

	<b>Saskatchewan Transfusion Medicine Working Group</b>	Effective Date: <b>January 29 , 2010</b>
		Page <b>1 of 40</b>
Title:	<b>SASKATCHEWAN REGIONAL HEALTH FACILITIES BLOOD SHORTAGE MANAGEMENT PLAN</b>	
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**INTENT:**

To provide regional health authorities and health facilities with a framework contingency plan for the management of blood components and/or plasma protein products in the event of a critical shortage. This template is consistent with the *National Plan for the Management of Shortages of Labile Blood Components* which has been endorsed by other provinces/territories and Canadian Blood Services. The specific purpose of the national plan is to maximize the effectiveness of a national response to any crisis which impacts the adequacy of the blood supply in Canada.

**POLICY DIRECTION:**

In December 2009, provincial/territorial Deputy Ministers endorsed the *National Plan for the Management of Shortages of Labile Blood Components* and directed health officials to align provincial blood shortage management plans with the national plan. The national plan outlines roles and responsibilities to be undertaken by Canadian Blood Services, the Ministry of Health, regional health authorities and health facilities in a blood shortage situation. Saskatchewan’s Transfusion Medicine Working Group has developed a template to assist health regions and health facilities with the development of their own blood shortage management plans in a manner that is consistent with the national plan, and in effect, consistent with those of health providers in other provinces and territories.

**RELATED GUIDELINES:**

The current version of the *National Plan for the Management of Shortages of Labile Blood Components* can be found on the National Advisory Committee on Blood and Blood Products website [www.nacblood.ca](http://www.nacblood.ca) and other relevant material may be found at the Canadian Blood Services website [www.transfusionmedicine.ca](http://www.transfusionmedicine.ca) .

**GENERAL INFORMATION:**

Web address for this document: [www.health.gov.sk.ca/transfusion-medicine](http://www.health.gov.sk.ca/transfusion-medicine)



# **Saskatchewan Regional Health Facilities Blood Shortage Management Plan**

Version date: January 29, 2010

Transfusion Medicine Working Group

**Prepared by:**  
Blood Shortage Sub-Committee

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Find the current version at [www.health.gov.sk.ca/transfusion-medicine](http://www.health.gov.sk.ca/transfusion-medicine)



## Table of Contents

Introduction.....	3
Abbreviations.....	4
Planning Principles and Ethical Considerations.....	5
Plan Structure.....	7
Actions Required in Response to Phases of Inventory Shortage	
Green Phase.....	8
Amber Phase.....	10
Red Phase.....	12
Development of Facility/RHA Emergency Blood Management Plan.....	14
Conclusion.....	15
References.....	16
Toolkit	
Contingency Plan Checklist for Regional Health Facilities.....	18
Roles & Responsibilities during the Phases of a Blood Shortage.....	22
Generic Emergency Blood Management Plan (EBMP) Template.....	24
Amber Phase Memo.....	33
Red Phase Memo.....	35
Recovery Phase Memo.....	37
Blood Shortage Sub-Committee of Transfusion Medicine Working Group .....	39

## Acknowledgements:

The development of this plan borrowed heavily from, and was based on, the Ontario Contingency Plan for Management of Blood Product Shortages, as well as the Nova Scotia Provincial contingency plan for blood component/blood product shortages. The ethical considerations were based on the work of Joy Mendel, Bioethicist, St. Paul's Hospital and Catholic Health Association of Saskatchewan.



### Introduction

The supply of labile blood components could be compromised by a number of threats such as endemic disease outbreaks, labour disruptions, extreme weather disturbances or disruptions in the transportation system. In times of severe shortages, the allocation of blood components could present a significant challenge to the provision of health care. A contingency plan must be in place to ensure that essential blood products will be available for patients across Saskatchewan not dependant on geographical location, based on clinical need and underpinned by the ethical principle of justice.

A plan will help facilities and the health regions (RHAs) develop the necessary 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 goal is to ensure secure access to safe blood products for patients who are most in need of them in times of critically low inventory levels.

Saskatchewan Health (MOH) and the Regional Health Authorities have a mandate to ensure the safe supply and appropriate use of blood and blood components. The Saskatchewan Transfusion Medicine Working Group has developed a framework contingency plan for facilities/health regions (RHAs) for the management of blood in the event of a critical inventory shortage, as communicated to hospitals by Canadian Blood Services (CBS).

Other provinces have developed contingency plans to manage blood shortages. The Saskatchewan Transfusion Medicine Working Group has based its plan largely on these existing plans to help ensure that Canadian Blood Services can respond to a critical blood shortage in a consistent manner regardless of provincial borders.

Although the Regional Health Facilities Blood Shortage Management Plan 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.



## **Abbreviations**

CBS	Canadian Blood Services
EBMC	Emergency Blood Management Committee
EBMP	Emergency Blood Management Plan
MOH	Ministry of Health
PEBMC	Provincial Emergency Blood Management Committee
RHA	Regional Health Authority



### Planning Principles and Ethical Considerations

The Regional Health Authorities will be considering many factors in their blood shortage planning, however, based on the ethical reviews of the *Regional Health Facilities Blood Shortage Management Plan* and feedback from consultations, a number of planning principles and ethical considerations underlie the plan. It is believed that adherence to these considerations and principles will promote the most effective use of provincial health resources and lead to ethical patient-centred care in the event of a blood shortage. These include, but are not limited to:

#### Planning Principles

- Consistent with, and supportive of, national and provincial blood shortage contingency planning efforts, including adherence to national and provincial clinical transfusion guidelines and/or triage guidelines where they exist.
- The health services delivered within the health facilities will remain consistent with those defined in the Saskatchewan hospital classification system and *The Facility Designation Regulations*.
- All transfusion service activities will be carried out in accordance with the minimum safety standards as defined by the pending Health Canada regulations pertaining to blood and blood products (see *CSA Z902 Standards for Blood and Blood Products*).
- Regional Health Authorities will explore a variety of options for delivering care to patients in their home regions, including patients receiving treatment through the Community Oncology Program, before referring patients to the tertiary centres for care. It is assumed that the tertiary centers will not have the capacity to provide transfusion services to all Saskatchewan patients in need of care in amber/red shortage situations.

#### Ethical Considerations

- Respect for all human life will continue to underpin decision-making in times of a blood shortage. However, this is not synonymous with the use of overly burdensome, extraordinary means of treatment at end of life.
- The facility and RHA Emergency Blood Management Plans will be consistent with the ethical frameworks adopted by national and provincial blood shortage contingency planning efforts.
- The development of Provincial Clinical Transfusion Guidelines and Triage Guidelines for a blood shortage based on clinical need alone. It is recommended that, once developed, these guidelines will be subject to an ethics review to help ensure the fair distribution of scarce resources.



