

17D. Blood Services

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17D. Ontario Contingency Plan for Management of Blood Product Shortages

Ontario's contingency plan for the management of blood product shortages was prepared by:

Contingency Planning Working Group, a Working Group of the Ontario Blood Advisory Committee, Ontario Regional Blood Coordinating Network and Blood Programs Coordinating Office, Ministry of Health and Long-Term Care. The working group included transfusion medicine hospital personnel (both teaching and community), patients, Canadian Blood Services, Ontario Hospital Association and the Ontario Regional Blood Coordinating Network, and was formed to develop a framework contingency plan for hospitals.

The plan is based on plans developed by the National Health Service in the United Kingdom, as well as the Nova Scotia Provincial contingency plan for blood component / blood product shortages. It is designed to be consistent with plans in other provinces so that the national blood supplier, Canadian Blood Services, can respond effectively to a blood shortage and not be restricted by provincial borders.

Although the Ontario Contingency Plan for Management of Blood Shortages has been developed with blood components in mind (red blood cells, platelets, plasma), a similar approach can be taken to address shortages of plasma products (i.e. IVIG, albumin). Therefore, reference will be made to both blood components and blood products throughout the document.

Objective:

To ensure secure access to safe blood products for patients who are most in need of them in times of critically low inventory levels.

Background

In times of blood product shortages, a contingency plan must be in place to ensure that patients across the province have equitable access to essential blood products. The plan will help hospitals develop the communication and management strategies to respond to these situations, and will facilitate the overall reduction of blood product usage to ensure an available supply for the most urgent cases.

The Canadian Blood Services has developed a plan to help manage the anticipated reduction to the blood supply during an influenza pandemic. Provincial blood programs must identify the actions to be taken within hospitals in the event of a severe and prolonged reduction to the blood supply.

Framework of Plan

Categories or phases of shortages of blood products will be defined in a manner consistent with the *Provincial Contingency Plan for Blood Component/Blood Product Shortages in Nova Scotia* (see Table 17D.1)

Table 17D.1: Phases of Blood Product Shortages

Phase	Inventory Supply Level	Hospital Impact and Actions
Green	Normal operations	<p>Inventory requests will be filled as per routine practice by the blood supplier. Hospitals can maintain inventory at optimum level.</p> <p>Hospitals should report hospital inventory to blood supplier on their product request form.</p>
Amber	<p>Short term shortage of inventory – may apply to a single blood group/ lot number, selected blood groups / lot numbers or to single blood product</p> <p>or</p> <p>Short term shortage of inventory may result from a large and unexpected need for products due to a local/regional disaster</p>	<p>Blood supplier will notify hospitals.</p> <p>Blood supplier may not stock orders to 100% of request.</p> <p>Urgent blood order requests will need to be triaged. Some activities in facilities may need to be reduced or delayed.</p> <p>It is important for hospitals to share inventory levels with the blood supplier. The blood supplier requests that hospitals report their blood product inventory on the request order form.</p> <p>If shortage continues, Blood Supplier may progress to Red Phase.</p> <p>If inventory levels improve, Blood Supplier will move to Recovery Phase.</p>
Red	<p>A severe and prolonged shortage of blood components / blood products</p> <p>or</p> <p>If an imminent severe threat to the blood supply is identified (e.g., 30% loss of donations)</p>	<p>Blood supplier will notify all hospitals.</p> <p>Hospital order fill rates will be reduced by defined levels.</p> <p>Hospitals will need to have a defined internal plan to respond to such a request for reduction in blood usage.</p> <p>It is critical in this phase that all hospitals report their blood product inventory levels with blood supplier. This should be done directly on the blood product order request form and submitted with each request for product.</p> <p>All urgent blood order requests will need to be triaged (prioritization of need).</p> <p>It may be necessary to transfer blood products between facilities.</p>
Recovery		<p>Blood supplier will notify hospitals when inventories have returned to normal.</p> <p>Hospitals will raise blood usage / activity slowly and increase inventory levels gradually.</p>

Actions Required by Phase of Blood Product Shortage

Green Phase: Normal Levels of Activity and Requests for Blood Products

Blood supplier inventory levels are at optimal levels and blood collection activity meets expected hospital demand.

National blood supplier will develop communication strategies and plans to inform hospital Transfusion Services when inventory levels drop below desired levels. Inventory levels are defined for Amber phase and Red phase. These are communicated to hospital Transfusion Services. The corresponding request for reduction of blood orders must also be defined in the plan and this must be communicated to hospital Transfusion Services.

