1. **PRINCIPLE:**

Most blood components and plasma protein and related products are ordered directly by hospitals from Canadian Blood Services. Hospitals also have the option of transferring blood components and plasma protein and related products between facilities for optimal utilization or to ensure best patient care. In such cases, it is necessary to ensure that the blood components and plasma protein and related products are received properly packaged and that the process ensures accurate tracking and disposition reporting.

1. **PURPOSE:**

To provide a standardized process for receiving blood components and plasma protein and related products, to ensure that acceptable temperature range was maintained during transportation and ensures accurate tracking and disposition reporting.10.1 This includes:

* Receipt from Blood Supplier
* Redistribution
* Provision of crossmatched units
* Provision of components during an MHP
1. **RELEVANT REQUIREMENTS:**
	1. Blood components and plasma protein and related products shall be inspected for abnormal appearance upon receipt by the TS. This inspection must be documented.10.1
	2. Blood components and products not passing inspection shall be quarantined until appropriate disposition is determined. The process must be documented, and the shipper informed.10.1
	3. Shipping containers for blood components and plasma protein and related products must be constructed to resist damage, examined for damage prior to use and be designed to include a tamper evident seal.10.1,10.2
	4. Shipping containers shall have an outer label that meets provincial, territorial, or federal transport regulations and identifies:10.1
		* + The shipping and receiving facility
* That the contents are human blood components or plasma protein and related products
* Any other cautions and or descriptions
	1. All shipments of blood components and plasma protein products must include documentation that has the following information on shipping packing slip10.1,10.3:
		+ - Name of shipping facility and receiving facility
* Identification of components or plasma protein or related products shipped (unit /lot numbers)
* Description of component/plasma protein and related product
* Total number of items shipped
* Date and time shipped
* Identification and signature of the person who packed the shipment
* A unique shipping document number to allow for traceability
* Indication if blood component or plasma protein and related product is not intended for transfusion (e.g., sending for research purposes)
* Indication if the blood component or plasma protein or related product is quarantined (if applicable).
	1. Blood components and plasma protein and related products must be transported in a validated shipping container and in a manner that will maintain the storage temperature requirements specified by the supplier .10.1 Compliance with these specifications is acknowledged by the signed Memorandum of Understanding on file with ORBCoN/FCRP for products that are being redistributed.
	2. Discontinuation of platelet agitation during transportation shall not exceed 24 hours as per the blood supplier’s recommendation.10.1
	3. All packing slips (issue vouchers) must be checked against the actual blood components and plasma protein and related products received to ensure the accuracy of the information. The blood supplier (or shipping facility) should be notified of any discrepancies.10.1
	4. All copies of shipping documentation must be retained according to requirements and/or facility policy, whichever is longest to maintain traceability of blood components and plasma protein and related products from their source until final disposition.10.2
	5. The receiving facility shall be responsible for the final disposition documentation of blood components and blood products that are shipped for blood inventory purposes. 10.2
1. **RELATED POLICIES/PROCEDURES (Policies in OTTRM)**
2. [IM.003 – Visual Inspection of Blood, Blood Components and Plasma Protein and Related](https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Ftransfusionontario.org%2Fwp-content%2Fuploads%2F2020%2F07%2FIM.003-Visual-Inspection-of-Blood-Blood-Components-and-Plasma-Protein-Products.docx&wdOrigin=BROWSELINK)
3. [IM.006 – Shipping Blood Components using J82/E38 Shipping Container](https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Ftransfusionontario.org%2Fwp-content%2Fuploads%2F2020%2F07%2FIM.006-Shipping-Blood-Components-Using-the-J82_E38-Shipping-Containers-SOP.docx&wdOrigin=BROWSELINK)
4. [IM.011 -Shipping Blood Components/Products Using MTS Shipping Containers](https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Ftransfusionontario.org%2Fwp-content%2Fuploads%2F2020%2F07%2FIM011-Shipping-Blood-Component_Products-Using-MTS-Shipping-Containers-3.docx&wdOrigin=BROWSELINK)
5. [IM.012 - Shipping Frozen Blood Components using J82 Shipping Container](https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Ftransfusionontario.org%2Fwp-content%2Fuploads%2F2020%2F07%2FIM.012-Shipment-of-Frozen-Blood-Components-Using-the-J82-Shipping-Container-1-1.docx&wdOrigin=BROWSELINK)
6. IM.014F1 – Blood Components and Plasma Protein and Related Products Inventory Record
7. IM.014F2 – Blood Component or Plasma Protein or Related Product Issue/Transfusion Record Form
8. [QCA.009 – Temperature Check of Blood and Blood Components](https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Ftransfusionontario.org%2Fwp-content%2Fuploads%2F2020%2F06%2FQCA.009-Temperature-Check-of-Blood-and-Blood-Components-final.docx&wdOrigin=BROWSELINK)

