ORBCoN
Ontario Regional Blood Coordinating Network

Inspiring and facilitating best transfusion practices in Ontario.

Transfusion Committee Forum

24 February 2014

Disclosures

- ORBCoN Physician Clinical Coordinator as of November 2013
- Peer assessor with the College of Physicians and Surgeons of Ontario

Objectives

1. Review the pre-forum survey
2. Letter from CPSO outlining the Medical Director's responsibilities
3. Identify resources to assist Medical Directors
4. Strategies for discussing blood issues with clinicians

Pre-Forum Questionnaire

1. What are the top two transfusion-related clinical questions/issues you encounter?
2. How have you answered or dealt with them?
3. Would you use a central repository of resources and information?
4. Would you be willing to share your resources?

Results (1)

Issue or Question	Management
Inappropriate indications for and dose of RBC (in a retrospective audit 6/27 RBC orders inappropriate)	Prospective audit of all RBC orders
Clinicians don't see Lab Director as in-house expert on transfusion medicine	More "advertisement" to Medical Staff
'transfusion windows' and specimen collection	Provide information from CSA Standards and product inserts
What types of products to use e.g. PCC	
How to use and infuse IVIg	Product information from monographs, ORBCoN resources
Complex patients e.g. SCD, WAHA, positive DAT	

Results (2)

Issue or Question	Management
Administration: rate? vented tubing?	Refer to administration chart
When to obtain post-transfusion increments	Policies in place for post transfusion blood work
Transfusing for iron deficiency anemia	This is a slow education process, but it is happening
When to use plasma vs. PCC	Ongoing education
Request for crossmatched RBCs in O.R. and L&D rather than ordering as needed	Hoping to implement electronic crossmatch soon

Results (3)

Issue or Question	Management
Requests for more data about in-house transfusion use	Very difficult to get reliable consistent data from our database
Requests for octaplex and dosing directions	All TM consultants trained on the dosing. Weekly sign-over rounds to discuss all difficult and unusual requests
Appropriate dosing of plasma, PCC, platelets	Transfusion Guidelines on hospital Intranet
Why there may be a delay in providing RBCs to patients with alloantibodies	One-on-one MD consultations and presentations at Department meetings

Themes – Issues

- Lack of knowledge of the indications for and dosing of blood products
  - FP, PCC, platelets, RBCs, IVIg
- Management of complex patients
- TM Medical Director as consultant
- Blood is wanted quickly
  - Satellite fridges
  - Why the delay to obtain Ag neg RBCs

Themes - Dealing with the Issues

- MD Education
  - One on one, Rounds
- Audits of practice
  - Prospective, retrospective
- Provide information
  - Standards, product monographs, hospital Intranet
- Laboratory policies and practices

How do these approaches compare to the literature?

Changing MD Practice

- Review of 19 studies (heterogeneous)
- Addressed RBC, Plt, FP, cryo, albumin
- Single or multiple interventions:
  - Guidelines
  - Retrospective audits with feedback
  - Education (to group or individuals)
  - Use of blood product order form
  - Prospective audit with approval of orders
  - Reminders

Tinmouth. Arch Int Med 2005;165:845

Changing MD Practice

- 18 of 19 showed relative reduction in:
  - Number of units transfused (9-77%)
  - Proportion of patients transfused (17-79%)
- No particular intervention or combination was better than others at decreasing utilisation of blood products

