



URGENT: IMMEDIATE ACTION REQUIRED

To: ALL HOSPITAL SITES
From: National Emergency Blood Management Committee (NEBMC)*
Subject: AMBER PHASE for Platelets; and GREEN PHASE ADVISORY for O Red Blood Cells (RBCs) and A Positive RBCs

National Inventory Advisory

Date and time of issue	2023-10-24 12:00pm (EST)
Inventory Availability Phase	Continuation of AMBER PHASE for Platelets and Continuation of GREEN PHASE ADVISORY for O RBCs and A-positive RBCs
Product(s)	Amber Phase: Platelets Green Phase Advisory: O RBCs (Rh positive and negative) and A-positive RBCs
Description	<p>Canadian Blood Services has resumed normal functionality at all production and distribution sites this morning, however platelet inventory nationally remains tenuous. The Hospital Online Portal is also now available for hospital orders. Automated Canadian Blood Services' inventory reports shared with hospitals may not be accurate today while distribution sites catch up from the manual contingency work performed over the last few days.</p> <p>The Amber Phase for platelets declared on October 23, 2023, remains in effect. In accordance with The National Plan for Management of Shortages of Labile Blood Components, standing orders for platelets will be discontinued during the Amber Phase until further notice. To mitigate inventory risks, Canadian Blood Services will import platelets from Héma-Québec and the American Red Cross. Hospital Liaison Specialists will contact select hospitals before they receive American Red Cross platelets to ensure they are able to receive these platelets. Note that American Red Cross platelets are pathogen inactivated and Héma-Québec platelets are not pathogen inactivated. Close monitoring will continue to occur to assess downstream impacts of the data outage.</p> <p>The Green Phase Advisory declared on June 16, 2023, remains in effect for group O RBCs (Rh positive and negative) and A-positive RBCs. At the current time, RBC inventory is sufficient to remain in Green Phase Advisory.</p> <p>For both the Amber Phase and the continued Green Phase Advisory, hospitals which experience challenges in obtaining orders should inform the local transfusion medicine physician on-call or their Provincial Emergency Blood Management Committee (PEBMC) and highlight if patient impacts have a significant potential to occur.</p>
Impact on hospitals	<p>Action Required for Amber Phase PEBMC and hospital responsibilities during an Amber Phase are outlined in the National Plan, and include:</p> <ul style="list-style-type: none"> • Convening their provincial and hospital emergency blood management committees to control utilization of platelets including postponing prophylactic outpatient platelet transfusions and potentially holding impatient prophylactic platelet transfusions. • Engaging hospital/regional health authorities most impacted by platelet supply to manage demand where possible to reserve for emergency uses.

	<ul style="list-style-type: none"> Adjusting hospital inventory levels of platelets to align with previously determined for Amber Phase. The following pages of this document are pages 48-49 of the National Plan which outlines guidelines for the use of platelet transfusions in children and adults in shortage situations. Although the National Plan refers to platelet splitting, NEBMC acknowledges this may not be possible with pathogen-reduced platelets. <p>Action Required for Green Phase Advisory</p> <p>Until Canadian Blood Services' inventories for O RBCs and A-positive recover, it is recommended that hospitals continue to follow best practice for appropriate use.</p> <ul style="list-style-type: none"> For O-negative RBCs, the NEBMC recommends the best practices outlined in the National Advisory Committee on Blood and Blood Products statement for the: Utilization and inventory management of Group O RH(D)-negative red cells. Additionally, the NEBMC recommends the following best practices for all RBC groups, including adherence to patient blood management principles outlined in: Choosing Wisely Canada recommendations related to RBC transfusions <p><i>Shipment Index for RBCs</i></p> <p>The NEBMC recommends the Shipment Index for group O RBCs be reduced to 15 for O-negative and 10 for O-positive. These targets apply to provinces only (excludes territories) and will be used by PEBMCs to determine how hospital inventory will be allocated in their jurisdictions, to avoid indiscriminate inventory cuts. Not all hospitals will be able to reduce inventories due to local circumstances such as size, proximity, programs, and previous action taken to reduce inventory. It is recommended hospitals confirm with their PEBMCs.</p> <p>Action Required for both Amber Phase and Green Phase Advisory</p> <ul style="list-style-type: none"> All blood system stakeholders should continue to actively monitor inventories and work within their respective PEBMCs to decrease inventories where appropriate to mitigate the risk of further order cuts (where needed across the country). PEBMCs should be prepared to provide guidance to the NEBMC on hospitals in their jurisdiction where order delays or reductions may be better tolerated than others. Hospitals should continue to provide inventory levels for group O RBCs and A-positive RBCs by 12:00 noon EST each day. Where possible, platelet inventory levels should also be reported. In the absence of reporting during these inventory challenges, cuts to inventory requests may be made inequitably. Hospital inventory is to be reported via the following link: https://myhospital.blood.ca/, or in accordance with usual provincial practices (British Columbia and Manitoba). Hospitals should confirm their ability to accommodate Héma-Québec components as well as make any process or system updates required to accommodate Héma-Québec components, should they be provided. Hospital Liaison Specialists will contact select hospitals to determine if they can receive American Red Cross platelets. <p>If a hospital is not aware of what steps to take, they are asked to contact their local transfusion medicine physician on-call, their PEBMC, their Hospital Emergency Blood Management Committee or their Hospital Liaison Specialist.</p>
<p>For more information</p>	<p>For additional info, contact:</p> <ol style="list-style-type: none"> Your representative to the Provincial Emergency Blood Management Committee Your representative to your Hospital Emergency Blood Management Committee Your Hospital Liaison Specialist, Canadian Blood Services

*The National Emergency Blood Management Committee is comprised of the National Advisory Committee on Blood and Blood Products, Provincial Territorial Blood Liaison representatives and key Canadian Blood Services personnel. This group will develop recommendations and provide advice to the P/T Ministries of Health, hospitals and regional health authorities, and Canadian Blood Services to support a consistent and coordinated response to critical blood shortages in Canada.