The blood supplier will develop and communicate a plan to notify hospital Transfusion Services when inventory levels begin to recover and then again when inventory levels are stable. Hospital plans should indicate that normal operations/activity should resume gradually until blood supplier notifies a return to stable inventory levels to ensure that inventory stocks at hospitals return to normal levels in an equitable and stable manner.

Hospitals should define the required inventory to be held on site to ensure normal blood demand will be filled, allowing for some unexpected emergency needs. These maximum/ minimum blood inventory levels should be determined based on historical blood product/ component usage, services provided at the facility, and physical distance from the blood supplier. Hospitals should define inventory levels to be consistent with the blood supplier. Canadian Blood Services

defines inventory levels by 'average daily use'. Ideal inventory levels are 4 days or higher, critical inventory levels are defined as less than a 2 day level. Consideration should be given to defining red cell inventory levels to match contingency plan 'phases'. For example:

- Green phase = 100% of optimal inventory or 4-6 days of average daily use
- Amber phase = less than 50% of optimal inventory or < 2 days
- Red phase = less than 25% of optimal inventory or < 1 day of average use

Consideration should be given to the availability and dependability of existing transport routes and the probability of unexpected emergent patient needs (e.g., trauma, obstetrical). Hospital inventory levels should balance out to minimize the amount of discarded products. Where feasible, product redistribution between facilities should occur to maintain a balance between the amount of inventory held at each site and the inventory that becomes outdated and is discarded.

Agreements should be developed between facilities located in proximity to share blood products should it become necessary. These agreements should outline the policies and procedures for the transfer of blood products and ensure that they maintain blood products in appropriate storage conditions with appropriate documentation.

Hospitals should be managing blood use efficiently to ensure blood products are not ordered/ transfused where not indicated. The use of existing blood product use guidelines, Maximum Surgical Blood Ordering Schedule (MSBOS), blood conservation strategies and regular auditing of blood ordering

practices will help to improve blood utilization. Understanding current blood usage figures according to surgical procedure will help determine the actions required to respond to requests for reduction of blood use. In addition, the adoption of a massive blood transfusion policy/ algorithm will help manage situations where large blood loss and blood needs may exist.

During the Green phase, hospital Transfusion Services should facilitate the development of an internal emergency blood management plan (EBMP) to address blood shortages. Strategies must be identified to respond to a request for reduction of blood product/blood component use in times of critical inventory levels. This plan should be agreed to by all services/stakeholders requiring blood product/component support within the facility. This plan must be communicated throughout the facility to ensure that should the need arise, hospital personnel will respond in a coordinated manner to a request for reduction of the use of blood products/components. Each facility should form a committee or make use of an existing committee (such as the Transfusion Committee) to develop an emergency blood management plan during a critical blood shortage.

The plan should:

- include personnel within the facility who must be notified of a situation of blood shortage and also a defined personnel fan-out
 - include a communication strategy to notify patients and their families who may be affected by the reduced blood inventory
 - be incorporated into the overall facility Emergency or Disaster plan
- have defined notifications and actions for both Amber and Red phases of inventory shortages
 - define and document responsibilities and actions required by key individuals.

Strategies for reduction of blood usage must be defined. These may include:

- reducing stock held on site to minimum levels
- adhering strictly to widely accepted transfusion triggers
- reducing the number of products given per treatment (e.g., number of platelet units)
- delaying or cancelling non-urgent elective surgeries
- categorizing patients to set priorities for blood product needs (i.e., life-threatening to urgent to supportive to elective needs).

Amber Phase: Short Term Shortage of Inventory

May Apply to a Single Blood Group or Blood Product/Component

The blood supplier will have defined inventory levels to determine when the Amber phase is initiated.

The Blood Centre will notify all hospitals that it supplies via the Transfusion Service when an Amber phase of the emergency plan is initiated. This notification will occur by fax. The notification should include the nature of the shortage and anticipated timeframe for inventory to return to normal levels. The blood supplier will co-ordinate and oversee all media announcements regarding the blood supply and any call for donations should they deem this necessary and appropriate.

