Transfusion Medicine Discussion Summary: Educational narrative based on the March 25, 2026 ORBCoN Medical Director Forum

Overview

This session was the follow-up panel discussion to the Transfusion Medicine (TM) Medical Directors forum initially scheduled for February 2026. Due to technical difficulties the pre-recorded speaker presentations were instead provided to all TM physicians that registered for the event, and subsequently a live virtual discussion was hosted with the speaker panel with the TM physician audience to discuss common challenges faced by hospital-based transfusion medicine medical directors, especially in community and peripheral settings. The panel consisted of presenters Drs Amer Ali, Christine Cserti-Gazdewich, Jacob Pendergrast and Nicole Relke, with the addition of Dr Marissa Laureano (to discuss the TM workload calculator), and moderated by Dr T. (Dorien) Ruijs of ORBCoN.

Audience background varied considerably: in the earlier audience snapshot, up to 10 participants identified as transfusion specialists, alongside 7 hematopathologists, 16 general pathologists, 2 clinical hematologists, and 4 anatomical pathologists. The discussions focused on practical decision-making, balancing safety with workload, and identifying implementable strategies for improving local transfusion practice. The session's strong emphasis on providing practical support for TM medical directors without formal fellowship training in the specialty was needed and justified as identified by the mix of physician director backgrounds that attended the event. The major topics included management of warm autoantibodies and alloimmunization risk, communication of HPA antibody findings, safe transfusion practice in sickle cell disease, physician workload and resource advocacy, the oversight role of the TM medical director, albumin stewardship, and coagulation management in liver disease. Throughout, the emphasis remained on practical guidance that could be adapted to hospitals with varying levels of local expertise and support.

1. Warm Autoantibodies, Alloimmunization Risk, and Matching Strategy

Patients with warm autoantibodies who require transfusion support for hemolysis pose a major practical challenge because new alloantibodies may be difficult to detect beneath the ongoing autoantibody reactivity. Dr Cserti-Gazdewich emphasized that these patients likely face an alloimmunization risk at least as high as other transfused patients (alloimmunization rate 5-10%), and probably higher, in the range of 20%. In practical terms, that makes a purely reactive approach - waiting for increased antibody screen reaction strength that suggests additional antibody formation, then requiring serial absorption studies or performing biweekly absorption studies routinely - labour-intensive and potentially harmful to the patient, by possibly delayed recognition of the allo-antibody, and causing delays in transfusion therapy. The value of early genotyping for patients with red cell autoantibodies, even if not (yet) causing hemolysis, was emphasized by Dr Cserti-Gazdewich, as genotyping results can take a month. Traditional phenotyping is often limited in patients with warm autoantibodies because certain antigens (Duffy, S) cannot be assessed reliably when antiglobulin-based methods are compromised. Genotyping therefore provides a more stable foundation for anticipating transfusion needs and planning future support before the patient becomes more clinically unstable.

Dr. Cserti-Gazdewich and Dr. Pendergrast supported a proactive extended-matching strategy whenever feasible. Rather than stopping at ABO/RhD and Kell alone (which would cover 90% of the odds, being most immunogenic), matching more broadly for clinically relevant Rh antigens and, when possible, additional systems such as Kidd, Duffy, and S if these are negative (matching for s deemed less necessary due to high prevalence of the antigen). This "super-matching" approach may reduce the need for frequent absorption-based reinvestigation and help shift practice from repeated crisis response toward longer-term prevention.

- Consider early genotyping in patients with warm autoantibodies who are likely to need repeated transfusion support.
- Use reaction-strength stability and clinical context to determine how extensive a reinvestigation needs to be, recognizing that most community hospital labs will not perform serial autoabsorptions and these then need to be sent to CBS.
- When inventory and patient phenotype permit (some phenotypes are difficult to match for eg R2R2 K-negative), extended antigen matching may reduce later workload and improve safety.
- Investigate sooner if there is a clinical reaction, unexpected red cell consumption, or a change in serologic pattern.
- References shared: Hutspardol 2026 Vox Sang. Hutspardol 2024 Vox Sang

2. HPA Antibodies: Communication, Documentation, and Product Support

A participant question raised concerns with CBS notification to blood bank of a patient HPA antibody; this creates both a clinical communication problem and a systems problem. In general, and mostly applicable to red cell antibodies, it is relatively straightforward to inform the patient that an antibody exists, but much harder to ensure that the information reaches the next blood bank or treating team when the patient presents elsewhere. Participants agreed that the main safety gap is not recognition of the result itself, but failure of the information to travel reliably with the patient or make it to the receiving hospital's blood bank. Several speakers emphasized that paper cards given to patients alone are not enough, and many patients do not want to carry them. While traditional wallet cards may still have a role, digital documentation and broad distribution through the care team are increasingly important. In the absence of a centralized patient registry, one practical approach is to scan the information into the electronic record, send it to all relevant clinicians, and identify who will take responsibility for discussing the result with the patient. Family physicians would not know what these results mean, or what to do with the information.

