RED BLOOD CELLS
Autologous

OTHER NAMES	Whole blood, autologous red cells
PRODUCT COMPOSITION	Whole blood collected pre-operatively from an individual to be stored and later transfused only to that individual in an intra- or post-operative situation. Allow 14 days minimum between collection of unit(s) and surgery date.
INFORMED CONSENT	Mandatory
ALTERNATIVES	**Non-blood Product:** None **Blood Product:** Allogeneic red blood cells
DOSAGE	1 unit is approximately 450mL whole blood with 63mL SAGM solution
ADMINISTRATION	**Rate must be specified by physician** • Must be infused within 4 hours of removal from a TM-monitored blood refrigerator • Use Standard Blood Administration set with 170-260 micron filter • Medication shall not be added directly to the blood products or to the administration set containing the blood product Pediatrics: 5% of the total volume ordered within the first 15 minutes, then increase to 2-5 mL/kg/hr or as tolerated/ordered
DIAGNOSTIC MONITORING	**Vital sign monitoring as per hospital policy for any blood, blood component and other related product.** In the event of an immediate or suspected transfusion reaction, refer to hospital policy and procedures.
CLINICAL INDICATIONS	• Review Red Blood Cell Guidelines at www.pbco.ca • Symptomatic anemia in the setting of normal intravascular volume • Should be considered whenever feasible in the perioperative setting, to reduce the risks of disease transmission and immune reactions from allogeneic donations • For patients without cardiovascular disease, and especially younger patients, transfusion is likely to be appropriate to maintain hemoglobin levels in the range of 70-90 g/L. Lower thresholds may be acceptable in younger patients without signs or symptoms of impaired oxygen transport. Transfusion is unlikely to be appropriate at hemoglobin levels above 90 g/L • For patients known to have or likely to have cardiovascular disease, transfusion is likely to be appropriate to maintain hemoglobin in the range of 90-100 g/L
SPECIAL CONSIDERATIONS	• Requires a current Type and Screen • A Physician's Request form must be submitted to CBS with a **minimum of four weeks notice** prior to the patient's OR date. Information available from CBS or TM, local 68003
STORAGE CONDITIONS	• Stored in a TM-monitored blood product storage refrigerator or cooler, 1-6˚C • Shelf life for autologous units is 42 days
REFERENCES	• Circular of Information, Canadian Blood Services Feb 2011 and www.blood.ca • Canadian Society for Transfusion Medicine: Standards for Hospital Transfusion Services, Version 3 February 2011 • Provincial Guidelines for Red Blood Cell Transfusion, British Columbia. Transfusion Medicine Advisory Group. 2003

RED BLOOD CELLS
Deglycerolized

OTHER NAMES	Frozen red cells
PRODUCT COMPOSITION	Red blood cells can be prepared for cryopreservation by adding glycerol as a protective agent and stored frozen for up to 10 years. Red cells frozen with glycerol cryoprotectant are thawed, washed, glycerol removed and suspended in 0.9% NaCl at Canadian Blood Services (CBS) prior to transport to hospital. This preparation removes virtually all the plasma, leukocytes, and platelets and anticoagulant through trace amounts of the glycerol may still be present in the product. The average unit has a hematocrit of 80%. Thawing and deglycerolizing takes at least two hours to complete at CBS.
INFORMED CONSENT	Mandatory
ALTERNATIVES	**Non-blood Product:** None
	Blood Product: None
DOSAGE	As ordered by physician
ADMINISTRATION	**Rate must be specified by physician** • Must be infused within 4 hours of removal from a Transfusion Medicine (TM)-monitored blood refrigerator • Use Standard Blood Administration set with 170-260 micron filter • Medication shall not be added directly to the blood products or to the administration set containing the blood product Pediatrics: 5% of the total volume ordered within the first 15 minutes, then increase to 2-5 mL/kg/hr or as tolerated/ordered
DIAGNOSTIC MONITORING	**Vital sign monitoring as per hospital policy for any blood, blood component and other related product.** In the event of an immediate or suspected transfusion reaction, refer to hospital policy and procedures.
CLINICAL INDICATIONS	• Review Red Blood Cell Guidelines at www.pbco.ca • **The decision to transfuse must be based on clinical assessment and not threshold** • Patients with rare blood types, those with multiple antibodies or patients with antibodies to high frequency antigens or rare red cell antigen profiles
SPECIAL CONSIDERATIONS	• Requires a current Type and Screen • Must be ABO and Rh compatible • Must be transfused within 24 hours of processing at CBS as the possibility of bacterial contamination exists due to product manipulation • As for red blood cells with an additional caution that there is a potential hazard of intravascular hemolysis if the glycerol has not been adequately removed • Only for use under special circumstances surrounding availability of compatible red cells • Must be discussed with TM and approved by CBS Medical Director • Available on regular working days (M-F) between the hours of 8am-4pm, otherwise with special arrangement
STORAGE CONDITIONS	• Stored in a TM-monitored blood product storage refrigerator or cooler, 1-6˚C
REFERENCES	• Circular of Information, Canadian Blood Services Feb 2011 and www.blood.ca • Canadian Society for Transfusion Medicine: Standards for Hospital Transfusion Services, Version 3 February 2011 • Provincial Guidelines for Red Blood Cell Transfusion, British Columbia. Transfusion Medicine Advisory Group. 2003 • CSA – Z902-10 Feb 2010