When the hospital receives the fax notification that Amber Phase has been initiated, the Transfusion Service Medical Director or Consultant on call must be notified. The hospital will activate the Emergency Blood Management Plan for Amber phase. This may include:

- notifying administrative, medical and nursing staff of the situation
- reducing minimum inventory levels of affected blood group or blood product/ component
- triaging blood order requests between the Medical Director/Consultant of the Blood Centre and the Medical Director/Consultant of the hospital Transfusion Service to ensure patients in the most urgent need of blood products will receive them (based on transfusion triggers, clinical urgency of need, existing blood inventory levels)
- transferring blood products between sites to meet urgent patient needs
- delaying elective activities and non-urgent transfusions. Patients and their families must be notified if treatment with blood products/blood components is to be deferred. The reason for deferring treatment must be included in the communication.

"In some shortage scenarios this reduction in hospital stockholding may be sufficient to allow recovery from shortage. However, in most scenarios this will need to be accompanied by a reduction in blood usage by hospitals."

*Emergency planning – development of an integrated plan for the management of blood shortages.
NHS DoH Gateway Ref 3344.
23 July 2004.*

The blood supplier will communicate regularly with hospital Transfusion Services – medical and technical staff – using defined protocols to provide status reports on inventory levels and anticipated recovery time or whether the inventory is dropping to even more critical levels. Once the inventory has returned to normal desired levels (Green Phase), the blood supplier will notify all hospital Transfusion Services via fax.

Recovery of hospital blood inventory and return to normal activities (transfusions) should be slow and gradual to ensure the overall blood inventory level does not return to shortage levels.

Red Phase: Severe and Prolonged Shortage of Inventory

If inventory levels cannot recover in the short term, the blood supplier may notify hospitals of a move from the Amber phase to the Red phase. If an imminent threat to or precipitous drop in the blood supply is identified, the blood supplier may move directly from the Green phase to the Red phase.

The Blood Centres will notify hospitals of the initiation of a Red phase via fax to hospital Transfusion Services. There may also be public service announcements. The blood supplier will co-ordinate and oversee all media announcements regarding the blood supply and any call for donations as necessary and appropriate.

The blood supplier will reduce fill rates by a defined percent. This may be from 10% to 50% or more, depending on the severity and anticipated length of time of the shortage.

When a hospital receives fax notification of a Red phase, the Transfusion Service Medical Director/Consultant on call must

be notified. The hospital will activate the Emergency Blood Management Plan for Red Phase. This should include:

- notifying senior administrative, medical and nursing staff of the situation
- reducing critical inventory levels of affected blood group or blood product/component
- triaging all requests for blood products/components according to defined criteria, and as required by the assigned medical staff (based on transfusion triggers, clinical urgency of need, existing blood inventory levels). Communication between the Medical Director/Consultant of the Blood Centre and the Medical Director/Consultant of the hospital Transfusion Service is necessary to ensure patients in the most urgent need of blood products receive them
- transferring blood products between sites to ensure the most urgent patient needs are met
- delaying elective activities and non-urgent transfusions. Patients and their families must be notified if treatment with blood products/blood components is to be deferred. The reason for deferring treatment must be included in the communication.

The blood supplier will communicate regularly with hospital Transfusion Services – medical and technical staff – using defined protocols to provide status reports of inventory levels and anticipated recovery time, or if the inventory is dropping to even more critical levels. Once the inventory has returned to improved levels (Amber or Green Phase), the blood supplier will notify all hospital Transfusion Services via fax.

Recovery of hospital blood inventory and return to normal activities (transfusions) should be slow and gradual to ensure the overall blood inventory level does not return to shortage levels. Prioritization of need will continue until inventory levels are maintained, and activities and usage return to normal. Responsibility for this decision should be defined in the EBMP. The scheduling of elective procedures should be gradual, as the blood inventory levels may be vulnerable to returning to shortage during the recovery period.

Development of a Hospital Emergency Blood Management Plan

This plan should be developed during the Green phase so that it will be available to implement in response should an event occur that would result in a shortage of blood products or components. Usually, the Transfusion Service personnel and Medical Director will respond to minor shortages in the supply of one or more blood groups and/or blood products by triaging blood order requests as they are received. Often, there is no coordinated approach taken outside of the Transfusion Service. Should a larger scale or prolonged shortage of blood products exist, this response would fail to reduce blood usage to the degree required.

Severe shortages of the blood supply (either current or imminent) must be communicated to professional staff outside of the Transfusion Service to ensure that a multidisciplinary and co-ordinated response to a reduction of blood product use is achieved. This communication will enable those providing healthcare in the facility to prioritize the needs for blood products so that the limited supply of blood products will go to those patients in the most

urgent need. All hospitals in a region/province need to have a consistent approach to ensure that equitable access to this critical supply will exist.

