

# What you want your TM physician to know

GHEST Sep 17, 2022

# Faculty/Presenter Disclosure

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- **Dr. Theodora (Dorien) Ruijs MD FRCPC (GenPath)**
- **Has received financial support from the Ontario Regional Blood Coordinating Network (ORBCoN)**
  
- **Potential for conflict(s) of interest:**
  - The speaker has not disclosed a potential conflict of interest
  
- **Relationships with commercial interests:**
  - No relationships with commercial interests





*We do our work in support of our vision of appropriate and safe transfusion practices for every Ontarian, every time.*

**Patient Safety**



**Accountability**



**Leading Practice**



**Collaboration**

**ORBCoN Values**

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**Strategic Goals**

1. Utilization of Blood Components and Products
2. Educational Resources
3. Inventory Management
4. Communication
5. Quality and Safety



**Quality**

# questions

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- Working or trained as MLT?
- Pathologist as medical authority in TM?



# The pathologist TM physician

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- General pathologists (or AP/CP trained in USA) have had 6 months training in TM as part of 4-5 year residency
- Anatomical pathologists may have had training if they had an interest, or as part of hematopathology rotation
- Some pathologists will have a 1 year TM fellowship



# What do you want your TM physician to know – some basics

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- Standards, Inspections and Regulations: IQMH review, signoff, discordant results, biannual review of procedures and policies, transfusion committee, competency of nursing and physicians
- Products
- Utilization – Choosing Wisely, IVIg/SCIg forms, Order Set
- Shortage contingency planning
- Transfusion reaction reporting
- Common clinical questions
- Resources, guidelines and education – staying current



# Standards, Inspections and Regulations

Acronym Soup

# Standards and Regulations!

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- Accreditation Canada AC
- Accreditation Canada Diagnostics ACD (formerly IQMH, OLA)
- CSTM standards
- Health Canada
- CSA

“  
A true friend  
won't let you face  
tough times  
alone.  
”





# Most common ACD non-conformances

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Top 10 non-conformances all pertain to:

- Insufficient or lack of training and/or competency assessment of those involved in transfusion practice incl blood administration
- Both nursing and physicians
- Physician training and assessment: BE Lite module  
<https://transfusionontario.org/en/bloody-easy-lite/>



# ACD

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- TM MD to review all TM policies and procedures bi-annually
- TM MD to review IQMH proficiency testing documents (surveys, guidelines and recommendations, broadsheets) as well as discordant results and investigations



## Products - What's in the fridge?



- Which products does your lab store routinely (eg platelets)?
- Which come from CBS?
- Do any other departments keep stock (eg idarucizumab Praxbind® in ED)?

# Speaking of fridges

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- Do any other departments keep blood components or products (blood fridge in OR?)
- Monitoring of those are TM responsibility



# What does CBS provide?

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# Some of what CBS provides

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Besides Blood components and products:

- Antibody investigations, pheno/genotyping
- Inventory management and optimization (green/amber/red phase)
- Physician consultation – oh so very useful!
- Annual hospital site visits with ORBCoN
- Customer letters
- Education and Resources on website [www.blood.ca](http://www.blood.ca)
- Lookback/traceback
- Rare Blood program