Tinmouth. Arch Int Med 2005;165:845

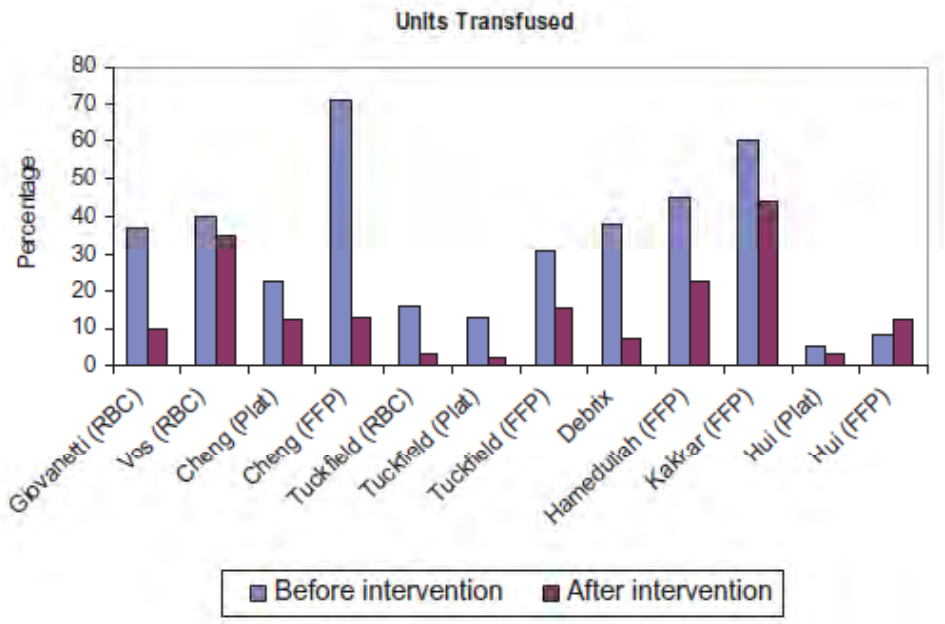
Changing MD Practice

Caveats:

- Publication bias
- Study heterogeneity
- Hawthorne effect

What drives change:

- Desire for change
  - transfusion risks
- Promote alternative practice
- Make change safe and simple
- Maintain MD autonomy



Tinmouth. Transfusion 2007;47(S):132S

Mandatory MD Education

Sunnybrook data

Year	RBC transfused
2001	12264
2002	12918
2003	12781
2004	13131
2005	11496
Last 12 months ending March 2010	9863

25% reduction
-3268 RBCs

Slide credit: J. Callum 2011 CSTM

Mandatory MD Education
Requires “managerial courage”

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Medical Director Responsibilities

- Some Lab Directors not comfortable as IVIg 'gatekeepers'
- Chair of IVIg Advisory Committee asked the CPSO for an opinion
- Reply from Medical Advisor, Investigations and Resolutions (Dr. E. Piliotis)

THE COLLEGE OF PHYSICIANS AND SURGEONS OF ONTARIO

Medical Director Responsibilities

"If a physician takes on the role of a laboratory director that dispenses blood products, then that physician must have the requisite knowledge, skills and judgment to dispense those blood products"

THE COLLEGE OF PHYSICIANS AND SURGEONS OF ONTARIO

Medical Director Responsibilities

"That would include indications and contraindications for blood product use, alternatives to blood products as well as the potential side effects of blood products and their management "

Medical Director Responsibilities

"Such physicians should also be responsible for managing the dispensing of blood products and acting as a gate keeper to scarce resources as appropriate"

Medical Director Responsibilities

- A laboratory director may seek guidance from experts
- Ultimate management of the dispensing of the blood product would be their individual responsibility

CSTM Standards 2011, 2.14

The Transfusion Service shall ensure there is a process for the development and maintenance of a formal competency assessment program for all medical, clinical and support staff involved in any transfusion related activity.

CSTM Standards 2011, 2.14

The program shall include:

- assessment of theoretical and practical knowledge
- assessment at regular intervals
- additional training where indicated
- documentation of all assessment and additional training

Ontario Laboratory Accreditation (OLA)

