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Volume 2, Issue 3

Bloody Good News

Newfoundland and Labrador Provincial Blood Coordinating Program

Special Interest Articles:

- NL Physician receives Order of Canada
- ISBT 128 – Are you ready?

Individual Highlights:

Newfoundland Doctor Inducted into the Order of Canada

Congratulations to Dr. William Fitzgerald on receiving the Order of Canada on April 11, 2008. As a Member of the Order of Canada, this award recognizes a lifetime of distinguished service in or to a particular community, group or field of activity.

Gov. Gen. Michaëlle Jean at Rideau Hall in Ottawa

Dr. Fitzgerald, Chief of Surgery at the Charles S. Curtis Memorial Hospital in St. Anthony, received this award in recognition of a career in healthcare that spanned thirty years. Throughout his career he has been responsible for establishing a colorectal screening, detection and management program in Labrador. He was also recognized for mentoring young physicians and being actively involved in his community.

presented the award.

The Order of Canada is the centerpiece of Canada's system of honours and recognizes people in all sectors of Canadian society who have enriched the lives of others and made a difference to this country. The Order launched in 1967 during the 100th anniversary celebrations of the Dominion of Canada.

The Order of Canada's motto is DESIDERANTES MELIOREM PATRIAM (They desire a better country).

ISBT 128 – Are You Ready?

What is ISBT 128?
When will this change occur?
Who will this impact?
Why do we need to plan so far ahead?
These are all appropriate questions with very reasonable answers.

WHAT? The International Society of Blood Transfusion (ISBT) requested a working party in 1989 to develop a coding system to replace the current coding convention. In 1994 a standard was developed. An International Council for Commonality in Blood Banking Automation (ICCBBA) was formed in 1994 and the ball started rolling. ISBT 128 is a system that incorporates a unique donation numbering system, standardized product definitions and data structures for bar coding and electronic data interchange.

So how is the Information displayed?
The Information is contained in definitions, reference tables, data structures, delivery mechanisms and labeling.

In this global village called Earth, transportation of blood products and tissues and the transfer of information occurs on a regular basis in response to transplantation programs, disaster relief and military operations worldwide. It is important that there is a standardized system that provides consistent and accurate information.

WHEN? In May 2009, Canadian Blood Services will comply with the CSA Standards by implementing the ISBT 128 bar coding system. In preparing for this transition, CBS has made available on its website, several articles to assist its customers to prepare for ISBT 128. CBS will have a transition period where both ISBT 128 and Codabar formats will appear on the label in order to augment the transition time to ISBT 128 compliance.

ISBT 128 – Are You Ready? (cont'd)

Do you know the viral researcher who co-discovered HIV and went on to identify the virus that causes human T-cell leukemia?

WHO? Everyone involved in the use of blood components and record management may be potentially affected. ***The most critical aspect of this transition is communication***. Every aspect of Blood Bank operations will be impacted at some level. This includes project planning, revision of operating procedures and associated forms, software upgrades where required, hardware upgrades such as bar code scanners and printers, impacts on medical records and reporting systems, hospital educators, logistics, physicians, nurses and laboratory staff. Facilities may need to register with ICCBBA depending upon the activities of the facility.

WHY? Planning ahead provides time to ensure that resources are available to perform the tasks required. Preparing a project plan will ensure a well thought out implementation, while ensuring all stakeholders are addressed. Upgrades to information systems take time to complete and validate. Communications and educational in-service sessions require participation and feedback. Senior Management needs to be informed of the impacts so that budgetary issues such as capital equipment, software upgrades, purchase of bar code scanners and human resources required for the development and revision of associated documents can be addressed. Labels may require revision. Contingency plans need to be developed or redesigned. Determine an implementation date.

Information on ISBT 128 is available on the PBCP website with links to CBS, AABB and ICCBBA. Stay tuned to the next newsletter for more on ISBT 128.

wilate® - Human Coagulation Factor VIII and human von Willebrand Factor

Come and view a poster presentation titled "National Collaboration to Help Develop Provincial Red Cell Redistribution Programs in Canada" on Saturday, Oct. 4, 2008 at AABB in Montreal.

A new plasma protein product for treatment and prophylaxis of bleeding in patients with hemophilia A (congenital or acquired FVIII deficiency) and the prevention and treatment of bleeding in minor surgical procedures is now available in Canada through Canadian Blood Services (CBS). Produced by Octapharma, the use of wilate® for treatment of von Willebrand Disease is currently under review by Health Canada.

wilate® is a stable, highly purified concentrate of freeze-dried active human coagulation factor VIII (FVIII) and von Willebrand Factor (vWF) prepared from cryoprecipitate. The manufacturing process includes advanced biotechnological methods: a recently developed chromatographic media that does not require stabilizing proteins such as albumin and two virus inactivation procedures – solvent / detergent and dry heat. Dosage for bleeding episodes is determined using the following formula: Required IU=BW(kg) x desired FVIII rise(%) x 0.5 IU/kg. Duration of treatment depends on the severity of bleeding, level of FVIII and the patient's clinical picture. The recommended prophylactic dose for patients with severe hemophilia A is 20 IU wilate®/kg BW every 2-3 days. Although wilate® was well tolerated by >99.6% of patients treated, development of factor VIII inhibitors and adverse reactions, i.e. hives, hypotension, may occur.