**5.0** **MATERIALS:**

1. **Specimen: N/A**
2. **Equipment: N/A**
3. **Reagents: N/A**
4. **Supplies/Related Forms: N/A**
5. **QUALITY CONTROL:**
6. Periodic verification of the shipping container shall be performed to confirm that temperatures remain consistent within the acceptable temperature range under the local conditions. Refer to ORBCoN’s Annual Shipping Container Temperature Verification Report.
7. Shipping containers must be inspected before and after each use.

Check that:

* The inner container is clean and free of breaks or cracks
* The straps and buckles are in good condition
* The outer container is free of breaks/rips
* Address labels from previous shipments have been removed
* Gel and ice packs are not cracked or leaking
1. The acceptable shipping and storage temperatures for blood components or plasma protein and related products are as follows10.3, 10.4

|  |  |  |
| --- | --- | --- |
| **PRODUCT**  | **SHIPPING TEMPERATURE**  | **STORAGE TEMPERATURE** |
| Red Blood Cell Units  | 1 - 10ºC (within 24 hours) | 1-6°C |
| Platelets  | 20 - 24ºC  | 20 - 24ºC  |
| Frozen Plasma | Maintain Frozen  | -18°C or colder. |
| Thawed Plasma | 1 - 10ºC (within 24 hours)  | 1-6°C |
| Plasma Protein and Related Products  | See [Plasma Protein Acceptable Shipping and Storage Requirements](https://transfusionontario.org/en/plasma-protein-product-acceptable-shipping-and-storage-requirements/)  | See [Plasma Protein Acceptable Shipping and Storage Requirements](https://transfusionontario.org/en/plasma-protein-product-acceptable-shipping-and-storage-requirements/)  |

**7.0 PROCEDURE:**

|  |  |
| --- | --- |
| **STEP** | **ACTION** |
| 1. Review the Shipping Voucher or Shipping Label
 | * 1. Retrieve and verify the shipping voucher or shipping label to ensure the container has been delivered to the correct hospital.

|  |  |
| --- | --- |
| **If** | **Then** |
| Received package intended for a different hospital | * Do not open the shipment.
* Notify the sending hospital or the blood supplier.
	+ Initiate a customer feedback form online for shipments received from the blood supplier.
	+ Follow the hospital or blood supplier’s indications as to what to do with the shipment.
* Follow your hospital specific process for initiating an incident investigation.
 |

* 1. Count the number of boxes in the shipment to confirm that the number corresponds to the amount received.

|  |  |
| --- | --- |
| **If** | **Then** |
| Missing container | * Notify the sending hospital or the blood supplier.
	+ Initiate a customer feedback form online for shipments received from the blood supplier.
* Follow your hospital specific process for initiating an incident investigation.
 |

 |
| 1. Verify the integrity of the shipping container and transit time
 | 1. Retrieve the Inter-Hospital Transfer form or look at the shipping voucher and record the length of time in transit on the form or voucher.
2. Verify that the items were received within the acceptable time range according to the table below. See Procedure Note 9.1.

|  |  |
| --- | --- |
| **For** | **Then** |
| CBS | Within 24 hours |
| CREDO | Within 24 hours |
| J82 | Refer to Table 1 of the [Provincial Redistribution Program for Transfusion Services in Ontario](https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Ftransfusionontario.org%2Fwp-content%2Fuploads%2F2022%2F03%2FProvincial-Redistribution-Program-for-Transfusion-Services-in-Ontario.docx&wdOrigin=BROWSELINK) |
| E38 | Refer to Table 1 of the [Provincial Redistribution Program for Transfusion Services in Ontario](https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Ftransfusionontario.org%2Fwp-content%2Fuploads%2F2022%2F03%2FProvincial-Redistribution-Program-for-Transfusion-Services-in-Ontario.docx&wdOrigin=BROWSELINK) |

|  |  |
| --- | --- |
| **If** | **Then** |
| Received after the acceptable amount of time | * Quarantine the items
* Notify the sending hospital or the blood supplier.
	+ Initiate a customer feedback form online for shipments received from the blood supplier.
* Follow your hospital specific process for initiating an incident investigation.
* Contact the TS Supervisor/Manager to determine the disposition of the products within the shipping container.
	+ See Procedure Note 9.2
 |