## Regional Health Facilities Blood Shortage Management Plan

- In situations where a request for blood does not comply with the established Clinical Transfusion Guidelines and Triage Guidelines, RHAs will put processes in place to ensure that the “transfusion service physician or designate” who reviews each request, will not be the treating physician for the request in question.
- Regional Health Authorities will remain mindful that barriers to accessing care exist (e.g. geographical), and where possible, will build in measures to alleviate these challenges.
- Where possible the facilities/RHAs should seek input from a variety of stakeholders in the development of their emergency blood management plans, including: clinical staff (particularly those who will be required to implement the plan); allied health staff (including Quality of Care Coordinators/patient representatives, social workers and pastoral/spiritual care workers); and vulnerable groups (such as people with chronic conditions or other non-urgent needs who may experience health setbacks as a result of the shortage; remote First Nations communities and other Aboriginal groups, people with disabilities, addictions, and criminal histories, aged, culturally and linguistically diverse, etc.).



## Regional Health Facilities Blood Shortage Management Plan

### Plan Structure

The Plan offers four phases of inventory availability – green, amber, red and recovery. A shortage phase could apply to a single component (e.g. platelets), a particular blood group of a component (e.g. O Negative red blood cells), or multiple blood components. Categories of blood product shortages are consistent with those in the *National Plan for Management of Shortages of Labile Blood Products* (see [www.nacblood.ca](http://www.nacblood.ca) and [www.bloodservices.ca](http://www.bloodservices.ca)).

Phase	Inventory Supply Level	Facility/RHA Impact and Actions
<b>Green</b>	Normal operations	<ul style="list-style-type: none"> <li>• Inventory requests will be filled as per routine practice by CBS.</li> <li>• Facilities/RHAs can maintain inventory at optimum level.</li> <li>• Facilities/RHAs report hospital inventory to CBS on their product request form.</li> </ul>
<b>Amber</b>	Blood inventory levels are insufficient to continue with routine transfusion practice and facilities/RHAs will be required to implement specific measures to reduce blood usage.	<ul style="list-style-type: none"> <li>• CBS will notify facilities/RHAs/MOH.</li> <li>• Facilities/RHAs will implement pre-defined communication plans.</li> <li>• Facilities/RHAs will request inventory from CBS based on Amber phase requirements.</li> <li>• Urgent blood order requests will need to be triaged. Some activities in facilities may need to be reduced or delayed.</li> <li>• It is important for facilities/RHAs to share inventory levels with CBS. CBS requests that facilities report their blood product inventory on the request order form.</li> </ul>
<b>Red</b>	Blood inventory levels are insufficient to ensure that patients with non-elective indications will receive the required transfusion.	<ul style="list-style-type: none"> <li>• CBS will notify all facilities/RHAs/MOH.</li> <li>• Facility order fill rates will be reduced by defined levels.</li> <li>• Facilities/RHAs will need to have a defined internal plan to respond to such a request for reduction in blood usage.</li> <li>• It is critical in this phase that all facilities report their blood product inventory levels to CBS.</li> <li>• All urgent blood order requests will need to be triaged (prioritization of need).</li> <li>• It may be necessary to transfer blood product between facilities.</li> </ul>
<b>Recovery</b>	Blood inventory levels are increasing and are expected to be maintained at a level that would enable facilities/RHAs to move from Red to Amber and subsequently to Green	<ul style="list-style-type: none"> <li>• CBS will notify facilities/RHAs/MOH when inventories have returned to normal.</li> <li>• Facilities/RHAs will raise blood usage / activity slowly and increase inventory levels gradually.</li> <li>• Facilities/RHAs will communicate blood inventory changes to their transfusion community (i.e. physicians, Quality of Care Coordinators/patient representatives, patients and their families.)</li> </ul>





## Regional Health Facilities Blood Shortage Management Plan

### GREEN PHASE

#### Normal Levels of Activity and Requests for Blood Products

Green Phase implies that normal blood component inventory levels exist and supply generally meets demand. This phase includes a broad range of inventory levels ranging from an ideal inventory to temporary shortages that occur periodically and can be managed with existing Canadian Blood Services/facility/RHA actions.

1. Canadian Blood Services will develop **communication strategies and plans** to inform the Provincial Ministries of Health (MOH) and Facility/RHA Transfusion Services when inventory levels drop below desired levels and when they begin to recover and become stable. This will ensure that inventory stocks and hospitals return to normal levels in an equitable and stable manner.
2. RHAs/Facilities develop **blood inventory management plans** which define the required inventory to be held at each site to ensure normal blood demand will be filled, and allow 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, as well as physical distance from Canadian Blood Services. Facilities/RHAs should define inventory levels to be consistent with the Canadian Blood Services (i.e. 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 75% of optimal inventory or < 2-3 days

**RED** phase = less than 50% of optimal inventory or < 2 day of average use

It is recognized that the 25% and 50% reductions may not apply to those smaller sites which hold a minimal amount of blood inventory to maintain their transfusion services. If these critical levels can not be maintained, then the transfusion services would close in those facilities. Reductions of inventory levels to these smaller sites may be considered if the blood was needed at the larger sites to maintain their 50% inventory (i.e. red phase). Such inventory management decisions will be made at the RHA level, however, will be reported at the provincial level to support the management of the provincial blood supply.

3. Consideration should be made also for availability and dependability of existing transport routes and the probability of unexpected emergent patient needs (e.g. trauma, obstetrical). Facility/RHA inventory levels should balance out to minimize the amount of discarded products. Where feasible, product redistribution between facilities/RHAs should be implemented to maintain a balance between the amount of inventory held at each site and the inventory that outdates and is discarded.
4. Agreements should be developed between facilities/RHAs located in proximity to support the sharing of blood products should it become necessary. These agreements should outline the policies and procedures for the transfer of blood products and ensure that they are consistent and acceptable in maintaining blood products at appropriate storage conditions and with appropriate documentation.



## Regional Health Facilities Blood Shortage Management Plan

5. RHAs/facilities should be developing **blood utilization management plans** to manage the blood use at each facility efficiently and 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 of current blood usage figures according to surgical procedure will be useful in determining actions required in response to requests for reduction of blood use. In addition, the adoption of a massive blood transfusion policy / algorithm will aid to manage situations where large blood loss and blood needs may exist.
  