- Do not rely solely on the patient to carry critical antibody information between hospitals.
- Use the electronic medical record and problem list to document not only the antibody result, but also the management implications.
- Regarding HPA antibodies specifically, it used to be recommended to administer washed red cells, but recent literature suggests this is not needed, and panelists have stopped routinely providing washed red cells. For platelet transfusions routine prophylactic HPA-matched platelets are also not recommended solely because an HPA antibody has been identified.

- A centralized registry would improve safety, but local workaround systems remain essential until one exists.
- Hospitals using Epic software have a “care everywhere” element that shares patient data between sites.
- Canadian Blood Services has started entering their patient antibody results (for Ontario patients only) into OLIS, so these will be accessible to hospital transfusion services, but those results will only be entered going forward from March 10, 2026, another limitation is that the result does not come with a management recommendation. CBS customer letter #2026-03

3. Sickle Cell Disease: Standardization, Escalation, and Early Blood Bank Involvement

A strong message from the session was that sickle cell disease should be treated as a specialized transfusion scenario, not as routine anemia management, and that all hospitals should be prepared for sickle cell patient care considering the number of patients in Ontario. Frontline clinicians may be tempted to respond to hemoglobin values alone, Dr. Pendergrast stressed that these patients require disease-specific indications, careful attention to phenotype or genotype, and consultation with clinicians experienced in sickle cell care whenever possible. The extra time spent up front by blood banks and hematologists’ early involvement far outweighs the complications, alloantibodies and hyperhemolysis that may result from inappropriate transfusion. The group strongly supported the development of standardized order sets and local care pathways for patients with sickle cell disease, especially in emergency departments and community hospitals. An initiative in Ontario (E2P: Evidence to Practice) is developing order sets that hospitals can adopt. An important operational idea was early notification of the blood bank as soon as a patient with sickle cell disease presents for care—even before any blood is ordered. This gives the laboratory time to identify prior transfusion history, phenotype or genotype information, and special transfusion requirements.

- Use standardized sickle cell order sets that extend beyond transfusion alone and support whole-patient emergency care.
- Notify the blood bank early when a patient with sickle cell disease presents, even if a transfusion order has not yet been placed.
- Require hematology involvement or escalation for transfusion decisions when local expertise is limited.
- Community hospitals should know in advance which reference centre or hematologist to contact for support.
- Reference: Health Quality Ontario Sickle cell disease standard
  Ontario Evidence to Practice (E2P): sickle cell disease acute care

4. Physician Workload, Resource Advocacy, and the Workload Calculator

The session also addressed an enduring problem in TM leadership: the work is often substantial but poorly visible to hospital administration and not covered under or recognized as pathology workload/budget. Dr. Marissa Laureano discussed a workload calculator she developed with Dr. Yulia Lin and a working group to help quantify physician effort in TM and support conversations about protected time, staffing, and the need for

additional physician support. The calculator combines two broad components: laboratory oversight work (estimated about 80%) and clinical or interpretive activity. Its value lies not in generating a perfect number, but in creating an objective framework for describing what transfusion medicine physicians actually do. Even where exact local data are hard to capture, the model can help leaders explain that physician work extends well beyond blood product release and includes consultation, reaction review, protocol development, policy oversight, and real-time support to clinical teams. The workload calculator is available on Ontario Medical Association (OMA) connect, it is an excel calculator tool that can be downloaded. It may appear a bit daunting to use, but the developers tried to capture all different TM activities. It also takes into account the lab workload as a measure of volume. The result is not meant as an exact FTE calculation, rather a workload estimate.

- Use workload tools to support advocacy for protected physician time and, where needed, additional transfusion medicine support.
- Even partial data can be useful if presented as part of a broader explanation of hidden clinical and oversight work.
- Workload review may be most practical when done periodically, such as annually, rather than continuously.

The panel including Dr. Ali Amer described the TM medical director role as both essential and difficult to define operationally. Participants agreed that the role extends beyond overseeing laboratory testing. It also includes promoting appropriate product use, supporting laboratory technologists, developing policies and order sets, educating clinicians, and identifying high-risk or clearly inappropriate orders. At the same time, this responsibility must be balanced against the reality that the TM physician is often acting as a consultant rather than the primary treating physician. As for the TM director role and responsibilities, these are described in the ORBCoN Medical Director handbook (being updated currently) and this may be another resource for hospital leadership to understand the responsibilities.