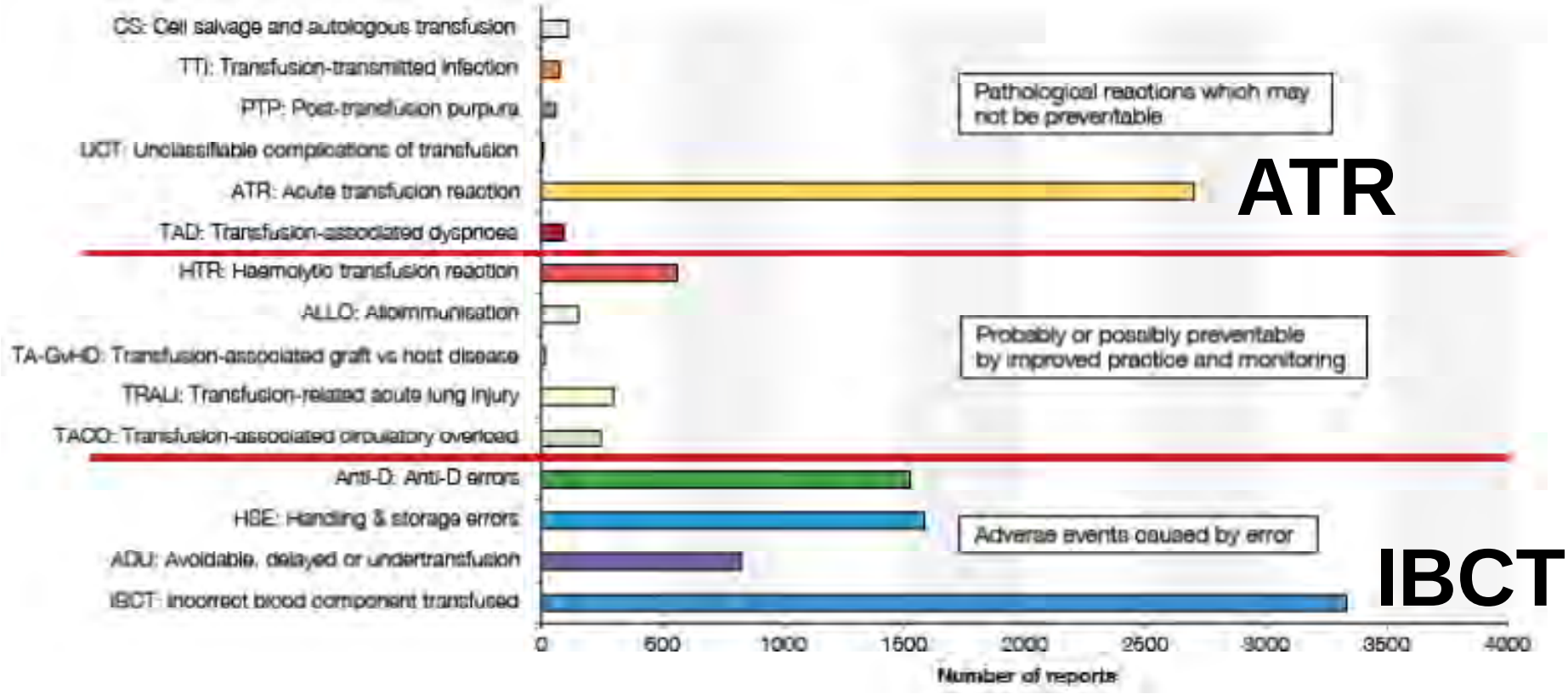
- Version 6.0 December 2013
- Transfusion Medicine Requirement I.C.6
  - Laboratory management shall provide and participate in educational programs to personnel responsible for patient care
  - Assessors look for evidence that educational programs/in-services are provided for areas outside of the lab

Strategies for Discussing Blood Issues with Clinicians (nothing new here)

- Make non-controversial contact first if you can
- Be available as a consultant, offer to do Rounds, share recent literature, become valuable
- Provide easy-to-use resources
- Provide locally relevant data, report to MAC – utilisation, wastage, incidents
  - even if they don't ask for it
- Get them on the Transfusion Committee, make it interesting, and they will tell their colleagues
- Provide information from external expert sources

SHOT Summary 2012

16 years of U.K. data



Leading incident (pathological and unpredictable): acute transfusion reaction (ATR)
Leading error: incorrect blood component transfused (IBCT)

Choosing Wisely Campaign

- Over 60 organisations are ‘partners’
  - Medical specialty societies
  - Consumer-focused organisations
  - Consumer Reports
- Lists of: “Five Things Physicians and Patients Should Question”
- Transfusion is on at least 4 lists:

Choosing Wisely Campaign

Choosing Wisely
An initiative of the ABIM Foundation

Am Soc Hematology

Avoid the 'routine' 2U RBC transfusion

1

Don't transfuse more than the minimum number of red blood cell (RBC) units necessary to relieve symptoms of anemia or to return a patient to a safe hemoglobin range (7 to 8 g/dL in stable, non-cardiac in-patients).

