

## In This Issue:

### Quality Enhancement in Blood Management

- Enhancement of Communication between Clinicians and Blood Banks on Special Blood Component Requirement
- Hospital Based Patient Blood Management Program for Surgical Patients
- New Key Performance Indicators on Patient Blood Management

Tell us your thoughts



## Enhancement of Communication between Clinicians and Blood Banks on Special Blood Component Requirement

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Special blood components [e.g. Cytomegalovirus (CMV) negative, irradiated] are indicated for specific groups of patients and their supply is usually limited. It is important to ensure that patients who are indicated will receive the appropriate blood products to mitigate the risk such as infection and transfusion-associated graft-versus-host disease which could be life-threatening.

In Hospital Authority (HA), Information Technology system improvements were implemented for improved mechanism of two-way communication between clinicians and blood banks on special blood requirements of patients. Such improvements will close loop in the systems and allow for timely update, prevent oversight and risk of forgetting to remove special requirements when they are no longer necessary, so as to ensure patients who have the indications will be offered the appropriate blood products.

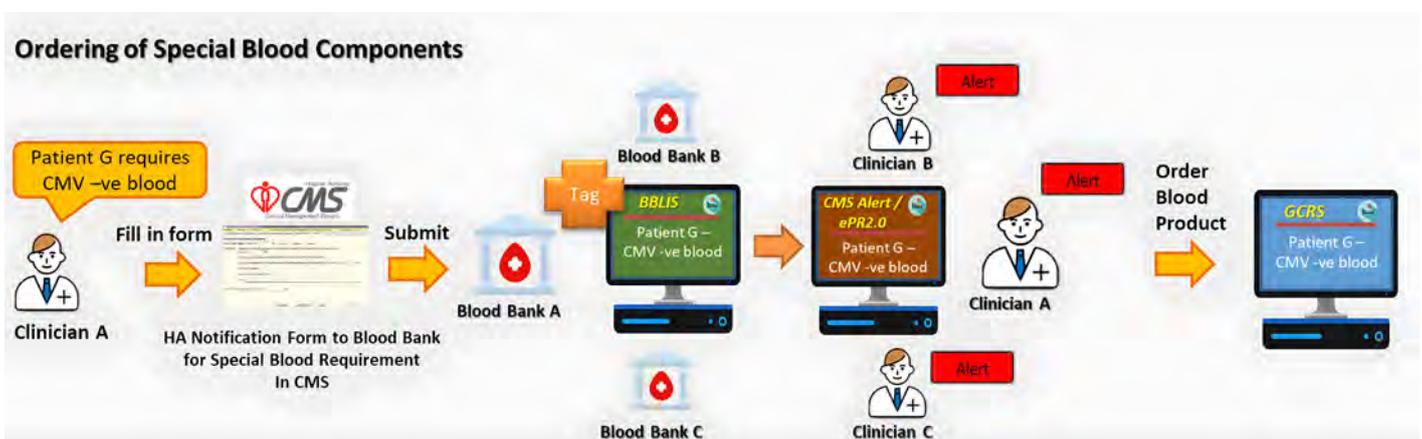


Figure 1: Ordering of Special Blood Components

## Result and Achievements

1. Standardisation of indications for special blood products was completed
2. Development of electronic version of HA Notification Form to Blood Bank for Special Blood Requirement was completed with real-time alert of blood bank to handle request and real-time update of review status on Electronic Patient Record System (ePR) for view
3. Workflow of tag / un-tag patients for special blood requirement has been developed and shared across different HA hospitals to prevent communication gap between clinicians and blood banks
4. Creation of free-text alerts for special blood requirements by clinicians in the Clinical Management System (CMS) is disabled to prevent communication breakdowns between systems
5. Special blood components requirement with history summary is displayed at the ePR to allow convenient tracking of the status
6. For patient tagged with the special blood requirement, the corresponding requirement is automatically subscribed when ordering blood component in the Generic Clinical Request System. This can eliminate miscommunication and secure the request of special blood components in every transfusion request



Figure 2: Enhancement of Communication

## Editorial Comments

*The limited supply of these special blood components requires a robust system to ensure the patients receive what they need promptly, reducing risks associated with infections and transfusion-related complications. These IT enhancements are a commendable advancement which has helped to enhance the two-way communication between clinicians and blood banks. This can surely help to mitigate the risk of oversight and ensure that only those truly need these components receive them.*

*Dr H M HUI, Deputy Service Director (Quality & Safety), HKEC*

# Hospital Based Patient Blood Management (PBM) Program for Surgical Patients

By **Dr Eric SO**, Associate Director, Multidisciplinary Simulation & Skills Centre, Queen Elizabeth Hospital

Surgical bleeding is a major source of blood consumption and intraoperative transfusion is a significant part in perioperative blood utilisation. Analysis of Operating Theatre transfusion rate revealed that departments of Cardiothoracic Surgery, General Surgery, Obstetrics & Gynaecology, and Orthopaedics & Traumatology were the major blood consumers. With the tremendous support of the Hospital Chief Executive (HCE) and top management of the Queen Elizabeth Hospital (QEH), Department of Anaesthesiology, Perioperative and Pain Medicine coordinated a task group in 2024, with these departments to further consolidate the evidence based comprehensive care paradigm by integrating pharmacological components of PBM into different surgical pathways. Hematologists, Blood Bank and Blood Transfusion Service (BTS) experts also contributed in the process. The objectives were for evidence based quality care and improvement of patients outcome and mitigate the risk of insufficient blood supply when demand is high and/or supply is low.