All key stakeholders should be represented on the committee assigned to develop the hospital Emergency Blood Management Plan, including:

- transfusion service medical director/consultant
- consultant anesthetist
- consultant surgeon(s)
- hematologist/oncologist
- chair of transfusion committee
- manager responsible for transfusion service
- transfusion nursing specialist
- consultant from er/trauma
- board member/lay person
- risk manager.

This broad representation will result in joint decision-making on the strategies required to reduce blood usage at the facility and a collaborative response, should it be necessary to implement the plan.

The plan should define personnel to be notified for various phases of inventory shortages. For example, Amber phase may initially include the Transfusion Service medical director, hematology/oncology and chief of intensive care and emergency, but may expand to chief of medicine and

surgical, nursing and senior administrative personnel should the need arise to delay or cancel elective procedures that might require blood transfusion; Red phase would need to include all of those mentioned above, in addition to the CEO and all senior medical and nursing staff. A mechanism is needed to define:

- categories of patients to prioritize for need for blood products
- how to safely implement blood conservation and transfusion alternatives to avoid anemia and reduce demand for blood
- how to triage blood order requests (e.g., pre-defined criteria, use of patient categories, direct medical approval)
- how to monitor blood use
- daily monitoring of inventory levels and status of situation from blood supplier, and communicating this information throughout the facility
- how to coordinate surgical schedules relating to deferral of procedures
- how to prioritize patients/procedures during the recovery phase to ensure any inventory recovery can be sustained.

Types of shortages

The types of shortages that blood centres may experience will vary based on cause of the shortage. An influenza pandemic is likely to cause a prolonged shortage (see Table 17D.2).

Table 17D.2: Types of Blood Product Shortages, Their Causes and Impact

Type of Shortage	Possible Causes	Impact
Short Term Regional Shortages	Events affecting one blood centre, such as: inclement weather impacting donor clinics, facility failure affecting blood collection/processing, labour disruption affecting operations, a local disaster or terrorist attack	Short-term gap between demand and supply
Short Term National Shortages	Events affecting more than one blood centre or a very large blood centre that could result in a national reduction to the blood supply, such as: major labor disruption, information system failure affecting testing or traceability of blood products, or transportation chain failure	Short-term gap between demand and supply
Prolonged Shortage	Events affecting more than one blood centre, such as a change to donor deferral policy affecting large proportion of blood donors, pandemic flu or other illness resulting in a severe reduction in donor attendance and/ or blood centre personnel, failure of contracted manufacturing supplier (e.g., plasma protein product, or blood collection / processing / testing supplies), or a protracted labour disruption	Longer-term, severe discrepancy between demand and supply

Conclusion

In the event a blood product shortage occurs, hospital Transfusion Services will be notified by the regional Blood Centre. Once this notification occurs, hospitals will take actions based on the severity and anticipated time frame of the blood product shortage. Actions may include reducing the inventory held on site and, if necessary, reducing the use of blood products.

Any reduction to the provision of blood products or components within a hospital must follow an Emergency Blood Management Plan developed internally by key stakeholders. This will ensure that strategies used to reduce service or prioritize patients will be accepted and followed. This, in turn, will help ensure equitable utilization of the limited inventory available across the region/province/country so patients whose need is most urgent will receive the blood products they require.

A more consistent approach taken by hospitals across the country will help the national blood suppliers – the Canadian Blood Services and Hema-Quebec –

manage and recover from a severe shortage of blood product/components, should one occur.

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Appendix A: Contingency Plan Checklist for Hospitals

Preparedness for Responding to Blood Inventory Shortages

Green Phase: Step 1

Inventory levels can be maintained at optimal levels

- Establish Emergency Blood Management Committee (EBMC).
- Develop Hospital Contingency Plan for managing blood shortages.
- Ensure Emergency Blood Management Plan is integrated into Facility Disaster Plan.
- Provide training on the contents of the plan and the communication strategy related to blood shortages.
- Ensure that 'best practices' in inventory management of blood components and blood products are in place.
- Determine and make available ideal "on hand" inventory levels, indicating the number of days on hand represented by levels (ideal 4-6 days of average use based on historical data).
- Practice routine strategies to ensure blood component/product outdating is minimized.
- Establish relationships with other nearby facilities and develop a plan to share inventory in the event of a shortage.
- Adopt guidelines for the use of blood products to ensure effective utilization (through Transfusion Medicine Committee or Medical Advisory Committee).
(e.g., Maximum Surgical Blood Order Schedule (MSBOS) and/or protocol for review of blood ordering practice by physicians using 'Best Practice' parameters)