Transfusion of the smallest effective dose of RBCs is recommended because liberal transfusion strategies do not improve outcomes when compared to restrictive strategies. Unnecessary transfusion generates costs and exposes patients to potential adverse effects without any likelihood of benefit. Clinicians are urged to avoid the routine administration of 2 units of RBCs if 1 unit is sufficient and to use appropriate weight-based dosing of RBCs in children.

Critical Care Societies Collaborative

2

Don't transfuse red blood cells in hemodynamically stable, non-bleeding ICU patients with a hemoglobin concentration greater than 7 g/dL.

Most red blood cell transfusions in the ICU are for benign anemia rather than acute bleeding that causes hemodynamic compromise. For all patient populations in which it has been studied, transfusing red blood cells at a threshold of 7 g/dL is associated with similar or improved survival, fewer complications and reduced costs compared to higher transfusion triggers. More aggressive transfusion may also limit the availability of a scarce resource. It is possible that different thresholds may be appropriate in patients with acute coronary syndromes, although most observational studies suggest harms of aggressive transfusion even among such patients.

Choosing Wisely Campaign

Choosing Wisely
An initiative of the ABIM Foundation

Society of Hospital Medicine

3

Avoid transfusions of red blood cells for arbitrary hemoglobin or hematocrit thresholds and in the absence of symptoms of active coronary disease, heart failure or stroke.

The AABB recommends adhering to a restrictive transfusion strategy (7 to 8 g/dL) in hospitalized, stable patients. The AABB suggests that transfusion decisions be influenced by symptoms as well as hemoglobin concentration. According to a National Institutes of Health Consensus Conference, no single criterion should be used as an indication for red cell component therapy. Instead, multiple factors related to the patient's clinical status and oxygen delivery should be considered.

American Society of Anesthesiologists

4

Don't administer packed red blood cells (PRBCs) in a young healthy patient without ongoing blood loss and hemoglobin of ≥ 6 g/dL unless symptomatic or hemodynamically unstable.

The hemoglobin transfusion threshold used in multiple studies has varied from 6.0 to 10.0 g/dL. The optimal hemoglobin/hematocrit criterion for transfusion remains controversial in several clinical settings. Nevertheless, compared with higher hemoglobin thresholds, a lower hemoglobin threshold is associated with fewer red blood cell units transfused without adverse associations with mortality, cardiac morbidity, functional recovery or length of hospital stay. Hospital mortality remains lower in patients randomized to a lower hemoglobin threshold for transfusion versus those randomized to a higher hemoglobin threshold.

The decision to transfuse should be based on a combination of both clinical and hemodynamic parameters.

CPSO Discipline Case

- MD found incompetent
- 16 examples cited
- 2 involved unnecessary transfusion
- 1 involved doing a procedure without first addressing the patient's elevated INR

Technique (1)

The Stalk (e.g. bright new surgeon)

Technique (2)

Parking lot consult

Hallway consult

Technique (3)

Know your nursing colleagues

- They know about IV sets, tubing,, pumps, cell savers, administering medications, how patients are ID'd
- Nursing orientation – what are they being told?
- Where do they go for transfusion information?
- They can ask MDs to clarify orders
- Find the nurse champions and get them on the Transfusion Committee - see Technique (1)