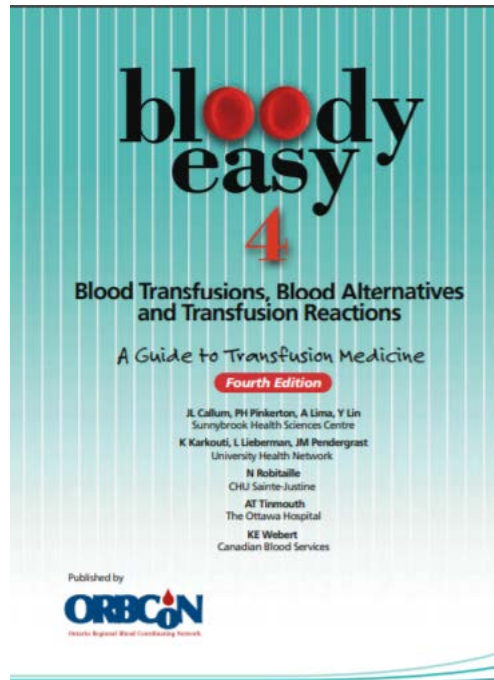
# Lookback/traceback and recall

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- **Lookback** – the **donor** developed/tested positive for a transmissible disease or other issue, requiring investigation of involved patient recipients
- **Traceback** – the **patient** recipient developed an issue, requiring investigation of involved donor(s)
- **Product recall**: potential or identified risk with product issued
- **TM physician to follow-up, do recipient/MD/CBS notification and document, as appropriate**



# Utilization



Best TM medical advice: read this,  
and call me in the morning



# Utilization

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- Choosing Wisely Canada
- Using Blood Wisely: at least 65% single unit transfusions; at least 80% of transfusions for Hgb 80 or less  
216 hospitals participating in Canada, 85 in Ontario
- IVIG/SCIG order form, use dose calculator and require assessment by TM MD of non-approved indications
- Use of Order Sets for Blood Components/Products help in screening of orders for appropriate indications



# Utilization contd.

- Consider switching to group A plasma in MHP <sup>(1)</sup>
- Track use of Oneg for non-Oneg patients and consider reducing Oneg stock. Switching to Opos in MHP after 4-6 units. Oneg for emergency issue: only  $F \leq 45$

Oneg use <sup>(2)</sup>:

National	720,225	91,029	12.6%
Ontario	367,832	43,664	11.9%

- Oneg population 6-7%, Oneg donors ~13%

» (1) Transfusion 2020 Nov;60(11):2517-2528

» (2) ORBCoN/CBS annual site visits 2022/23



# question

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- What is the WHO cutoff for anemia?
- For males?    For females?
  
- 130 gm/L for males
- 120 gm/L for females



# RBC transfusions - Anemia

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Iron deficiency anemia:

- your OB patients have it (Fe demand)
- actually - your female patients <50 have it (blood loss)
- your GI disease patients have it (blood loss, reduced Fe uptake)
- your elderly patients have it (diet, underlying conditions)
- And so: many of your preop patients have it!



# Iron deficiency anemia

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Oh yes, and milk babies/toddlers have it, little picky eaters have it.....

- toddlers who drink more than 700 mL cow's milk per day (low iron content, Fe hard to absorb, and suppresses appetite for other food)

but pediatricians rarely ask for transfusion



# OnTrac algorithm for pre-op anemia

- [https://www.ontracprogram.com/ckupload/files/103/Revised%20PBM%20algorithm%202021\(6\).pdf](https://www.ontracprogram.com/ckupload/files/103/Revised%20PBM%20algorithm%202021(6).pdf)

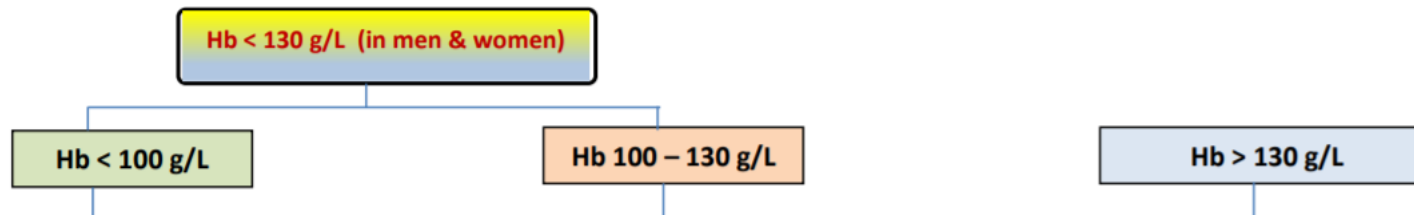
## Preoperative Hemoglobin Optimization and Anemia Management

**Risk Factors for Transfusion:** Hemoglobin (Hb) less than (<) 130 g/L, weight less than 65 Kg, elderly, female, complex or repeat surgical procedure, renal insufficiency (creatinine clearance <40 ml/min), antiplatelet agents, anticoagulants, some supplements

Interventions must take into consideration age, gender, anticipated surgical blood loss and pre-existing medical conditions.