1. Inspect the shipping container. Refer to Section 6.2.

|  |  |
| --- | --- |
| **If** | **Then** |
| Shipping Container is Damaged | * Quarantine the items.
* Notify the sending hospital or blood supplier.
	+ Initiate a customer feedback form online for shipments received from the blood supplier.
* Follow your hospital specific process for initiating an incident investigation
* Contact the TS Supervisor/Manager to determine the disposition of the products within the shipping container.
	+ See Procedure Note 9.2
 |

1. Confirm that there is an intact tamper-proof seal.

|  |  |
| --- | --- |
| **If** | **Then** |
| Tamper-Proof seal was missing | * Quarantine the items.
* Follow your hospital specific process for initiating an incident investigation
* Contact the TS Supervisor/Manager to determine the disposition of the products within the shipping container. See Procedure Note 9.2
* Notify the sending hospital or blood supplier of the error.
	+ Initiate a customer feedback form online for products received from blood supplier.
 |

 |
| 1. Unpack the Shipping Container.
 | 1. Remove the tamper-proof seal and open the shipping container. Unpack one shipping container at a time, beginning with fresh and frozen blood products.
2. Verify the packing configuration. See IM.006 or IM.011 or IM.012 or CBS ISC Packing configuration10.5 See Procedure Note 9.3.

|  |  |
| --- | --- |
| **If** | **Then** |
| Incorrect Packing Configuration | * Quarantine the units.
* Follow your hospital specific process for initiating an incident investigation
* Contact the TS Supervisor/Manager to determine the disposition of the products within the shipping container. See Procedure Note 9.2
* Notify the sending hospital or blood supplier of the error.
	+ Initiate a customer feedback form online for products received from blood supplier.
 |

1. Complete the Inter-Hospital Transfer Form, if applicable.
2. Remove and inspect the plastic bag from the shipping container.

|  |  |
| --- | --- |
| **If** | **Then** |
| There is liquid in the bag | * Determine whether any of the items are broken or leaking

|  |  |
| --- | --- |
| **If** | **Then** |
| Items are intact and none are leaking | * proceed to step 7.4
 |
| Some of the items are broken or leaking | * Follow your hospital specific process for initiating an incident investigation
* Notify the sending hospital or blood supplier of the error.
	+ Initiate a customer feedback form online for blood components and PPRP received from blood supplier.
* Contact the TS Supervisor/Manager to determine the disposition of the products within the shipping container.
* Continue to Step 7.5
 |

 |

 |
| 1. Perform a check on the contents of the shipping container.
 | * + 1. Remove the items one at a time from the plastic bag and compare the information on the product label with the information on the form or voucher. See Procedure Note 9.4.

|  |  |
| --- | --- |
| **If** | **Then** |
| Information does not match | * Quarantine the item.
* Notify the sending hospital or the blood supplier of the error.
	+ Initiate a customer feedback form online for shipments received from the blood supplier.
* Follow your hospital specific process for initiating an incident investigation
* Proceed to Step 7.5
 |

* + 1. Confirm that any specialized products requested appears on the label of the component.

|  |  |
| --- | --- |
| **If** | **Then** |
| Item received does not meet the specialized request | * Notify the sending hospital or blood supplier.
	+ Initiate a customer feedback form online for shipments received from the blood supplier.
* Follow your hospital specific process for initiating an incident investigation
* The items can still be accepted into inventory.
 |

* + 1. Visually inspect each item. See IM.003 – Visual Inspection of Blood, Blood Components and Plasma Protein and Related Products.

|  |  |
| --- | --- |
| **If** | **Then** |
| Visual inspection criteria are not met | * Quarantine the item.
* Notify the sending hospital or blood supplier of the error.
	+ Initiate a customer feedback form online for shipments received from the blood supplier.
* Follow your hospital specific process for initiating an incident investigation
 |

* + 1. Repeat steps 7.4.1 to 7.4.3 for all other items in the plastic bag from the shipping container.
		2. Repeat steps 7.1 and 7.4 for the remaining shipping containers.
 |
| 1. Receive the products into inventory
 | 1. Receive each component and/or PPRP into your inventory one at a time. See Procedure Note 9.5.

|  |  |
| --- | --- |
| **If** | **Then** |
| Inventory Management in Laboratory Information System (LIS) in use | * Follow your site’s specific instructions for entering all items in inventory.
 |
| Manual Inventory Management in use | * Record the items received on IM.014F1- Blood Component and Plasma Protein and Related Product Inventory Record
 |

 |
| 1. Store items in appropriate storage area.
 | 1. Store components and PPRP in appropriate storage area.