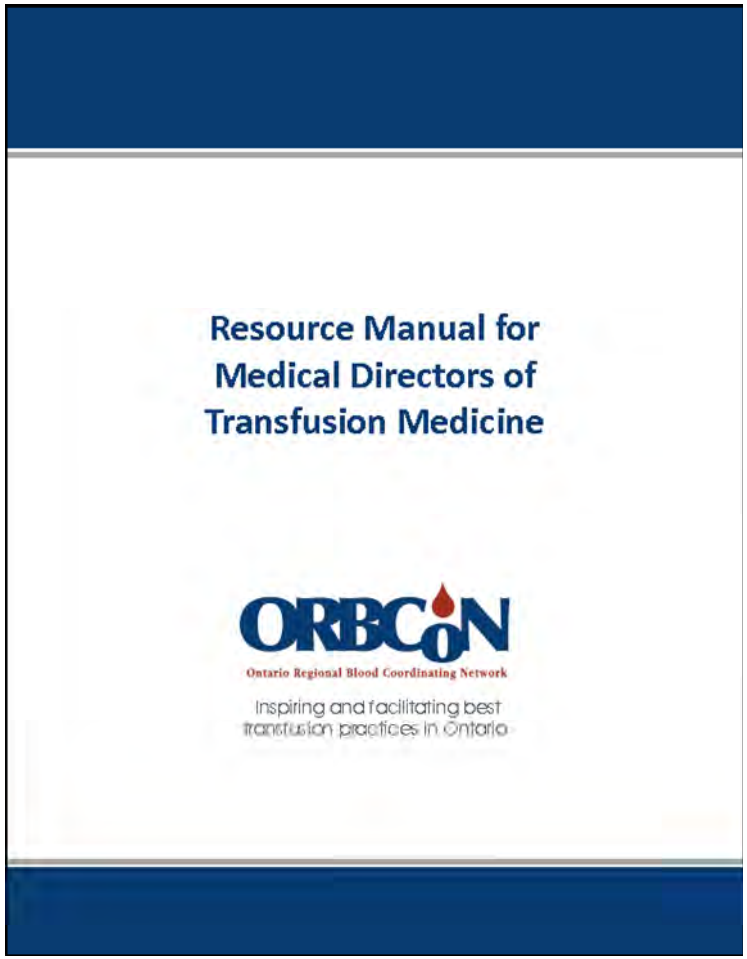
“Slow Ideas”

“We yearn for frictionless, technological solutions.

But people talking to people is still the way that norms and standards change.”