**A pre and post treatment Hb should ALWAYS be obtained; if still anemic, consider further dosing.**

When assessing a pre-op patient, do a CBC. If anemic, do a ferritin, TSAT and C-reactive protein (CRP) if at all possible.



# Would you please talk to....

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- The ED physicians about Choosing Wisely – Hgb cutoffs, and single unit transfusions for stable non-bleeding patients
- Unstable is not the same as symptomatic! Fatigue and shortness of breath on exertion  $\neq$  “unstable”



# Would you please talk to....

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- The radiologists who give plasma to correct an abnormal INR before an interventional procedure
- There is an app for that: Society for Interventional Radiology guidelines

<https://www.sirweb.org/practice-resources/clinical-practice/guidelines-and-statements/>





# JW stands for...

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- Jehova's witnesses
- Others also may refuse blood components and products
- The hospital should have a Bloodless Medicine policy to support these patients when bleeding, going for surgery etc
- Also refer to general PBM (Patient Blood Management) resources for Hgb optimization



# Blood Shortage Contingency Planning

National and Provincial resources

# Blood Shortage Contingency

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- National Advisory Committee on Blood and Blood Products (NAC Blood): most recent contingency plan update March 2002
- <https://nacblood.ca/en/blood-shortage>
- Ontario Emergency Blood Management Committee (OEBMC) most recent Contingency Plan V3 on ORBCoN website
- (currently under revision)



# Transfusion Reaction reporting

Reactions, near misses, errors, product-  
related or recipient related, clinical impact

# Transfusion reactions

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- <https://ttiss.mcmaster.ca/>
- **How do I know if a transfusion reaction needs to be reported to Canadian Blood Services or Health Canada?**
- **What transfusion reactions do I need to report to TTISS-ON?**



# Common clinical questions

...not already answered

# Riddles of Rh D and RhIg

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- Rh D-negative pregnant patient in ED
- G2P1, 27 weeks gestation
- Not previously seen at this hospital, no history
- Some vaginal bleeding
- Antibody screen: anti-D present. Titre is 4
- Nurse in ED says patient has not received “an injection”



# What do you want from your TM physician?

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- TM physician can contact ED nurse or physician and ask more direct questions, phrase differently.
- Most Rh D-negative women understand the risk of allo-immunization and know if they received RhIg and when
- In this case, on further asking, the mother had abdominal trauma at 16 weeks and received RhIg then





# Riddles of Rh

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- Weak D by serological methods
- Genotyping for pregnant women to distinguish partial vs weak D, and need for Rh prophylaxis
- Blood Bank Guy videos (till 2014) and blogs, podcasts (current)
- <https://www.bbguy.org/education/videos/dvariants/>



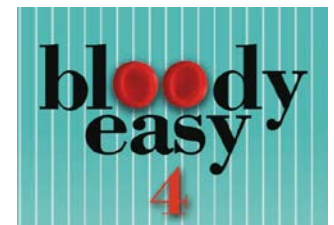
# Wrapping up

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# There is an App resource for that 🇨🇦

- ORBCoN: [www.transfusionontario.org](http://www.transfusionontario.org) and specifically
- <https://transfusionontario.org/en/category/tm-guidelines-standards-recommendations/resource-manual-for-medical-directors-of-transfusion-medicine/>
- And of course: [https://transfusionontario.org/wp-content/uploads/2020/06/EN\\_BE4-JULY11\\_FINAL.pdf](https://transfusionontario.org/wp-content/uploads/2020/06/EN_BE4-JULY11_FINAL.pdf)
- **5<sup>th</sup> edition coming soon!**



# More Resources

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- OnTrac program: [www.ontracprogram.com](http://www.ontracprogram.com)
- CBS: [www.blood.ca](http://www.blood.ca)
- TTISS <https://ttiss.mcmaster.ca/>



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# Thank you



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Ontario Regional Blood Coordinating Network