For information about the National Blood Shortages Plan, please see: <http://www.nacblood.ca/resources/shortages-plan/index.html>. If you require this advisory in an accessible format, please contact your local Canadian Blood Services Hospital Liaison Specialist.

Excerpt from the National Blood Shortages Plan for Management of Shortages of Labile Blood Components (pages 48-49)

Table 2: Guideline for the use of platelet transfusions in children and adults in shortage situations

<i>Green Phase</i>	<i>Amber Phase</i>	<i>Red Phase</i>
Major Hemorrhage	Major Hemorrhage	Major Hemorrhage
<p>Immune thrombocytopenia and life- or limb-threatening bleeding maintain PC >10 x 10⁹/L.</p> <p>For head trauma or CNS bleeding maintain a PC >100 x 10⁹/L</p> <p>Other significant bleeding, or acute promyelocytic leukemia at acute presentation, maintain a PC >50 x 10⁹/L.</p>	<p>For head trauma or CNS bleeding maintain a PC > 80 x 10⁹/L.</p> <p>Withhold routine platelet issue in massive hemorrhage packs in the absence of a confirmed indication for platelet transfusion (ex. platelet dysfunction, PC <50x 10⁹/L).</p>	Same as Amber phase.
Invasive procedures/ surgery/ ECMO	Invasive procedures/ surgery/ECMO	Invasive procedures/ surgery
<p>For non-surgical invasive procedures maintain a PC of >20 x 10⁹ /L (central venous catheter insertion, paracentesis, thoracentesis)</p> <p>For lumbar puncture maintain a PC >50 x 10⁹ /L</p> <p>For ECMO maintain a PC > 50-80 x 10⁹ /L</p> <p>For CNS surgery maintain a PC >100 x 10⁹ /L</p>	<p>Urgent ¹ and emergency ² surgery in consultation with H/RBEMC.</p> <p>In presence of active bleeding or surgical procedure maintain a PC > 50 x 10⁹ /L</p> <p>If CNS trauma/surgery a PC > 80 x 10⁹ /L.</p> <p>For non-surgical invasive procedures (other than bone marrow biopsy) maintain a PC > 10 x 10⁹ /L with image guidance.</p> <p>For lumbar puncture maintain a PC >20 x 10⁹ /L</p> <p>For ECMO maintain a PC >50 10⁹ /L</p>	<p>Emergency surgery in consultation with H/RBEMC.</p> <p>Any requests for platelet transfusion must be reviewed by designated medical personnel.</p>
Bone marrow failure/ stem cell transplantation/ chemotherapy/ Chronic transfusion recipients (CTR)	Bone marrow failure/ stem cell transplantation/ chemotherapy/Chronic transfusion recipients (CTR)	Bone marrow failure/ stem cell transplantation/ chemotherapy/CTR
Adhere to a maximum threshold PC of 10 x 10 ⁹ /L for prophylactic platelet transfusions.	<p>Adhere to a maximum threshold PC of 10 X 10⁹/L for prophylactic transfusions; consider lowering this threshold to 5 x 10⁹/L.</p> <p>Transfuse autologous stem cell transplant patients only if symptoms of bleeding.</p> <p>All requests for a platelet transfusion in non-bleeding patients with a PC >10 x 10⁹/L must be reviewed by designated medical personnel.</p> <p>Split PC doses and use half doses in non-bleeding patients if necessary.</p>	<p>Cease all prophylactic transfusions.</p> <p>Any request for platelet transfusions in non-bleeding patients must be reviewed by designated medical personnel.</p>

- ¹ Urgent surgery – patient likely to have major morbidity if surgery not performed within the next 1 to 28 days
- ² Emergency surgery – patient likely to die or have major morbidity within 24 hours without surgery

Notes

- PC = Platelet Count
- Given the relatively small volumes/numbers of units required, transfusions for neonates (i.e. patients less than 4 months of age) and intrauterine transfusions would be given according to usual guidelines (i.e. would not be restricted even in times of shortage). However, measures to share units among neonates or between neonates and larger patients should be used to the extent possible.
- Follow the same guidelines for cancelling/performing surgery as described in Table 1.
- Split doses of platelets (apheresis or buffy coat) should be considered if available. Health Canada advises that splitting doses of platelets is considered aliquoting and is not a processing activity which requires registration.
- Lower PC thresholds for platelet transfusions for surgical bleeding or special procedures should be used.
- In Red Phase or Amber phase, the hospital/RHA transfusion medicine director, in consultation with the patient's physician, may consider the use of a blood component which has passed its Health Canada approved storage period. In such cases, the justification for the use of an outdated product must be documented by the most responsible physician in the patient's chart, and every effort must be made to obtain specific patient consent.