Annals of Medicine
Atul Gawande
July 29, 2013

ORBCoN Resources



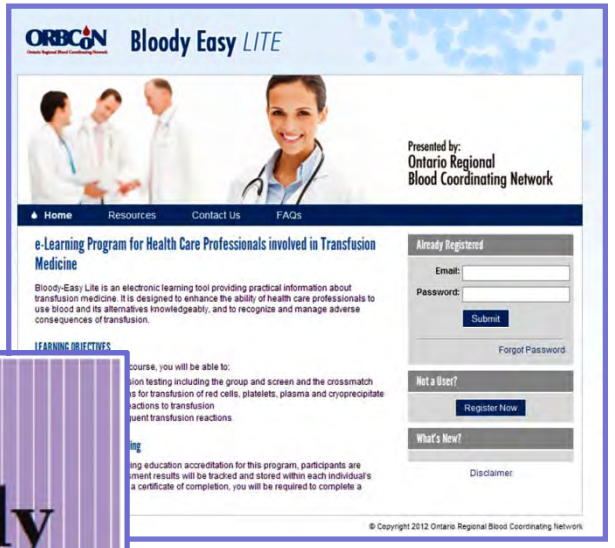
Toolkits

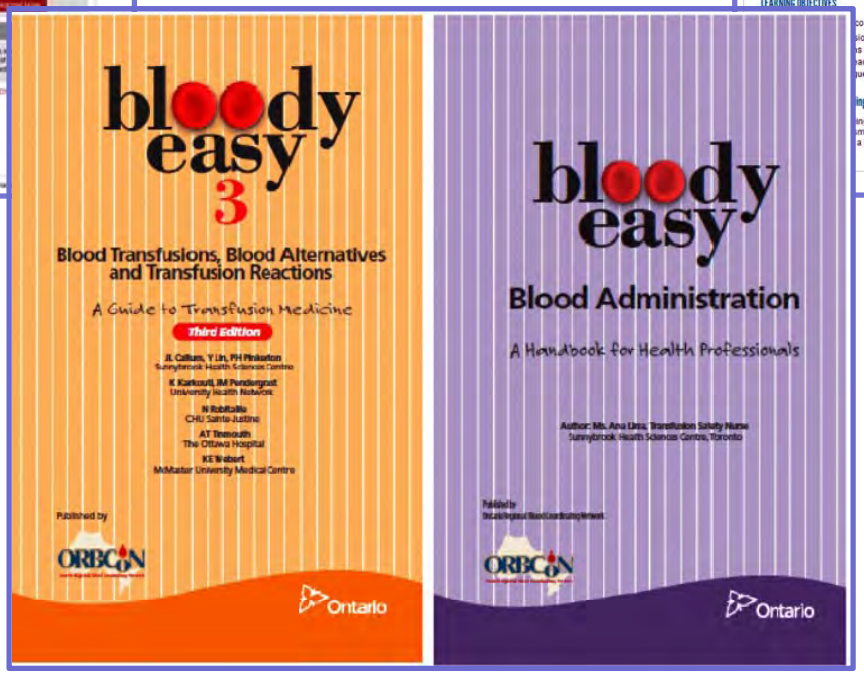
- IVIg
- Transfusion Committee
- Introduction of a New Product
- Frozen plasma
- Inventory Management

Webcasting Centre

- Archived webcasts, 1-2 years
- Upcoming webcasts
  - June 19, 2014 “Physician Education” with Dr. Yulia Lin