Supplied as a powder, wilate® when reconstituted with the enclosed diluent, contains 90 IU/ml of FVIII and 80 IU/ml of vWF and is administered intravenously immediately upon reconstitution. wilate® must not be mixed with other products or administered simultaneously with other intravenous preparations in the same infusion set.

Storage is at 2-8°C until expiry. During the storage period, wilate® may be stored at room temperature (max +25°C) for a single block up to 6 months. If stored at room temperature (max +25°C) wilate® must be used within 6 months or discarded. The shelf life of wilate® is 3 years.

wilate® is available in two vial sizes with diluent:
450 IU FVIII/400 vWF and
900 IU FVIII/800 IU vWF.

For more information on this product contact Octapharma at ana.bhucher@octapharma.ca

The Porter's Role in Transfusion Medicine

Porters are employed by many hospital facilities to perform a variety of activities that include the transportation of blood components and blood products from the laboratory to the patient care unit. This activity represents a major aspect of the Vein to Vein concept. Portering staff should be trained in handling and transporting blood components and blood products, the importance of timely delivery and the documentation requirements and safeguards involved in transfusion medicine.

Porters should be aware that once a unit of red blood cells has been out of the temperature controlled refrigerator longer than 30 minutes it cannot be returned to inventory but must be discarded. This activity could have serious impact upon patient care as blood components thought to be available are not. There is also a monetary impact when a unit is discarded. All blood components and blood products should be delivered to the patient care area immediately.

The porter should be aware that they may require pertinent documentation (i.e. patient hospital card or transfusion report/request) when arriving at the transfusion medicine laboratory to pick up blood. Failure to present the required documentation may cause a delay in the patient receiving blood components or blood products. Porters should not be delegated for other tasks until the blood components or blood products have been delivered to the patient care area. Reports in the National Association of Healthcare Quality address porter operations and services and offer insight into the design and management of portering systems and stress the importance of good communications.

Hospital Porters have an important role in Transfusion Medicine

Quality Systems - The Pyramid

Quality Systems (QS) is not a new concept. QS incorporates many aspects that come together to form a hierarchy that is applicable to both industry and blood banking. Let's look at the quality pyramid and what it incorporates.

The pyramid takes into consideration the objectives of the organization as a whole, quality components and the methods by which quality is measured. This hierarchy is similar to that of personal needs, whereby an organization must master the lower level before attaining the next higher level. Total Quality Management (TQM) includes all the activities that determine quality policy, objectives and responsibilities that are implemented through quality planning, quality control, quality assurance and quality improvement within the quality system. TQM captures the ultimate goals and objectives, the mission statement of the organization. It is authorized by executive management, in some cases the Ministry of Health, and creates a commitment to quality. The QS approach ensures that quality principles are applied throughout.

Stay tuned for more QS in our next edition.

"Be a yardstick of quality. Some people aren't used to an environment where excellence is expected."
Steve Jobs, US computer engineer and industrialist

Severe Allergic / Anaphylactic Transfusion Reaction

Allergic reactions categorically include minor and anaphylactoid / anaphylactic occurrences. The allergen is usually a plasma protein contained in the transfused component to which the patient has been sensitized. In addition to the signs and symptoms associated with minor allergic reactions, more severe indicators are manifested such as respiratory distress, cardiovascular instability and gastrointestinal symptoms. These symptoms can include dyspnea, stridor, bronchospasm, hypoxemia, hypotension, tachycardia, loss of consciousness, arrythmia, shock and cardiac arrest. The onset of the reaction may occur within 1 to 45 minutes in anaphylactic conditions and may be delayed up to several hours in less severe reactions. Transfusion of small volumes of blood or plasma can often trigger anaphylactic reactions. Discontinue the transfusion while maintaining IV access. Supportive care should be established immediately. Epinephrine and antihistamines may be required to treat the symptoms. Patients who have experienced anaphylactic reactions should only be transfused in a setting where emergency treatment is available. All severe allergic and anaphylactic reactions must be reported.

Answer from Issue 2

This Canadian pioneer is credited with the first mobile blood transfusion service -
Dr. Henry Norman Bethune

Case Study #4

A 75 year old male, immuno-compromised by Non-Hodgkins Lymphoma, presented to the ER with a hemoglobin of 74g/L. The patient was transfused within the past three months but was not transfused under anesthesia. The patient's blood group was O Positive and he was transfused 100 ml RBC between 0825 - 1005 hrs. He was pre-medicated with Solucort 250mg.IV. An adverse reaction was reported 1005 hrs. The patient experienced hypertension (BP pre 125/65, post 190/105), diaphoresis, shortness of breath and an increased pulse (70 pre, 105 post). The patient was treated with steroids, diuretics, supplementary O_2 and transferred to the ICU. Blood cultures collected from the patient were negative and a chest x-ray revealed diffuse increase in pulmonary vascularity seen throughout both lungs associated with bilateral effusions representative of cardiogenic failure. The patient was discharged home the following day.

1. Classify the type of reaction.

2. What was the relationship of the adverse event to the transfusion?

3. What was the severity of the reaction?

4. What was the outcome of the adverse event?

Case Study #3 Interpretation

1. *Minor Allergic transfusion reaction*
2. *Relationship of adverse event to transfusion – probable*
3. *Severity of the reaction – Grade 1 (minor)*
4. *Outcome – Minor sequelae*

Each newsletter will contain an interesting case study for you to review. The type of adverse event and answers to the questions will be provided in the next edition of the newsletter.

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We're on the Web!

See us at:

http://www.health.gov.nl.ca/health/bloodprogram/index.htm