Amber Phase: Step 2

Shortage not anticipated to be long term or severe. Shortage may affect only one or a few facilities if due to local or regional disaster

- Ensure that Regional CBS Blood Centre will be notified of a local situation that could affect blood supply (e.g., equipment failure or multiple traumas).
- Define response to notification of a blood shortage if received from CBS.
- Include notification to internal personnel including Transfusion Manager, Medical Director, Chair of Transfusion Medicine Committee, Chair of EBMC and other staff.
- Develop communication template and list of contact names/numbers of those to be notified in Amber phase (include pager numbers, fax numbers, email addresses).
- Prepare a communication to notify patients and their families to explain the need for possible deferral of their treatment, should it be necessary.
- Ensure that contact information for other nearby sites is available if a need is identified for inter-hospital transfer of blood components/products. (List of available transport options with contact numbers should be available).
- Give direction, in the plan, to reduce red cell stock (if shortage applies to this component) by 25% (3 day vs 4 day levels), and reinforce NOT to stockpile inventory.
- Identify one person to act as a main contact with CBS to communicate any inventory needs and status of inventory at the Blood Centre, and to attend regular conference calls held by CBS, providing updates on the inventory status. This person/position should be determined beforehand, and his/her role should be documented to ensure everyone understands who is responsible.
- If necessary, institute pre-approval of requests for blood components prior to releasing. The person/position assigned to perform pre-approvals, and what criteria will be used, should be determined beforehand.
- If a situation appears to be worsening, notify the Medical Director of Transfusion Service and Chairperson of Transfusion Committee to determine if additional communication and/or actions are required to further conserve use of existing blood inventory:
 - Pre-approved contact list and communication template should be available
 - Prioritization list of areas where reduction of blood use will occur

Red Phase: Step 3

Inventory shortage predicted to be long term and/or severe

- Notification of this level of shortage should be received from CBS.
- Internal hospital notification should go out (in writing) to Division Chiefs of Surgery, Anesthesia, Critical Care, Trauma/Emergency, Hematology and Medicine, Directors of Laboratory Services, Diagnostic Services and Nursing, Chair of the Transfusion Medicine Committee (or its equivalent) and Emergency Blood Management Committee members.
 - Pre-approved contact list and communication template should be available
 - EBMC members should be identified; contact list should be available
- Communication should include modification to ordering practices to be used, in order to conserve blood component inventory to ensure availability of product to treat urgent life-threatening situations. The Medical Director of the Transfusion Service or delegate shall review all orders that fall outside these parameters.
- Reduce blood component stock kept on hand to minimum levels (1-2 days equivalent based on historical use).
- Do not issue blood to 'stock' fridges such as operating room or trauma room.
- DO NOT** stockpile product to safeguard local needs, as this will result in increasing the overall risk to patients at other institutions.
- Direction to work with local CBS Medical Director to determine priority inventory needs in region should be included in the plan.

Recovery Phase:

Following notification from the blood supplier, CBS, by teleconference, that inventory levels are on the rise, hospital blood usage must remain restricted to critical needs, or increase at a controlled pace, in order to ensure levels do not result in a shortage in the Recovery Phase.

- Notification of recovery of blood inventory stocks should be sent, in writing, to Division Chiefs of Surgery, Anesthesia, Critical care, Trauma/Emergency, Hematology and Medicine, Directors of Laboratory Services, Diagnostic Services and Nursing, Chair of the Transfusion Medicine Committee (or its equivalent) and Emergency Blood Management Committee members.
- Communication template, approved distribution list and contact information should be available.
- Requests for blood components/products shall continue to be monitored and reviewed until CBS has notified the hospital of a return to the Green Phase.

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2. Contingency Plan For Blood Component Shortages. DRAFT procedure Sunnybrook Health Sciences Centre, Toronto, ON.
3. Blood Shortage Policies. QM-TM-410A-01. Procedure from Cambridge Hospital, Cambridge, ON.

