

## Section D: Requests for Blood Products

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**NOTE:** To review how to place orders for blood products in Cerner, please refer to the [Web Based Training](#) modules: (LHSC or St Joe's home page / Staff Services / EPR Online Computer Software Training / Electronic Ordering of Blood Transfusion)

### I. Requests for Packed Red Blood Cells (PRBCs)

Review the Blood Product Information page in Cerner to determine if there is an in-date **Group and Reserve** specimen. If not done or if outdated, [order](#) and [draw](#) a Group and Reserve specimen.

- a. If PRBCs are to be on hand for the patient, no additional orders need to be entered. An in-date Group and Reserve will ensure that PRBCs are available when required.
- b. If there is an order for the transfusion of PRBCs, enter this order in Cerner.

Turn Around Time (TAT) for the crossmatch of Red Blood Cells decreases to <5 minutes if there is a previously ordered, indate Group and Reserve in the BTL. (see reasons for increased TAT below)

| Type of Order  | Turn Around Time (TAT) | Reasons for Increased TAT   |
|--|------------------------|---|
| Routine  | 2 hours                | Preparation of: <ul style="list-style-type: none"> <li>• pediatric volumes</li> <li>• washed cells</li> <li>• other product manipulation</li> </ul> Detection of red cell antibodies: <ul style="list-style-type: none"> <li>• BTL staff will notify ordering physician of approximate TAT</li> </ul> |
| Urgent   | 45 min.                | As above  |
| <b>NOTE:</b> Crossmatch of Red Blood Cells decreases to less than 5 minutes if there is a previously ordered, <i>indate</i> Group and Reserve in the BTL |                        |   |
| Uncrossmatched Request   | < 45 min.              | See section on <a href="#">Uncrossmatched Blood</a>   |

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### II. Blood Order Guidelines for Adult Elective Surgery

1. The Divisions of Surgery and the Transfusion Committee have reviewed blood transfusion frequency and approved the [Blood Order Guidelines for Adult Elective Surgery \(BOG\)](#).
2. These may also serve as a point of reference for urgent/emergency surgical procedures.
3. If a surgical procedure is not listed on the BOG, a blood specimen for group and reserve will not be obtained without a physician's specific request.
4. A physician's specific order for a specific patient will always take precedent over the BOG.

### III. Requests for Other Blood Products

| Product                         | Specimen Required?                           | Preparation Time   | Additional Requirements  |
|---------------------------------|--|--|--|
| Fresh Frozen Plasma             | Yes, from current admission                  | 30 minutes   | May require approval from hematologist   |
| Platelets                       | Yes, unless patient's blood group is on file | <5 minutes, if platelets are available on site, longer if platelets must be obtained from CBS.<br><br>Special requirements (anti-CMV negative, irradiated, volume-reduced, washed or HLA-matched) may also increase TAT. | As above   |
| Cryoprecipitate                 | Yes, from current admission                  | 30 minutes   | Fibrinogen level <1.0g/L or hematologist's approval  |
| Albumin 25%                     | No   | Immediate  |  |
| Albumin 5%                      | No   | Immediate  |  |
| Rh Immune Globulin              | Yes, within 30 days                          | Immediate  | If <u>postpartum</u> , cord or venous specimen from infant required <u>and</u> FMH screen specimen must be drawn <u>before</u> issue.          |
| IV Immune Serum Globulin (IVIG) | No   | Immediate  | IVIG Request Form must be completed prior to initial infusion. Request must also be renewed every 6 months. May require hematologist approval. |

For complete listing, description and indications for ALL blood products, see [Section S: Blood Product Information](#).

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### IV. Requests for Special Products

#### 1. Anti-CMV Negative (CMV-) Products

Anti-CMV negative components and leukoreduction are considered equivalent in reducing the risk of CMV seroconversion; however combining the two strategies may provide enhanced protection. Therefore anti-CMV negative tested components will be supplied to the following patients:

- a. Autologous/allogeneic bone marrow or stem cell transplant (BMT/PSCT) recipients (upon notification of potential transplant)
- b. Oncology patients under the care of a *pediatric* hematologist
- c. Neonates: *birth weight* <1200g (includes exchange transfusion, if required)
- d. Pediatric heart surgery patients, if requested
- e. Congenital immunodeficiency e.g. DiGeorge syndrome, Severe Combined Immunodeficiency (SCID)
- f. Patients with HIV infection, if requested
- g. Pregnant women receiving elective transfusion\*
- h. Placenta previa\*
- i. Specific request by a Hematologist

\*Anti-CMV negative components NOT required at time of delivery - only if pregnancy is continuing post-transfusion.

Patient's own CMV status should be determined as soon as possible. If patient is anti-CMV positive, anti-CMV negative tested components are not required.

If a transfusion order is received for a patient requiring anti-CMV negative components, and CBS is unable provide anti-CMV negative components, components leukoreduced by CBS may be substituted with approval of the attending physician.

#### 2. Irradiated Products

Irradiated components will be supplied to following groups of patients:

- a. Autologous/allogeneic BMT/PSCT recipients (2 weeks pre- until a minimum of 2 years post-transplant)
- b. All children on chemotherapy
- c. Congenital immunodeficiency e.g. DiGeorge syndrome, Severe Combined Immunodeficiency (SCID)
- d. Aplastic anemia receiving strong immunosuppressive agents (e.g. AT-Gam)
- e. All patients receiving (or who have received) Fludarabine, Cladribine or Campath: use of irradiated products to continue after drug has been discontinued
- f. All recipients of directed donations
- g. Exchange transfusion
- h. Specific request by a Hematologist

There is no substitution for irradiated components: if CBS is unable to supply irradiated components, and transfusion cannot be delayed, approval of a Hematologist is required to transfuse non-irradiated components.

**NOTE:** Approval of a Hematologist is required if requests for anti-CMV negative and/or irradiated components are received for a patient not meeting above criteria.

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### 3. Preservative Depleted Red Cells

A unit of red cells has approximately 100mL of preservative or nutrient solution (see [Section S - Packed Cells](#)). As red cells age, potassium leaks out of the red cell into the preservative solution. The preservative solution is removed for **pediatric patients (<10kg) receiving less than 20mL/kg in a 24 hour period** in order to reduce the amount of sugars that are transfused.

SEE: [Section M: Pediatric / Neonate](#)

### 4. Volume Reduced Platelets

All attempts are made to provide platelets in which the plasma is compatible with the patient's ABO group. In pediatric patients, if ABO compatible platelets are not available, the platelets will be volume reduced to minimize the amount of incompatible plasma given. Volume reduced platelets will not be supplied for any other reason.

SEE: [Section S – Platelets](#) for appropriate dosing for pediatric patients.

### 5. Washed Red Cells and/or Platelets

Washed cellular products may require the approval of the BTL Medical Director or designate. Washed cellular products may be supplied to the following groups of patients:

- a. IgA deficient patients with anti-IgA. (May also be required until anti-IgA confirmed)
- b. Patients with consistent severe allergic or febrile reactions to red cells or platelets
- c. Exchange transfusion for neonates