6. During the Green phase, facility/RHA Transfusion Services should facilitate the development of an internal **emergency blood management plan (EBMP)** to address blood shortages. Strategies must be determined and defined to allow for a response to a request for reduction of blood product / blood component use in times of critical inventory levels. This plan should be agreed to amongst all services /stakeholders requiring blood product/component support within the RHA/facility to ensure support for the policy, legal and ethical implications of the plan. This plan must be communicated throughout the facility/RHA to ensure that should the need arise, all personnel will respond in a coordinated manner to a request for reduction of the use of blood products / components. Each RHA/facility should form a committee or make use of an existing committee (such as the Transfusion Committee) to develop an emergency blood management plan for responding to a critical blood shortage.
  - a. The plan should include personnel within the facility/RHA who must be notified of a blood shortage and also a defined personnel fan out.
  - b. The plan should include a communication strategy to notify patients and their families who may be affected by the reduced blood inventory.
  - c. The plan should include a communication strategy that includes linkages with the Ministry of Health for both operational and informational purposes.
  - d. The plan should be incorporated into the overall Facility/RHA Emergency or Disaster plan.
  - e. The plan should have defined notifications and actions for both Amber and Red phases of inventory shortages.
  - f. Responsibilities and actions required by key individuals must be defined and documented.
  - g. Strategies for reduction of blood usage must be defined. These may include:
    - i. Reduction of stock held on site to minimum levels.
    - ii. Strict adherence to widely accepted clinical transfusion guidelines.
    - iii. Reduction in number of products given per treatment (e.g. number of platelet units).
    - iv. Delays or cancellation of non-urgent elective surgeries.
    - v. Categorization of patients for prioritizing blood product needs (life threatening to urgent to supportive to elective needs).



## Regional Health Facilities Blood Shortage Management Plan

### AMBER PHASE

#### Inventory levels are insufficient to continue routine operations.

Amber phase implies that blood inventory levels are insufficient to continue with routine transfusions practices and facilities/RHAs will be required to implement specific measures to reduce blood usage.

1. **Canadian Blood Services (Saskatchewan) will notify** the MOH and all facilities/RHAs that it supplies via the Transfusion Service when an Amber phase of the emergency plan is initiated. The fax notification should include the nature of the shortage and anticipated timeframe for inventory to return to normal levels. Canadian Blood Services will work with the MOH/Provincial Emergency Blood Management Committee to coordinate and oversee all media announcements regarding the blood supply and any call for donations should they deem this necessary and appropriate.
2. When the facilities/RHA receives the fax notification that Amber Phase has been initiated, the Transfusion Service Medical Director or Consultant on call must be notified. The facility/RHA will activate the **Emergency Blood Management Plan for Amber phase**. This may include:
  - a. Notification to Senior Administrative, Medical and Nursing staff and the Quality of Care Coordinators/patient representatives of the situation.
  - b. Notification of the facility/RHA transfusion service representatives who will be monitoring and communicating the RHAs daily blood inventory and triaging plans to CBS, the MOH and PEBMC.
  - c. Reduction to minimum or amber blood inventory levels of affected blood group or blood product.
  - d. Triage of blood order requests between the facilities/RHAs and CBS to ensure that patients in the most urgent clinical need of blood products will receive them based on clinical transfusion guidelines, clinical urgency and existing blood inventory. (See Appendix A - Clinical Transfusion Guidelines and Appendix B - Triaging Guidelines.)
  - e. Transfer blood products between sites to ensure the most urgent patient needs are met.
  - f. Delay of 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 the need to defer treatment must be provided 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.

3. Canadian Blood Services will communicate regularly with RHA Transfusion Services and the MOH 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. It is recommended that Transfusion Service medical staff participate as well as technical staff. Once the inventory has returned to normal desired levels (Green Phase), Canadian Blood Services will notify all Facility/RHA Transfusion Services and the MOH via fax.



## Regional Health Facilities Blood Shortage Management Plan

The RHAs will manage the blood inventory within their respective regions. However, to ensure that Saskatchewan patients who are in most urgent need have equitable and timely access to the provincial blood supply, CBS (Saskatchewan) will host daily conference calls with transfusion service representatives from all of the RHAs who can speak to their region's blood inventory and triaging plans. This will help to ensure that patients are being triaged consistently in accordance with the provincial Clinical Transfusion Guidelines (See Appendix A) and Triage Guidelines (See Appendix B.) A representative of the MOH and/or Provincial Emergency Blood Management Committee will be present on all calls and report this information back to the PEBMC.

4. Facilities/RHAs will communicate blood inventory changes to their transfusion community (i.e. physicians, Quality of Care Coordinators/patient representatives, patients and their families).
5. **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.



## Regional Health Facilities Blood Shortage Management Plan

### RED PHASE

#### Severe Shortage of Inventory

Red Phase implies that blood inventory levels are insufficient to ensure that patients with non-elective indication for transfusion will receive the required transfusions(s).

1. **Canadian Blood Services (Saskatchewan) will notify facilities/RHAs** and the MOH of the initiation of a Red phase of inventory levels. There may be public service announcements. The MOH and/or Provincial Emergency Blood Management Committee will work with Canadian Blood Services to coordinate and oversee all media announcements regarding the blood supply and any call for donations should they deem this necessary and appropriate.
2. Canadian Blood Services will reduce fill rates by a defined per cent. This may be 50% or more depending on the severity and anticipated length of time of the shortage.
3. When the facility/RHA receives the fax notification that Red Phase has been initiated, the Transfusion Service Medical Director or Consultant on call must be notified. The facility/RHA will activate the **Emergency Blood Management Plan for Red phase**. This shall include:
  - a. Notification to Senior Administrative, Medical and Nursing staff, and the Quality of Care Coordinators/patient representatives of the situation.
  - b. Notification of the facility/RHA transfusion service medical and technical representatives who will be monitoring and communicating the RHAs daily blood inventory and triaging plans, to CBS, the MOH and PEBMC.
  - c. Reduction to minimum or red phase blood inventory levels of affected blood group or blood product.
  - d. Triage of blood order requests between the facility/RHA and CBS to ensure that patients in the most urgent need of blood products will receive them based on clinical transfusion guidelines, clinical urgency and existing blood inventory. (See Appendix A - Clinical Transfusion Guidelines and Appendix B - Triage Guidelines.)
  - e. Transfer blood products between sites to ensure the most urgent patient needs are met.
  - f. Delay of 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 the need to defer treatment must be provided in the communication.
4. To ensure that Saskatchewan patients who are in most urgent need have equitable and timely access to the provincial blood supply, Canadian Blood Services (Saskatchewan) will host daily conference calls with transfusion service medical and technical representatives from all of the RHAs who can speak to their region's blood inventory and triaging plans. This will help to ensure that patients are being triaged consistently in accordance with the provincial Clinical Transfusion Guidelines (See Appendix A) and Triage Guidelines (See Appendix B.) A representative of the MOH and/or Provincial Emergency Blood Management Committee will be present on all calls and report this information back to the PEBMC.
5. Facilities/RHAs will communicate blood inventory changes to their transfusion community (i.e. physicians, Quality of Care Coordinators/patient representatives, patients and their families).