|  |  |
| --- | --- |
| **If** | **Then** |
| Red Cells | * Remove one segment from each unit received and label the segment with a sticker from the back of the unit.10.1
	+ If there are no stickers on the back of the unit, write the ISBT 128 donor unit number including source code, year, unit number and check character on a piece of tape or a blank label and attach the tape/label to the segment.
* Store the segments at 1-6°C at least 7 days post transfusion of the unit.
* If electronic crossmatch is used, prepare the units for ABO/Rh confirmation as per established procedure.
 |
| All other acceptable items  | * Store items in the appropriate storage areas according to manufacturer instructions, ensuring that the oldest products are placed in an area where they will be selected first. See Section 6.3.
 |
| Items received for a designated patient | * Record the name of the patient from the issue voucher onto a label affixed to the item.
* Place items in their designated storage area.
 |

 |
| 1. Acknowledge Receipt of Shipment
 | * 1. Acknowledge your receipt of the shipment to the sender.

|  |  |
| --- | --- |
| **If** | **Then** |
| Received from CBS | * Go to the CBS portal online and enter the shipment as received. 10.6
 |
| Received from another facility | * Fax the completed Inter-Hospital Form (IM.007F1 or IM.006F1) to the sending facility.
 |

 |
| 1. Return shipping Containers
 | * 1. Close all shipping containers and reattach closure straps. Remove shipping label(s) from the shipping containers if indicated.
	2. Store the shipping containers in an appropriate location or return to blood supplier as per established procedure.
 |

1. **REPORTING: N/A**
2. **PROCEDURE NOTES:**
	1. If there are suspicions of temperature deviations due to extreme outside temperature during transit,perform a temperature check of the products. See QCA.009 – Temperature Check of Blood and Blood Components.
	2. If there is a deviation with shipments, the TS Medical Director or designate must authorize their use. This authorization must be documented. This includes for the following events:
		* + Items received beyond acceptable time range.
			+ Shipping container received damaged.
			+ Broken or leaking item.
			+ Product is outdated.
			+ The temperature in the shipping container is suspect.
			+ Platelet components have not been agitated within 24 hours.
			+ There is no tamper-proof seal on a shipment.
	3. If frozen products are shipped on dry ice, dry ice should be visible in box to ensure no thawing has occurred during shipping.
	4. All products transported from a facility other than the blood supplier will be recorded on IM.006F1 or if transported with the patient IM.007F1.
		1. If units were transfused en route, the transfusion information should be recorded on the form (IM.007F1).
		2. If the number of products received does not equal the number of products sent, the missing products should be identified on the form.
		3. If there are units that were sent with a patient, not received and not documented as transfused, a medical record review should be done to determine if the unit(s) were transfused or discarded. Alternatively, the products should be considered “presumed” transfused. In this case, record the unaccounted-for units in the Transfusion en route column as ‘transfused’.
		4. Fax completed copy of form IM.007F1 to issuing hospital.

**9.5** For TS that have product processed/ issued by Pharmacy, a process must be in place to ensure traceability of products.

**10.0 REFERENCES:**

* 1. CSTM Standards for Hospital Transfusion Services Version 5.1 December 2022. Canadian Society for Transfusion Medicine, 5.1.1; 5.3.1.6; 5.7.1.
	2. Blood Regulation SOR/2013-178. Minister of Justice; August 25 2020, <http://laws-lois.jstice.gc.ca>
	3. Canadian Standards Association Standards for Blood and Blood Components CANZ902-20. 9.5.2, 10.5.3
	4. Circular of Information for the use of human blood and blood components. Canadian Blood Services, [www.blood.ca](http://www.blood.ca)
	5. Canadian Blood Services Customer Letter CL#2017-40 attachment 1
	6. CBS Online Ordering Version 3.2.5 2022/07/13, 4.5

**11.0 REVISION HISTORY:**

|  |  |
| --- | --- |
| **Revision Date** | **Summary of Revision** |
| August 8, 2014 | * Revised name of manual
* Changed wording from “fractionated blood products” to “plasma protein products” in section 1.0
* Revised and renumbered sections 2.0 & 6.0 & 8.0
* Added “Inter-hospital Transfer Form- Blood Components/ Plasma Protein Products” to section 4.0- *Supplies*
* Revised sections 5.0 & 7.0
* Updated list of references to include most recent editions
 |
| August 14, 2017 | * 5.2.1 – updated expiry of irradiated RBC to comply with NAC recommendations and change to CBS policy
* 5.2.3 – hospitals are not required to confirm phenotype if appears on label/tag from blood supplier
* References updated
 |
| June, 2023 | * Format Updated
* Major Review of all Steps
* References updated
 |