The discussion contrasted two broad approaches to transfusion utilization oversight: prospective review with approval before product release, and retrospective audit with education and feedback. Both were seen as valid, with the best choice depending on hospital size, local relationships, and available physician support. Participants strongly emphasized that technologists should not be placed in the position of independently refusing orders. Instead, they can apply predefined screening criteria established by the medical TM director and escalate questionable cases to that director.

- Create evidence-based order sets for red cells, platelets, plasma, albumin, and other blood products where feasible.
- Educate physician groups before implementing screening or escalation processes so that the rationale is clear. Show internationally accepted guidelines like AABB guidelines to strengthen your point.
- Use simple screening questions to identify outliers rather than expecting technologists to make clinical decisions independently.

- Participating in Using Blood Wisely is another way to address utilization, and hospital leadership tends to appreciate the designation that comes with achieving these goals, and they are all familiar with Choosing Wisely.
- Recognize that the role can be professionally rewarding, but it requires local leadership support and realistic boundaries and expectations, such as after-hours availability.
- It is an expectation (CSTM standards) that the TM medical director sits on the hospital Transfusion Committee, and although it is not recommended that they chair it, they are often in the best position to do so, and it carries the advantage of interactions with clinical leaders.

5. Albumin Stewardship: "Low-Hanging Fruit" Interventions and Practical Implementation

Albumin stewardship emerged as an area where many hospitals could make meaningful gains quickly. Dr. Nicole Relke discussed updated international ICTMG recommendations, including new recommendations posted on ORBCoN website, and upcoming Choosing Wisely-aligned statements aimed at reducing inappropriate use. The practical consensus was that hospitals do not need to solve every albumin question at once; instead, they can begin with a few high-yield interventions that are strongly supported by current evidence. The most practical starting points identified were to avoid routine use of 5% albumin except in plasma exchange or major burns, and to avoid albumin for malignant ascites. For 25% albumin, participants recommended simple order sets focused on common cirrhosis-related indications such as large-volume paracentesis, spontaneous bacterial peritonitis, and hepatorenal syndrome. Local audit and targeted education for high-volume prescribers—such as cardiac surgery and nephrology—were also seen as effective early steps.

- Audit local albumin use to identify high-volume services and problematic ordering patterns.
- Implement simple order set for 25% albumin tied to a short list of approved indications.
- As for 5% albumin; in many smaller community hospitals, evidence-based indications will be rare or absent.
- The common "sandwich" therapy of albumin plus furosemide to shift volume in patients with severe edema and hypoalbuminemia is not evidence based and generally not recommended.
- Review dialysis-related albumin use carefully and ensure order sets do not default to albumin unnecessarily, or as first line treatment in dialysis-associated hypotension (Midodrin).
- Patients in ICU on dialysis are different from dialysis outpatients and a Canadian trial by Dr Edward Clark is underway studying the ICU population (ALTER-AKI trial).

6. Liver Disease, Plasma, and PCC: Avoiding Correction of Numbers Alone

The final major clinical discussion addressed coagulation support in patients with liver disease. Panel participants emphasized the concept of rebalanced hemostasis and cautioned against treating abnormal coagulation numbers in isolation. INR and related measures may suggest deficiency in procoagulant factors, but they do not reflect parallel reductions in anticoagulant factors or the broader balance of hemostasis in liver disease.

For that reason, the group advised against giving large-volume plasma simply to cosmetically improve coagulation test results and cautioned against using PCC as a low-volume substitute in patients who are not truly bleeding. In some cases of massive hemorrhage, plasma may still have a role as part of broader resuscitation, but neither plasma nor PCC should be used reflexively to “correct” a number before a procedure when the patient is otherwise clinically stable.

References: Thrombosis Canada website and mobile app, and Society of Interventional Radiologists (SIR) guideline for periprocedural management of bleeding and thrombotic risk in percutaneous biopsies and related mobile app .

Overall Lessons for Community and Peripheral Hospitals

Across all topics, the discussion consistently returned to the same practical principles: standardize where possible, escalate early when expertise is limited, document management decisions as clearly as laboratory results, and focus on high-yield local changes rather than trying to fix every problem at once. Community hospitals do not need to reproduce the infrastructure of tertiary centres, but they do need reliable pathways for consultation, documentation, and evidence-based practice. The session also underscored the educational value of shared case-based discussion among transfusion medicine leaders. By converting expert presentations into practical conversation, the group highlighted how guidance can be adapted to real hospital workflows, helping transfusion medicine medical directors move from isolated problem-solving toward more deliberate system design. The resulting themes are well suited for incorporation into future educational materials, including updated handbooks, order sets, and local protocols.

ORBCoN sought interest from participants in facilitating a forum for TM medical directors annually with an overwhelmingly positive response.

We would like to acknowledge and thank all speakers who took the time to pre-record their presentations and allow ORBCoN to share with attendees unable to attend the subsequent, rescheduled session.