## Regional Health Facilities Blood Shortage Management Plan

6. **Recovery** of facility/RHA 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 such that there is a return to normal activities and usage can be approved. 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 Facility/RHA 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 coordinated response to a reduction of blood product use is achieved. By working together, it 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 facilities/RHAs need to have a consistent approach to ensure equitable access to this critical supply.

It is recommended that all key stakeholders are represented on the committee tasked with the development of the Facility/RHA Emergency Blood Management Plan. This will result in joint input and decision making on the determined strategies required to reduce blood usage at the facility and a collaborative response should it be necessary to implement it. Suggested personnel to have on this committee are recommended in other existing plans and may include:

- Representative of facility/RHA senior or executive management
- Facility/RHA Transfusion Service Medical Director
- Head, Department of Internal Medicine (or in larger centers could be Heads of Critical Care Medicine and Hematology/Oncology)
- Head, Department of Surgery
- Head, Department of Anesthesiology
- Head, Intensive Care and Emergency Department
- Head, Obstetrics/Gynecology Department
- Chair of the Blood Transfusion Committee
- Director of Nursing
- Manager Responsible for Transfusion Service
- Transfusion Technical Supervisor
- Transfusion Safety Officer
- Hospital/RHA Risk Manager
- Director Communications/Public Affairs
- Other members as deemed appropriate by the Facility/RHA Blood Transfusion Committee
- Board member/Member of Public<sup>1</sup>

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<sup>1</sup> It is recommended that consideration be given to identifying patient groups who have had high reliance on transfusion of labile blood products as opposed to fractionated products.





## Regional Health Facilities Blood Shortage Management Plan

The plan should define the notification of personnel required for various phases of inventory shortages. Amber phase may initially include the Transfusion Service Medical Director, Hematology/Oncology and Head of Intensive Care and Emergency, but may expand to Heads/Directors 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. A mechanism is needed to define:

- Categories of patients to prioritize need for blood products.
- How blood conservation and transfusion alternatives may be safely and appropriately implemented to avoid anemia and reduce demand for blood.
- How blood order requests will be triaged (predefined clinical transfusion guidelines, use of patient categories, direct medical approval).
- How blood use will be monitored.
- Daily monitoring of inventory levels and status of situation from CBS and communication of this information throughout the facility to physicians, Quality of Care Coordinators/patient representatives, patients and their families.
- How surgical schedules will be coordinated relating to deferral of procedures.
- How the prioritization of patients / procedures will occur during the recovery phase to ensure any inventory recovery can be sustained.

**Whenever possible, these guidelines and mechanisms should be consistent with any provincially established guidelines, mechanisms or protocols, where they exist.**

### Conclusion

In the event that a shortage occurs in the inventory levels of blood products / blood components, facility/RHA Transfusion Services will be notified by Canadian Blood Services (Saskatchewan). Once this notification occurs, actions will be required within the facility/RHA, dependant on the severity and anticipated time frame of the blood product shortage. Reduction in inventory held on site and, if necessary, reduction in the use of blood products may be required.

Any reduction to the provision of blood products or components within facilities/RHAs must follow an Emergency Blood Management Plan developed internally by key stakeholders. This will ensure that any strategies taken to reduce service or prioritize patients regarding use of a critically low blood supply will be accepted and followed. This, in turn, will help utilize the limited available inventory across the region / province / country in an equitable manner so that those 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.





## Regional Health Facilities Blood Shortage Management Plan

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# Saskatchewan Regional Health Facilities Blood Shortage Management Plan Toolkit

Contingency Plan Checklist for Regional Health Facilities  
Roles & Responsibilities during the Phases of a Blood Shortage  
Emergency Blood Management Plan (EBMP) Template  
Amber Phase Memo  
Red Phase Memo  
Recovery Phase Memo  
Blood Shortage Subcommittee Membership



**Contingency Plan Checklist for Facilities/RHAs  
Preparedness for Responding to Blood Inventory Shortages**

**GREEN PHASE: Step 1**

**Inventory levels can be maintained at optimal levels.**

- Establish Facility/RHA Emergency Blood Management Committee (EBMC).
- Develop RHA/Hospital Contingency Plan for managing blood shortages.
- Ensure Emergency Blood Management Plan (EBMP) is integrated into Facility Disaster Plan.
- Develop a template to be used in the amber and red phase, identifying key facility/RHA contacts and their designates, to fill the various roles outlined in the RHA and provincial blood shortage plans (e.g. RHA medical and technical representatives on CBS' daily inventory conference calls, the EBMC, etc). Notify CBS, the MOH and others throughout the RHA of these contacts and their designates (include pager numbers, fax numbers, email addresses).
- Provide training on the contents of the plan and the communication strategy related to blood shortages.
- Consider holding a "mock disaster" to trial the plan.
- Develop a RHA blood inventory management plan to ensure that 'best practices' in inventory management of blood components and blood products are in place.
- Ideal "on hand" inventory levels should be determined and made available 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/RHAs and develop a plan to share inventory in the event of a shortage.
- Develop provincially standardized storage and transportation processes.
- Develop a blood utilization management plan (through Transfusion Medicine Committee or Medical Advisory Committee), to ensure effective utilization, including such things as: predefined clinical transfusion guidelines, 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 (Saskatchewan) will be notified of a local situation that could affect blood supply e.g. equipment failure or multiple traumas.
- Define a process for a 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 an internal RHA communication template to inform hospital stakeholders of the shortage. Include list of contact names/numbers of those to be notified in Amber phase (i.e. 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.
- Contact information for other nearby sites should be 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).
- Plan should give direction to reduce “on hand” red cell stock by 25% (3 day vs. 4 day levels) if shortage applies to this component and reinforce NOT to stockpile inventory.
- Identify one person to act as a main contact with CBS to communicate any RHA inventory needs, 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 before hand and documented to ensure everyone understands who is responsible for this role.
- 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 before hand.
- 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.

- Include the fact that notification of this level of shortage should be received from CBS.
- Internal hospital notification should go out (in writing) to Division Heads of Surgery , Anesthesia, Critical Care, Trauma/Emergency, Hematology and Medicine, Obstetrics and Gynecology, 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. (See Appendix A – Clinical Transfusion Guidelines and Appendix B - Triaging Guidelines.)
- 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 CBS that inventory levels are on the rise, it is vital that hospital blood usage remains restricted to critical needs or increases at a controlled pace, in accordance with CBS directives, 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 Heads of Surgery , Anesthesia, Critical care, Trauma/Emergency, Hematology and Medicine, Obstetrics and Gynecology, 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.