ORBCoN Resources

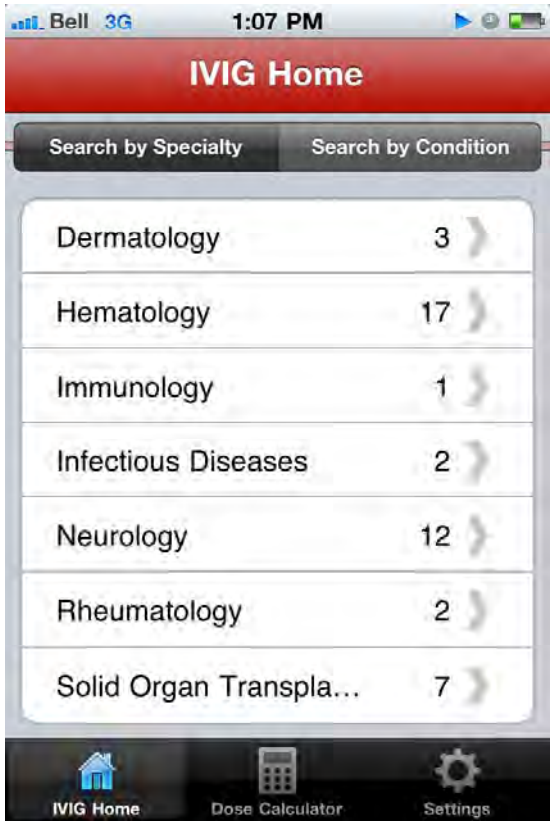




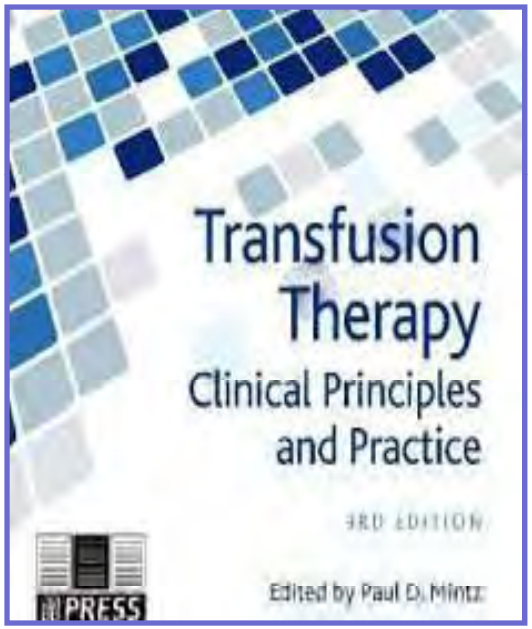
ORBCoN Resources – Audits

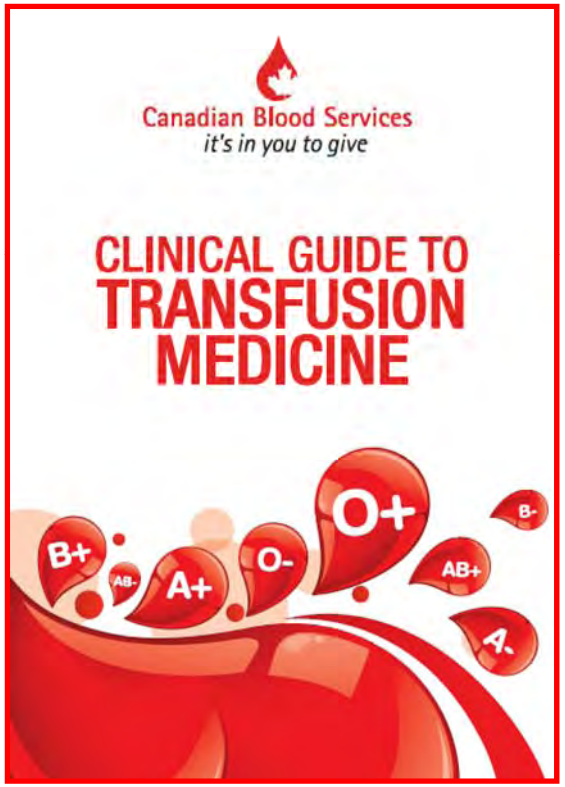
- IVIg
- RBC
- Specimen Collection
- Frozen Plasma
- Bedside

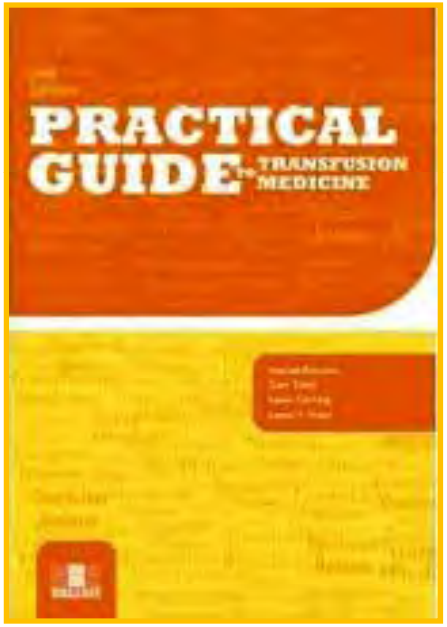
ORBCoN Resources – Apps



Other Resources - Books

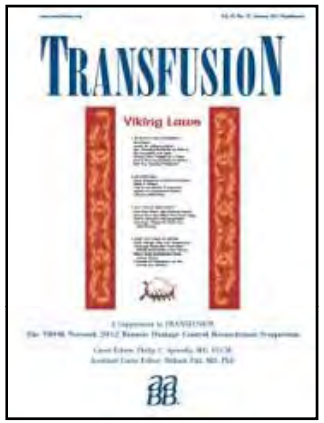






With quizzes

Other Resources - Journals



Q-probes

Other Resources - Internet

Transfusion Evidence Library

www.transfusionevidencelibrary.com

(the site sends alerts by email)

Transfusion Medicine Questions

www.pathologyquestions.com

Actually, limitless

ORBCoN Physician Clinical Coordinator

- New 0.2 FTE position as of Nov 2013
- Act as resource for community hospital pathologists
- Develop and deliver education to prescribing MD's as per ORBCoN projects and strategic direction
- Support ORBCoN initiatives
- allison.collins@sw.ca

Thank you

(for presentations and slides, though you may not know it)

Jeannie	Callum	Pierre	Robillard
Christine	Cserti Gazdewich	Elianna	Saidenberg
John	Freedman	Nadine	Shehata
Barbara	Hannach	Lois	Shepherd
Nancy	Heddle	Bob	Skeate
Wendy	Lau	Alan	Tinmouth
Yulia	Lin	Melanie	Tokessy
Katarina	Pavenski	Danielle	Watson
Jacob	Pendergrast	Kathryn	Webert
Peter	Pinkerton	and many	others!