RED BLOOD CELLS
Packed

OTHER NAMES	CPDA-1 Red Blood Cells, LRF; CP2D Red Blood Cells, LRF; AS-3 Red Blood Cells, LRF; PRCs; SAG-M Red Cells LR; packed red cells; concentrated red cells; RBC; RC; PRBC; stored blood
PRODUCT COMPOSITION	Approximately 240-370mL red cells in SAG-M solution
INFORMED CONSENT	Mandatory
ALTERNATIVES	**Non-blood Product:** None
	Blood Product: None
DOSAGE	As ordered by physician
ADMINISTRATION	**Rate must be specified by physician** • Must be infused within 4 hours of removal from a Transfusion Medicine (TM)-monitored blood refrigerator • Use Standard Blood Administration set with 170-260 micron filter • Medication shall not be added directly to the blood products or to the administration set containing the blood product Pediatrics: 5% of the total volume ordered within the first 15 minutes, then increase to 2-5 mL/kg/hr or as tolerated/ordered
DIAGNOSTIC MONITORING	**Vital sign monitoring as per hospital policy for any blood, blood component and other related product.** In the event of an immediate or suspected transfusion reaction, refer to hospital policy and procedures.
CLINICAL INDICATIONS	• Review Red Blood Cell Guidelines at www.pbco.ca • **The decision to transfuse must be based on clinical assessment and not threshold** • Symptomatic anemia in the setting of normal intravascular volume • Should be considered whenever feasible in the perioperative setting, to reduce the risks of disease transmission and immune reactions from allogeneic donations • For patients without cardiovascular disease, and especially younger patients, transfusion is likely to be appropriate to maintain hemoglobin levels in the range of 70-90 g/L. Lower thresholds may be acceptable in younger patients without signs or symptoms of impaired oxygen transport. Transfusion is unlikely to be appropriate at hemoglobin levels above 90 g/L • For patients known to have or likely to have cardiovascular disease, transfusion is likely to be appropriate to maintain hemoglobin in the range of 90-100 g/L
SPECIAL CONSIDERATIONS	Requires a current Type and Screen
STORAGE CONDITIONS	• Stored in a TM-monitored blood product storage refrigerator or cooler, 1-6˚C • Shelf life for allogeneic units is 42 days, unless otherwise specified
REFERENCES	• Circular of Information, Canadian Blood Services Feb 2011 and www.blood.ca • Canadian Society for Transfusion Medicine: Standards for Hospital Transfusion Services, Version 3 February 2011 • Provincial Guidelines for Red Blood Cell Transfusion, British Columbia. Transfusion Medicine Advisory Group. 2003 • CSA – Z902-10 Feb 2010

RED BLOOD CELLS
Washed

OTHER NAMES	Washed RBCs, Washed cells
PRODUCT COMPOSITION	Red blood cells with plasma and preservatives removed and replaced with saline. A unit of RBCs is washed by automated or manual method using sterile normal saline. About 99% of plasma proteins, electrolytes, and antibodies are removed. Up to 20% of the red cell mass may be lost depending on the method.
INFORMED CONSENT	Mandatory
ALTERNATIVES	**Non-blood Product:** None
	Blood Product: None
DOSAGE	As ordered by physician
ADMINISTRATION	**Rate must be specified by physician** • Must be infused within 4 hours of removal from a Transfusion Medicine (TM)-monitored blood refrigerator • Use Standard Blood Administration set with 170-260 micron filter • Medication shall not be added directly to the blood products or to the administration set containing the blood product Pediatrics: 5% of the total volume ordered within the first 15 minutes, then increase to 2-5 mL/kg/hr or as tolerated/ordered
DIAGNOSTIC MONITORING	**Vital sign monitoring as per hospital policy for any blood, blood component and other related product.** In the event of an immediate or suspected transfusion reaction, refer to hospital policy and procedures.
CLINICAL INDICATIONS	• Review Red Blood Cell Guidelines at www.pbco.ca • **The decision to transfuse must be based on clinical assessment and not threshold** • Washed RBC product may be recommended after severe allergic reactions to RBCs. Patients with IgA deficiency and anti-IgA require RBCs washed with 3L of normal saline.
SPECIAL CONSIDERATIONS	• Blood Transfusion Services will order the product from CBS. Allow for preparation and shipping time. • Requires a current Type and Screen • Must be ABO and Rh compatible • Must be transfused within 7 days of processing at CBS as the possibility of bacterial contamination exists due to product manipulation • Available on regular working days (M-F) between the hours of 8am-4pm, otherwise with special arrangement
STORAGE CONDITIONS	• Stored in a TM-monitored blood product storage refrigerator or cooler, 1-6˚C
REFERENCES	• American Association of Blood Banks, (2003) *AABB Technical Manual 14th Edition*, pg. 170 • Circular of Information, Canadian Blood Services February 2011 and www.blood.ca • Canadian Society of Transfusion Medicine: Standards for Transfusion Medicine, Version 3 February 2011 • CSA – Z902-10 Feb 2010