### References

1. Canadian Blood Services (2007). Communication and Inventory Management during Pandemic Influenza: Information for Hospitals.
2. Contingency Plan for Management of Blood Product Shortages (2008). Ontario Provincial Blood Programs Coordinating Office, Contingency Planning Working Group.
3. Ontario Health Plan for an Influenza Pandemic. September 2006.
4. Clarke, G., Blajchman, M. (2006) Canadian Blood Services. Clinical Guide to Transfusion, 4th Edition. Available on the Internet at: [www.transfusionmedicine.ca](http://www.transfusionmedicine.ca)
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6. Contingency Plan for Blood Component Shortages. DRAFT procedure Sunnybrook Health Sciences Centre, Toronto, ON.
7. Blood Shortage Policies. QM-TM-410A-01. Procedure from Cambridge Hospital, Cambridge, ON.
8. Bluewater Health Department of Laboratory Services (2007) Draft Procedure: Contingency Plan for Blood Supply shortages LAB-BBK-DIS-C-002.
9. Bluewater Health Department of Laboratory Services (2007) Draft: Practice Parameters for Transfusion of Blood Components (for Adult Patients) LAB-BBK-INV-D-022.
10. Kenora – Rainy River Regional Laboratory Program Inc. (2007) Disaster Plan: Transfusion Medicine Department. 06-IM-010.



## Regional Health Facilities Blood Shortage Management Plan

### Roles and Responsibilities during the Phases of a Blood Shortage

Phase	RHA/Hospital	Ministry of Health (MOH)	Canadian Blood Services
<b>Green</b> 100% of optimal inventory or 4-6 days of average daily use	<ul style="list-style-type: none"> <li>• Normal utilization activities.</li> <li>• Develop Facility/RHA Emergency Blood Management Plan (EBMP) for use during shortages.</li> <li>• Must report hospital inventory to CBS on product request form.</li> </ul>	<ul style="list-style-type: none"> <li>• Initiate and act as secretariat for the Saskatchewan Provincial Emergency Blood Management Committee (PEBMC).</li> <li>• Ensure communication linkages between PEBMC and RHA EBMCs.</li> <li>• Maintain, review, disseminate provincial blood contingency plan.</li> <li>• Support development of RHA/hospital EBMP.</li> </ul>	<ul style="list-style-type: none"> <li>• Fill Inventory requests as per routine practice.</li> <li>• Notify RHA/hospital Transfusion Services by fax, of reductions to fill rates.</li> <li>• Effectively manage provincial/ national blood product inventories.</li> <li>• Initiate and develop plans to be used during shortages.</li> </ul>
<b>Amber</b> Less than 75% of optimal inventory or < 2-3 days	<ul style="list-style-type: none"> <li>• Transfusion Service Medical Director / Consultant on call must be notified. The facility/RHA will activate the EBMP for Amber Phase.</li> <li>• <u>Must</u> report hospital inventory to CBS on product request form.</li> <li>• Reduce inventory held on site.</li> <li>• Urgent blood order requests may need to be triaged. Some activities in facilities may need to be reduced or delayed.</li> <li>• Facility/RHA EBMP may include:               <ul style="list-style-type: none"> <li>○ setting Clinical Transfusion Guidelines.</li> <li>○ requirement of Medical Director authorization for use of blood/blood component.</li> </ul> </li> <li>• Work with the MOH through the Joint Communications Committee to coordinate and oversee all media announcements regarding impact of blood supply on RHA services.</li> </ul>	<ul style="list-style-type: none"> <li>• Convene PEBMC.</li> <li>• Monitor and review correspondence and updates from CBS.</li> <li>• Assist CBS as needed (e.g. appeal for donations, instruct RHAs/hospitals to reduce product use).</li> <li>• Liaise with other ministry branches as needed.</li> <li>• Coordinate and oversee all media announcements regarding impact of blood supply on provincial health services.</li> <li>• Work with CBS and RHAs to coordinate communication (to staff and public/media) as required.</li> </ul>	<ul style="list-style-type: none"> <li>• Declare shortage and notify MOH and RHA/hospital Transfusion Services by fax of Amber Phase (CBS may reduce fill rates by 25-50% of request).</li> <li>• Communicate regularly (including daily conference calls) with MOH and RHA/hospital Transfusion Services, using defined protocols to indicate phase, anticipated recovery time (if known) or if the inventory is dropping to even more critical levels.</li> <li>• Coordinate and oversee all media announcements regarding the blood supply and any call for donations as required.</li> </ul>



## Regional Health Facilities Blood Shortage Management Plan

Phase	RHA/Hospital	Ministry of Health (MOH)	Canadian Blood Services
<p><b>Red</b> Less than 50% of optimal inventory or &lt; 1 day of average use</p>	<ul style="list-style-type: none"> <li>• Transfusion Service Medical Director/Consultant on call must be notified. The facility/RHA will activate the <b>EBMP for Red Phase</b>.</li> <li>• Facilities/RHAs will have a defined internal plan to reduce blood usage. (See Appendix A – Clinical Transfusion Guidelines.)</li> <li>• All facilities/RHAs <u>must</u> report their blood product inventory levels to CBS.</li> <li>• All urgent blood order requests will need to be triaged based on clinical need. (See Appendix B – Triaging Guidelines.)</li> <li>• It may be necessary to transfer blood product between facilities/RHAs.</li> <li>• Work with the MOH through the Joint Communications Committee to coordinate and oversee all media announcements regarding impact of blood supply on RHA services.</li> </ul>	<ul style="list-style-type: none"> <li>• Convene PEBMC.</li> <li>• Monitor and review correspondence and updates from CBS.</li> <li>• Assist CBS as needed (e.g. appeal for donations, instruct RHAs/hospitals to reduce product use).</li> <li>• Liaise with other ministry branches as needed.</li> <li>• Coordinate and oversee all media announcements regarding impact of blood supply on provincial health services.</li> <li>• Work with CBS and RHAs to coordinate communication (to staff and public/media) as required.</li> </ul>	<ul style="list-style-type: none"> <li>• Notify the MOH and facility/RHA Transfusion Services by fax of Red Phase.</li> <li>• Reduce fill rates by a defined per cent. This may be 50% or more depending on the severity and anticipated length of the shortage.</li> <li>• Communicate regularly (including daily conference calls) with the MOH and RHA/hospital Transfusion Services, using defined protocols to indicate phase, when anticipated recovery time or if the inventory is dropping to even more critical levels and to take action as per facility/RHA EBMP.</li> <li>• Coordinate and oversee all media announcements regarding the blood supply and any call for donations should they deem this necessary and appropriate.</li> </ul>
<p><b>Recovery</b></p>	<ul style="list-style-type: none"> <li>• Facilities/RHAs will raise blood usage/ activity in accordance with CBS directives.</li> <li>• Scheduling of elective procedures should be gradual as the blood inventory levels may be vulnerable to returning to shortage during the recovery period.</li> <li>• Work with the MOH through the Joint Communications Committee to coordinate and oversee all media announcements regarding impact of blood supply on RHA services.</li> </ul>	<ul style="list-style-type: none"> <li>• Monitor and review correspondence and updates from CBS.</li> <li>• Provide assistance to CBS as needed.</li> <li>• Review event and report to MOH emergency management structure.</li> <li>• Work with CBS and RHAs to coordinate communication (to staff and public/media) as required.</li> </ul>	<ul style="list-style-type: none"> <li>• Notify MOH and RHA/hospital Transfusion Services via fax when inventories have returned to normal.</li> <li>• Slowly increase order fill rate to allow hospital inventories to return to optimal levels.</li> <li>• Coordinate and oversee all media announcements regarding the blood supply.</li> </ul>