Notification of Blood Component/ Blood Product Shortage

Hospital Name Here

Memo

To: [Enter name of Chiefs of Surgery, Anaesthesia, Critical Care, Trauma, Emergency, Hematology, Medicine, Directors of Laboratories, Nursing and Risk Management, Chairpersons of Transfusion Committee, Emergency Blood Management Committee]

From: [Enter name of Medical Director of Transfusion Service]

CC: [Enter name of Transfusion service Manager / supervisor]

Date: [Enter date]

**Re: Notification of Blood Shortage –
*Amber phase***

We have received recent notification from the Canadian Blood Services (CBS) that they are currently experiencing a shortage of **[Enter name of blood component / product here]**. The shortage is the result of **[Enter the reason for the shortage here]**. As a result, blood inventory levels may be reduced in order to conserve product for critical cases. **The following modifications to blood ordering will be implemented:**

- ordering of the product in short supply will comply to ordering parameters as defined in the attachment provided with this communication
- inventory levels for this product will be reduced by up to 50% in efforts to conserve
- it may be necessary to consider deferral of elective transfusions and/or of elective surgical procedures associated with probable blood use

Note: This shortage is expected to remain for **[Enter the expected time frame for shortage]**. Until you receive further notification, you will be asked to follow the hospital procedure for **Emergency Management of Blood – Amber Phase**. Once inventory levels have stabilized, you will receive further notification of entry into recovery phase procedures.

Should you experience a need for support in managing patients requiring blood during this period, please contact the Transfusion Service at **[Enter the contact number desired]**.

***Urgent Notification Of Blood Component/Blood Product Shortage

Hospital Name Here

Memo

To: [Enter name of Chiefs of Surgery, Anaesthesia, Critical Care, Trauma, Emergency, Hematology, Medicine, Directors of Laboratories, Nursing and Risk Management, Chairpersons of Transfusion Committee, Emergency Blood Management Committee, CEO, Public affairs / Communications]

From: [Enter name of Medical Director of Transfusion Service]

CC: [Enter name of Transfusion service Manager / supervisor]

Date: [Enter date]

Re: Critical Blood Shortage
**** Red phase ****

We have received recent notification from Canadian Blood Services (CBS) that they are currently experiencing a severe shortage of [Enter name of blood component / product here]. The shortage is the result of [Enter the reason for the shortage here]. This shortage is anticipated to last for a prolonged period of time. As a result, blood inventory levels will be reduced in order to conserve product for critical and life-threatening cases only. **The following modifications to blood ordering will be implemented**

- ordering of the product in short supply will comply to ordering parameters as defined in the attachment provided with this communication
- inventory levels for this product will be reduced to a minimum (25-30%) in efforts to conserve product
- it will be necessary to defer elective transfusion procedures and/or elective surgical procedures associated with probable blood use where patient safety will not be adversely affected

Note: This shortage is being experienced across the country and it could possibly continue for a prolonged period of time. You will be asked to strictly follow the hospital procedure for **Emergency Management of Blood – Red Phase**. Communication will be ongoing with Canadian Blood Services. Once CBS inventories regain stability, you will receive further notification indicating when normal blood ordering practice may be resumed. Should you experience need for support in managing patients requiring blood during this period, please contact the Transfusion Service at [Enter the contact number desired].

Notification Regarding Blood
Component/Blood Product
Shortage Situation

Hospital Name Here

Memo

To: [Enter name of Chiefs of Surgery, Anaesthesia, Critical Care, Trauma, Emergency, Hematology, Medicine, Directors of Laboratories, Nursing and Risk Management, Chairpersons of Transfusion Committee, Emergency Blood Management Committee]

From: [Enter name of Medical Director of Transfusion Service]

CC: [Enter name of Transfusion service Manager / supervisor]

Date: [Enter date]

**Re: Notification of Blood Shortage –
*Recovery Phase***

We have received recent notification from Canadian Blood Services (CBS) that inventory levels for [Enter name of blood component / product here] have steadily improved over the last week and have now reached a stable level. As a result, critical blood product conservation strategies may be lessened. Inventory levels on site will improve over the next few days back up to optimal levels.

- Elective transfusions and elective surgical procedures deferred as a result of the blood inventory shortage may begin to be recalled in a controlled and gradual way in order to reduce the possibility of de-stabilizing the recovery of blood inventory levels.

Note: We would like to take this opportunity to thank you for your support and collaboration during this difficult period. By working together, it was possible to use available blood inventory effectively to ensure the patients in most critical need received required products.

Should you experience the need for support in managing patients requiring blood during this recovery period or if you have any questions/comments regarding this recent shortage and how it was managed, please contact the Manager of Transfusion Services at [Enter the contact number desired].