The group identified major and ultra-major elective operations with high transfusion demand to start hematinic and hemostatic drugs early in the perioperative period. Commitment and collective efforts by multidisciplinary operating teams with support from other stakeholders were crucial to successful program rollout. Through education, knowledge refresh and discourse with staff of these surgical departments in their department meetings, not only PBM awareness was raised, but also provided an invaluable opportunity for colleagues to comprehend the need to change default transfusion concept and traditional clinical practice to state of the art PBM practices.



**Figure 1: Complex Surgery Has a High Bleeding Risk**



**Figure 2: Department Meetings are Valuable Opportunities for Exchange of Ideas and Promulgation of PBM Concepts**

## Editorial Comments

*Implementing patient blood management in major operations enhances care quality by tailoring blood use to individual needs, minimising unnecessary transfusions. This approach not only conserves valuable blood resources but also reduces complications, aligns with patient-centric healthcare practices, and promotes faster recovery. Ultimately, it optimises outcomes and resource utilisation, marking a significant advancement in surgical care efficiency.*

*Dr Linda YU, Service Director (Quality & Safety), NTEC*

# New Key Performance Indicators (KPIs) on Patient Blood Management (PBM)

By **Dr Cheuk Kwong LEE**, Chief Executive & Medical Director, Hong Kong Red Cross Blood Transfusion Services

Blood transfusion is a routine clinical procedure which can be potentially life-saving in many patients. It is generally considered safe, but carries some inherited risks. However, alternative therapies, when available, should be considered to prevent unnecessary exposure of patients to transfusion complications. In addition, Hong Kong is also facing similar challenges as in many countries in securing a sustainable safe blood supply, while blood transfusion demand is rising with the ageing population and prevalence of chronic non communicable diseases. Appropriate and efficient use of the precious blood products is therefore, crucial to maintain a sustainable service provision. PBM becomes standards of care with an objective of enhancement of patients outcomes, of which the appropriate use of blood is included. It involves the adoption of patient-centered care by optimising and preserving patients' own blood, while saving healthcare resources and reducing costs. After few years of implementation within Hospital Authority, two new KPIs on Patient Blood Management namely, **% of transfusion with pre-transfuse haemoglobin (Hb) level <7g/dL** and **% of transfusion with single red blood cell unit transfusion** have established, and will be included in KPI reporting from 2Q of 2025/26 onwards.

These two KPIs are proven to be cost-effective, reduce the risk of adverse events specific to transfusion and introduce no harm to patients. While these KPIs serve as valuable monitoring parameters for PBM, it is acknowledged that the decision to initiate transfusion or the need of subsequent unit(s) of blood is a clinical judgment based on individual patient's clinical conditions (e.g. active bleeding, hemodynamic instability, and red cell production problems) in conjunction with the Hb test results.

Four Strategies for Patient Blood Management in HA



Figure 1 Strategies for Patient Blood Management



Figure 2 Poster on Single Unit Blood Transfusion (Courtesy to HKEC Q&S)

## Editorial Comments

*The new KPIs for Patient Blood Management (PBM) are essential for monitoring the effectiveness and outcomes of the PBM strategies. With the accumulation of these KPI figures, we can also demonstrate the achievement of optimal patient-centered outcomes for attaining hospital accreditation.*

*Ms Bonnie WONG, Cluster Manager (Quality & Safety), NTWC*

## Trivia



Please scan the QR code to answer the question of the Trivia.

If you answer the following question correctly by 20 June 2025, we will put your name into a lucky draw. Then we will present a gift coupon to each of the 3 winners that we draw.

### What are the new Key Performance Indicators (KPIs) on Patient Blood Management (PBM)?

1. % of transfusion with pre-transfuse haemoglobin (Hb) level <7g/dL
2. % of transfusion with single red blood cell unit transfusion
3. % of hypertension patients treated in GOPCs with blood pressure < 140/90mmHg

- A** 1,2
- B** 1,3
- C** 1,2,3

#### Here is the answer to Issue 54 :

Question: What is the key aim of the GCRS-PLUS?

Answer: B) To create a paperless environment for specimen collection

Thank you for participating and congratulations to the three winners of Quality Times Issue 54! We have already contacted all the winners for the prize-delivery arrangement.

### Editorial Board Members:

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### Comments are welcome

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