## Regional Health Facilities Blood Shortage Management Plan

### Generic Hospital Blood Emergency Management Plan

Lab Area: <b>XXXXXX Manual</b>	Document No.:
	Page 1 of 8
Issued by: Professional Practice Leader	Effective date:
Approved by: Medical Director / Manager	Revision date:
Related Documents:	Filename:
Distribution:	

#### SOP REVIEW RECORD

Author :	_____
	<Enter name>
Issued by:	_____ Date _____
	<Enter Name>
Manager's Signature:	_____
	Date _____ <Enter Name>
Medical Director's Signature:	_____
	Date _____ <Enter Name>

Removed Date:	_____
By:	_____
Revised	Final Archive

REVISION DATE	REVISION/DESCRIPTION



## Regional Health Facilities Blood Shortage Management Plan

Lab Area: <b>XXXXX Manual</b>	Document No.:
	Page 2 of 8
Issued by: Professional Practice Leader	Effective date:
Approved by: Medical Director / Manager	Revision date:
Related Documents:	Filename:
Distribution:	

### 1.0. Principle

- 1.1. Blood products are supplied directly to hospitals from Canadian Blood Services. In the event that Canadian Blood Services is unable to fill inventory requests for blood components or blood products at requested levels, hospitals shall have a policy and procedure in place to adjust their usage in response. The degree of reduction to blood use required will be dependant on the severity and expected length of the shortage. It is critical that stockpiling of the component / product in shortage **DOES NOT OCCUR**. Note: a reduction in inventory may be limited to one blood group, one blood component, all blood components or a specific blood product supplied by Canadian Blood Services.
- 1.2. Blood inventory shortages will be categorized into four phases to help define the required level of response / reduction at the hospital level:
  - a. **GREEN PHASE:** No shortage of blood components or blood products exists. CBS is able to fill hospital requests as per routine practice. Hospitals continue to practice routine strategies to minimize product wastage.
  - b. **AMBER PHASE:** Blood inventory levels are insufficient to continue with routine transfusion practices. Canadian Blood Services is unable to fill hospital requests as per routine practice. The shortage may result from a short term imbalance between the supply and demand. Hospital action will be required to reduce inventory levels on hand and may be required to reduce usage of blood component(s) / product(s) affected by the shortage in order to ensure conservation for use in urgent treatments.
  - c. **RED PHASE:** Blood inventory levels are insufficient to ensure that patients with non-elective indications for transfusion will receive the required transfusions. Canadian Blood Services will call a Red phase when blood component / product inventory is at a critically low level and is not expected to improve for a prolonged period of time. In this situation, hospital demand continues to outpace available inventory. Hospital action is required to reduce inventory levels on hand to minimum levels and will be required to reduce usage of blood component(s) / product(s) affected by the shortage in order to conserve blood for use in critical and life threatening treatments only.
  - d. **RECOVERY PHASE:** When inventory begins to rise again in relation to demand, Canadian Blood Services will communicate to hospitals. It is critical that hospital use does not resume at normal operating rates immediately. Blood use reductions in place should remain until Canadian Blood Services indicates that inventory has reached a stable level to allow for increased usage. Following this notification, hospitals must gradually increase usage in accordance with CBS directive to ensure the improved inventory level can be maintained and a return to the shortage phase is avoided.



## Regional Health Facilities Blood Shortage Management Plan

Lab Area: XXXXX Manual	Document No.:
	Page 3 of 8
Issued by: Professional Practice Leader	Effective date:
Approved by: Medical Director / Manager	Revision date:
Related Documents:	Filename:
Distribution:	

### 2.0. Scope/Related Policies

- 2.1. Stock Inventory Levels defined (by blood component / blood product including optimal as well as emergency / critical levels)
- 2.2. Redistribution / Transfer of blood to / from another facility
- 2.3. Maximum Surgical Blood Order Schedule
- 2.4. Existing practice guidelines for use of blood components / blood products in use at facility
- 2.5. Saskatchewan Contingency plan for the management of blood product shortages (2009)
- 2.6. Canadian Blood Services Pandemic Plan
- 2.7 National Plan for the Management of Shortages of Labile Blood Components

### 3.0 Specimen

Not applicable

### 4.0 Materials

Not applicable

### 5.0 Safety

Not applicable

### 6.0 Records/Forms/Documents

- 6.1 Communication memo templates for internal notification of medical, nursing and laboratory personnel
  - 6.1.1 Amber Phase memo
  - 6.1.2 Red Phase memo
  - 6.1.3 Recovery Phase memo
  - 6.1.4 Patient notification memo
  - 6.1.5 Ministry of Health memo
- 6.2 Communication forms relating to Canadian Blood Services
  - 6.2.1 Blood component / product order forms (includes section to report hospital inventory)
  - 6.2.2 Form to record CBS conference calls on inventory status
- 6.3 Practice parameters for blood component / blood product use (adopted by facility)
- 6.4 Contact list of personnel to send notification memos (by phase)

### 7.0 Quality Control

Not applicable



## Regional Health Facilities Blood Shortage Management Plan

Lab Area: XXXXX Manual	Document No.:
	Page 4 of 8
Issued by: Professional Practice Leader	Effective date:
Approved by: Medical Director / Manager	Revision date:
Related Documents:	Filename:
Distribution:	

