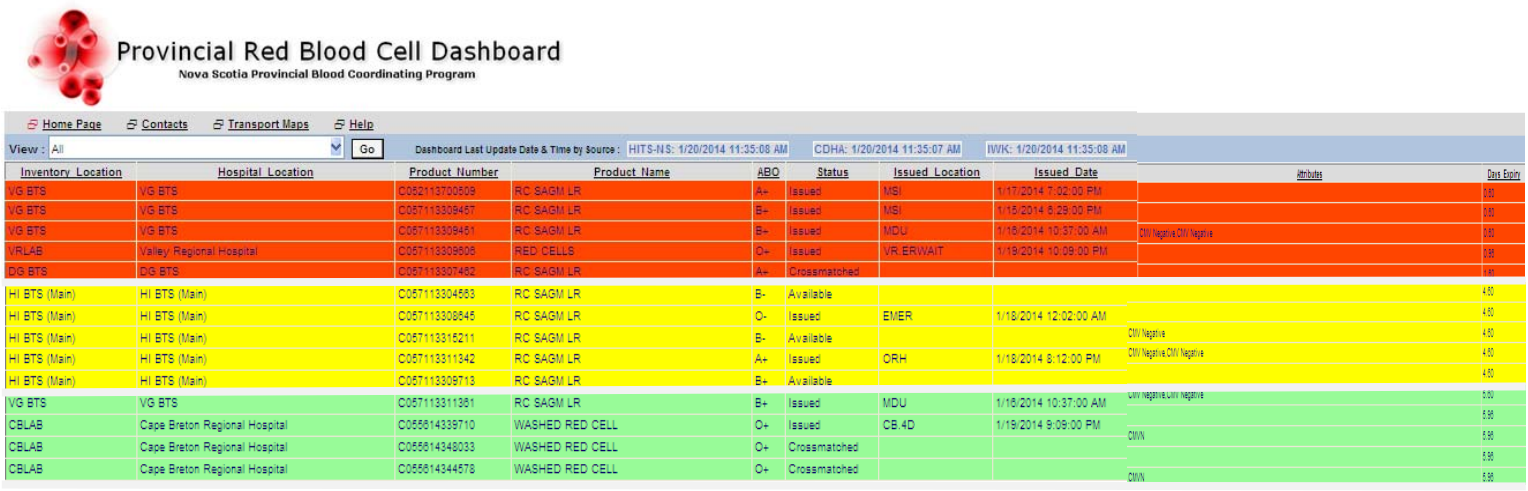
RBC Dashboard Successes and Steps Forward

Cathy McAuley of the IWK Blood Transfusion Services Department accepts a certificate of recognition for significantly reducing their outdate discards to 0 through use of the RBC Dashboard Inventory Tool – Dec 2013

In 2012, The Nova Scotia Provincial Blood Coordinating Program (NSPBCP) launched the RBC Dashboard for blood banks. You can access the dashboard by inserting the following URL https://nspbcp.nshealth.ca/rbc_dashboard/Default.aspx, on the nshealth network.

The RBC Dashboard is a web-based tool designed to support blood banks across Nova Scotia in reducing outdate discards through joint management of inventory levels.

The dashboard inputs from the 3 LIS systems and displays RBCs that are expiring within 0-3 days in red, 3-5 days in yellow and > 5 days are green. Users can sort on the grid by clicking on the header.



Inventory_Location	Hospital_Location	Product_Number	Product_Name	ABO	Status	Issued_Location	Issued_Date	Attributes	Days_Expiry
VG BTS	VG BTS	C052113700509	RC SAGM LR	A+	Issued	MSI	1/17/2014 7:02:00 PM		0.83
VG BTS	VG BTS	C057113309457	RC SAGM LR	B+	Issued	MSI	1/15/2014 8:29:00 PM		0.83
VG BTS	VG BTS	C057113309451	RC SAGM LR	B+	Issued	MDU	1/16/2014 10:37:00 AM	CMV Negative,CMV Negative	0.83
VRLAB	Valley Regional Hospital	C057113309608	RED CELLS	O+	Issued	VR ERWAIT	1/19/2014 10:09:00 PM		0.98
DG BTS	DG BTS	C057113307462	RC SAGM LR	A+	Crossmatched				0.83
HI BTS (Main)	HI BTS (Main)	C057113304563	RC SAGM LR	B-	Available				4.80
HI BTS (Main)	HI BTS (Main)	C057113308645	RC SAGM LR	O-	Issued	EMER	1/18/2014 12:02:00 AM		4.80
HI BTS (Main)	HI BTS (Main)	C057113315211	RC SAGM LR	B-	Available			CMV Negative	4.80
HI BTS (Main)	HI BTS (Main)	C057113311342	RC SAGM LR	A+	Issued	ORH	1/18/2014 8:12:00 PM	CMV Negative,CMV Negative	4.80
HI BTS (Main)	HI BTS (Main)	C057113309713	RC SAGM LR	B+	Available				4.80
VG BTS	VG BTS	C057113311361	RC SAGM LR	B+	Issued	MDU	1/16/2014 10:37:00 AM	CMV Negative,CMV Negative	5.00
CBLAB	Cape Breton Regional Hospital	C056614339710	WASHED RED CELL	O+	Issued	CB.4D	1/19/2014 9:09:00 PM		6.98
CBLAB	Cape Breton Regional Hospital	C056614349033	WASHED RED CELL	O+	Crossmatched			CMVN	6.98
CBLAB	Cape Breton Regional Hospital	C056614344578	WASHED RED CELL	O+	Crossmatched				6.98
								CMVN	6.98

Using this information, staff can facilitate transfer of product that will not be used before its expiry date to another centre who is showing low levels. The most important function however is to support blood banks in managing outdating products. Before placing a new order with CBS, blood bank staff can log in to the dashboard to first see whether or not there is already product in Nova Scotia hospitals that needs to be used up first.

The RBC dashboard is one more way that District Health Authorities/IWK are working together to promote excellence in transfusion medicine and improve the management and safe administration of donor gifts in our province.

Amber White
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