### 8.0 Procedure

Phase	Action
<b>8.1 Green Phase: Normal operations, preparation phase</b>	<p>8.1.1 Follow standard operating procedures under normal blood inventory (optimal) levels.</p> <p>8.1.2 Prepare facility to ensure ability to respond to a notification of shortage to blood component(s) / blood product(s).</p>
<b>8.2 Amber Phase: Initiate internal communication</b>	<p>8.2.1 Upon notification of amber phase of blood shortage from Canadian Blood Services, notify internal personnel as follows verbally and in writing (refer to Amber memo template):</p> <ul style="list-style-type: none"> <li>– Manager / Supervisor responsible for Transfusion service</li> <li>– Medical Director responsible for Transfusion service</li> <li>– Chairperson of Transfusion Committee</li> <li>– Chairperson of Facility/RHA Emergency Blood Management Committee</li> <li>– Medical Chief of Staff, CEO</li> <li>– Heads/Directors of Nursing, Laboratory, Anaesthesia, Surgery, Haematology, Oncology, Emergency, ICU, Obstetrics and Gynecology</li> <li>– Risk Manager</li> <li>– Public Relations</li> <li>– Quality of Care Coordinator/Patient Representative</li> </ul> <p>8.2.2 Assign key point person in RHA to liaise with CBS regarding inventory status.</p> <p>8.2.3 Document communication between hospital and CBS relating to inventory status / levels.</p>
<b>8.3 Amber Phase: Implement reduction of inventory levels targeted to hold on site</b>	<p>8.3.1 Reduce desired inventory target (on hand inventory levels) to 75% of normal, or as determined appropriate for the facility.</p> <p>8.3.2 Reduce inventory held in satellite storage locations (trauma room, operating room).</p> <p>8.3.3 Report hospital inventory levels to CBS on product request form.</p>
<b>8.4 Amber Phase: Implement review of orders for the blood component(s) / product(s) that the shortage applies to</b>	<p>8.4.1 Transfusion Service Technologist(s) reviews all blood orders against facility/RHA adopted guidelines (for relevant component(s) / product(s)).</p> <p>8.4.2 Transfusion service physician or designate will review each request that does not comply with guidelines and make a decision on approval.</p> <p>8.4.3 Ensure all orders for blood requested for surgical use comply with the facility/RHA Maximum Surgical Blood Order Schedule (MSBOS).</p> <p>8.4.4 Reduce holding period post operatively for any blood not required during surgery.</p>



## Regional Health Facilities Blood Shortage Management Plan

<b>8.5 Amber Phase: If shortage continues, review elective transfusions scheduled</b>	<p>8.5.1 Designated Medical personnel (Facility/RHA Emergency Blood Management Committee or Transfusion Committee) will review all impending elective surgery for potential blood use and consider deferral if it can be safely deferred NOTE: if surgeries will be deferred, patients and their families must be notified (refer to patient notification memo template).</p> <p>8.5.2 Encourage increase in blood conservation practices where feasible including: Autologous donation, use of erythropoietin, use of medication to reduce blood loss and perioperative blood salvage where applicable.</p>
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## Regional Health Facilities Blood Shortage Management Plan

Lab Area: <b>XXXXXX Manual</b>	Document No.:
	Page 5 of 8
Issued by: Professional Practice Leader	Effective date:
Approved by: Medical Director / Manager	Revision date:
Related Documents:	Filename:
Distribution:	

Phase	Action
<b>8.6 Red Phase: Initiate internal notification</b>	<p>8.6.1 Upon notification of Red Phase of blood shortage from Canadian Blood Services, notify internal personnel as follows verbally and in writing (refer to Red memo template):</p> <ul style="list-style-type: none"> <li>- Manager / Supervisor responsible for Transfusion service</li> <li>- Medical Director responsible for Transfusion service</li> <li>- Chairperson of Transfusion Committee</li> <li>- Chairperson of Facility/RHA Emergency Blood Management Committee</li> <li>- Medical Chief of Staff, CEO</li> <li>- Heads/Directors of Nursing, Laboratory, Anaesthesia, Surgery, Haematology, Oncology, Emergency, ICU, Obstetrics and Gynecology</li> <li>- Risk Manager</li> <li>- Public Relations</li> <li>- Quality of Care Coordinator/Patient Representative</li> </ul> <p>8.6.2 Assign a key point person to liaise with CBS regarding inventory status.</p> <p>8.6.3 Document communication between hospital and CBS relating to inventory status / levels.</p>
<b>8.7 Red Phase: Implement reduction of inventory levels targeted to hold on site</b>	<p>8.7.1 Reduce desired inventory target (on hand inventory levels) to minimum 25-30% of normal, or as determined appropriate for the facility.</p> <p>8.7.2 Refrain from holding any inventory in satellite storage locations (trauma room, operating room).</p> <p>8.7.3 Report hospital inventory levels to CBS as requested.</p>
<b>8.8 Red Phase: Implement review of all orders for the blood component(s) / product(s) that the shortage applies to</b>	<p>8.8.1 Transfusion service physician or designate must review all blood orders received during this phase of shortage.</p> <p>8.8.2 Approval will be based on Clinical Transfusion Guidelines (See Appendix A), Triaging Guidelines (see Appendix B), individual clinical evaluation and whether the need is deemed to be life threatening or not.</p> <p>8.8.3 The blood component(s) / product(s) in short supply should not be held or reserved for any patient.</p>
<b>8.9 Red Phase: If shortage continues, review elective transfusions scheduled</b>	<p>8.9.1 Facility/RHA Emergency Blood Management Committee or Transfusion committee will review all elective transfusion requests (surgical or non-surgical) and defer all cases that can be safely deferred NOTE: if transfusions are deferred, patients must be notified (refer to patient notification memo template).</p> <p>8.9.2 Increase blood conservation practices where feasible including: Autologous donation, use of erythropoietin, use of medication to reduce blood loss and perioperative blood salvage where applicable.</p>



## Regional Health Facilities Blood Shortage Management Plan

Lab Area: <b>XXXXX Manual</b>	Document No.:
	Page 6 of 8
Issued by: Professional Practice Leader	Effective date:
Approved by: Medical Director / Manager	Revision date:
Related Documents:	Filename:
Distribution:	

Phase	Action
<b>8.10 Red Phase: Communicate with other nearby facilities</b>	8.10.1 The designated Medical person should communicate with other nearby facilities / regional facilities (in consultation with the Medical Director of the local Blood Centre) to determine if inter-hospital transfer of product is required to support patients in critical need of blood component(s)/product(s) that are at critical levels.
<b>8.11 Red Phase: Consider options of extending shelf life of blood component(s) / product(s) that is in critical supply</b>	8.11.1 Initiate guidelines for extension of shelf life of blood component(s) / product(s) that are in critical supply according to National Advisory Committee on Blood and Blood Products recommendations / communications.
<b>8.12 Recovery Phase: Initiate internal communication</b>	8.12.1 Upon notification of recovery phase from blood shortage from Canadian Blood Services, notify internal personnel verbally and in writing (refer to Recovery memo template): <ul style="list-style-type: none"> <li>- Manager / Supervisor responsible for Transfusion service</li> <li>- Medical Director responsible for Transfusion service</li> <li>- Chairperson of Transfusion Committee</li> <li>- Chairperson of Emergency Blood management committee</li> <li>- Medical Chief of staff, CEO</li> <li>- Heads/Directors of Nursing, Laboratory, Anaesthesia, Surgery, Haematology, Oncology, Emergency, ICU, Obstetrics and Gynecology</li> <li>- Risk Manager</li> <li>- Public relations</li> <li>- Quality of Care Coordinator/patient representative</li> </ul>
<b>8.13 Recovery Phase: Maintain inventory levels targeted to hold on site at reduced levels</b>	8.13.1 Maintain inventory at 50% level of optimal (Amber recovery) or 30% level of optimal (Red phase recovery) until notified by Canadian Blood Services that Regional / National inventory has reached stability.  8.13.2 Continue to refrain from holding or reduce inventory held in satellite storage locations (trauma room, operating room).



## Regional Health Facilities Blood Shortage Management Plan

Lab Area: <b>XXXXX Manual</b>	Document No.:
	Page 7 of 8
Issued by: Professional Practice Leader	Effective date:
Approved by: Medical Director / Manager	Revision date:
Related Documents:	Filename:
Distribution:	

Phase	Action
<b>8.14 Recovery Phase: Review of orders for the blood component(s) / product(s) that the shortage applies to</b>	<p>8.14.1 Transfusion Service Technologist(s) should continue to review all blood orders against facility/RHA adopted guidelines (for relevant component(s) / product(s).</p> <p>8.14.2 Transfusion service physician or designate review each request from 8.14.1 that does not comply with facility/RHA adopted guidelines and make approval decision.</p> <p>8.14.3 Ensure all orders for blood requested for any urgent surgical use comply with the facility Maximum Surgical Blood Order Schedule (MSBOS) where applicable.</p> <p>8.14.4 Continue to minimize holding period post operatively for any blood not required during surgery.</p>
<b>8.15 Recovery Phase: Review elective transfusions scheduled</b>	<p>8.15.1 Emergency blood management committee or Transfusion committee will continue to review all elective transfusion requests and consider deferral if it can be safely deferred NOTE: if transfusions will be deferred, <u>patients and their families must continue to be notified</u> (refer to patient notification memo template).</p> <p>8.15.2 Continue to encourage blood conservation practices where feasible including: Autologous donation, use of erythropoietin, use of medication to reduce blood loss.</p> <p>8.15.3 As inventory improves, gradually resume elective transfusion, beginning with non-surgical patients or based on prioritization of need as determined by the Emergency Blood Management Committee / Transfusion Committee.</p>
<b>8.16 Recovery Phase: Return to green phase</b>	<p>8.16.1 Once communication from Canadian Blood Services is received that blood inventory for the component(s) / product(s) that were in short supply has recovered, gradually increase the inventory held on site to optimal levels.</p> <p>8.16.2 Return to normal operations.</p>





## Regional Health Facilities Blood Shortage Management Plan

Lab Area: <b>XXXXX Manual</b>	Document No.:
	Page 8 of 8
Issued by: Professional Practice Leader	Effective date:
Approved by: Medical Director / Manager	Revision date:
Related Documents:	Filename:
Distribution:	

### 9.0 References

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2. Ontario Laboratory Accreditation (OLA) Requirements version 4, released December 2007.
3. Canadian Blood Services (2007). Communication and Inventory Management during Pandemic Influenza: Information for Hospitals.
4. Contingency Plan for Management of Blood Product Shortages (2008). Ontario Provincial Blood Programs Coordinating Office, Contingency Planning Working Group.
5. Clarke, G., Blajchman, M. (2006) Canadian Blood Services. Clinical Guide to Transfusion, 4th Edition. Available on the Internet at: [www.transfusionmedicine.ca](http://www.transfusionmedicine.ca)
6. Ontario Health Plan for an Influenza Pandemic. September 2006.
7. Bluewater Health Department of Laboratory Services (2007) Draft Procedure: Contingency Plan for Blood Supply shortages LAB-BBK-DIS-C-002.
8. Bluewater Health Department of Laboratory Services (2007) Draft : Practice Parameters for Transfusion of Blood Components (for Adult Patients) LAB-BBK-INV-D-022.
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10. Sunnybrook Health Sciences Centre (2007) Draft Procedure: Contingency Plan for Blood Component Shortages.
11. Cambridge Hospital. (2004) Policy: Blood Shortage Policies. QM-TM-410A-01.
12. Kenora – Rainy River Regional Laboratory Program Inc. (2007) Disaster Plan: Transfusion Medicine Department. 06-IM-010



Notification of Blood Component/  
Blood Product Shortage

Hospital Name Here

# Memo

To: [Enter name of Heads of Surgery, Anaesthesia, Critical Care, Trauma, Emergency, Hematology, Medicine, Obstetrics and Gynecology, 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\***

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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



## Regional Health Facilities Blood Shortage Management Plan

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 me at **[Enter the contact number desired]**.



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

Hospital Name Here

# Memo

To: [Enter name of Heads of Surgery, Anaesthesia, Critical Care, Trauma, Emergency, Hematology, Medicine, Obstetrics and Gynecology, 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 \*\***

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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



## Regional Health Facilities Blood Shortage Management Plan

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 me at [Enter the contact number desired].



Notification Regarding Blood  
Component/Blood Product  
Shortage Situation

Hospital Name Here

# Memo

To: [Enter name of Heads of Surgery, Anaesthesia, Critical Care, Trauma, Emergency, Hematology, Medicine, Obstetrics and Gynecology, 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\***

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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.



## Regional Health Facilities Blood Shortage Management Plan

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 me at **[Enter the contact number desired]**.



## **Blood Shortage Sub-Committee Membership**

<b>Name</b>	<b>Title</b>	<b>Organization</b>
<b>Ms. Carolyn Andrews</b>	Regional Director of Laboratory Services	Sun Country Health Region
<b>Ms. Cheryl Bear</b>	Director of Diagnostics	Sunrise Health Region
<b>Ms. Maureen Ffoulkes-Jones</b>	Regional Manager, Transfusion Medicine and Quality	Saskatoon Health Region
<b>Ms. Kathleen Handford</b>	Project Manager, Acute and Emergency Services Branch	Saskatchewan Health
<b>Ms. Judy Hoff</b>	LIS Specialist/MLT II Transfusions, Laboratory Services	Regina Qu'Appelle Health Region
<b>Ms. Lisa Desjarlais</b>	Administrative Support, Acute and Emergency Services Branch	Saskatchewan Health

Distributed copies of this plan may not be the most current version.  
Find the current version at [www.health.gov.sk.ca/transfusion-medicine](http://www.health.gov.sk.ca/transfusion-medicine)