Document History:

Title:	**Emergency Issue of Red Cell Units: Non-eTraceLine / Non-Crossmatch Facilities**	**Site(s):**	**Shared Health Diagnostic Services non-eTraceLine & non-crossmatch sites**

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Approved by: **Signature:**	Dr. Charles Musuka *(approval on file)*	**Date:**	07-MAR-2023
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Details of Recent Revision

- **4.2.1:** addition of the option to contact Canadian Blood Service (CBS) Diagnostic Services by fax to determine if patient has pre-existing antibodies
- **4.3.1** and **4.3.2**: changed bullets to numbers

Emergency Issue of Red Cell Units: Non-eTraceLine / Non-Crossmatch Facilities

1.0 Principle

To issue group O unmatched red cell units in an emergent situation where time does not permit for completion of pre-transfusion testing (e.g., type and screen and/or crossmatch)

2.0 Scope and Related Policies

2.1 At a minimum, **group O Rh negative** red cells shall be available for emergency use in facilities where obstetrical care and/or dialysis is provided.

2.2 Emergency units shall be stored in a separate, clearly labeled designated location within the controlled blood bank refrigerator.

2.3 A pre-transfusion blood specimen shall be drawn from the patient prior to the transfusion of unmatched group O red cells whenever possible.

2.4 Units shall have a visible label clearly indicating compatibility testing has **not** been completed.

2.5 Transfusion records shall include a signed declaration by the ordering physician/authorized practitioner confirming the clinical situation was sufficiently urgent to justify releasing blood products prior to completion of pre-transfusion testing.

2.6 Should a red cell unit be issued before compatibility testing is complete, and subsequently proven to be **incompatible**, the ordering physician/authorized practitioner and the TM physician on-call shall be informed immediately. Transfusion of an incompatible unit shall be stopped immediately and discontinued pending the decision of the ordering physician/authorized practitioner.

2.7 As per CBS letter 2020-28 and 2018-46, Kell negative red cells are recommended for people of childbearing potential 45 years or younger. In emergencies or circumstances in which Kell negative red cells are not available, Kell untested or Kell positive red blood cells may be given.

3.0 Materials

Group O Rh-positive or Rh-negative red cell units, Kell-negative if available, with emergency red cell tag affixed
Request form for crossmatch
Patient specimen
Record of Transfusion (RoT)
Emergency Issue Red Cells Non-eTraceLine/Non-Crossmatch Facilities, JA160-MP-20A

4.0 Procedure

For **non-testing eTraceLine** sites refer to *eTraceLine Procedure: Issue of Emergency Uncrossmatched Red Cells and Emergency Plasma Components in eTraceLine,* 160-TL-09

****Emergency issue of unmatched group O red cells will be given priority****

4.1 Collect a specimen from the patient and send STAT to testing site (BTS/CBS) supplying facility's stock emergency red cells:

4.1.1 If stock emergency red cells were supplied by an eTraceLine hub site (non-testing site) send sample to CBS crossmatch lab

4.1.2 When possible, it is preferable to collect the specimen prior to transfusion of the emergency red cells

4.2 Obtain available patient information:

4.2.1 For history of dangerous blood recipient:
4.2.1.1 Check the ***Antibody Notification*** binder; **or**
4.2.1.2 Contact CBS Diagnostic Services using *CM077 Fax Notification*, F160-INV-32; call CBS to alert lab of incoming fax request

4.2.2 Notify the ordering physician/authorized practitioner immediately if the patient has an antibody letter on file or CBS Diagnostic Services has confirmed an historical antibody

4.2.3 It is the ordering physician's responsibility to determine if the emergency transfusion will proceed or if the transfusion can wait for crossmatched blood to be made available

4.3 Select and visually inspect emergency red cell units as per *Visual Inspection of Blood, Blood Components and Plasma Protein Product,* 160-INV-12, and *Selection of Blood and Blood Components for Transfusion,* 160-INV-20:

4.3.1 When both group O Rh positive and group O Rh negative units are available select:
4.3.1.1 Group ***O Rh negative*** red cells if patient is of childbearing potential 45 years or younger
4.3.1.2 Group ***O Rh positive*** red cells if patient is not of childbearing potential 45 years or younger or if patient is greater than 45 years
4.3.1.3 If time allows for review of patient's file in eTraceLine prior to issue, search for protocols. For example, if:
- Patient is an Rh negative person not of childbearing potential 45 years or younger or a person greater than 45 years and has a confirmed anti-D, issue Rh negative units, if available
- Rh negative units are not available, inform the ordering physician who will take responsibility if Rh positive units are requested

4.2.1.4 If group O Rh positive red cells are not available, group O Rh negative red cells may be substituted
4.2.1.5 Select Kell negative units for people of childbearing potential 45 years or younger:
- If Kell negative are not available, select Kell untested
- If Kell untested are not available, select Kell positive

4.3.2 When **only** group ***O Rh positive*** units are available:
4.3.2.1 Notify the BTS laboratory
4.3.2.2 The BTS laboratory will notify the TM physician on-call within 24 hours if the recipient is determined to be Rh negative and is a person of childbearing potential 45 years or younger
4.3.2.3 Administration of Rh immune globulin (RhIg) will be determined by the TM physician on-call after consultation with the ordering physician/authorized practitioner. This consultation shall be documented by the TM physician on-call.
4.3.2.4 For people of childbearing potential 45 years or younger, group O Rh positive units ***may*** be used. Alert the ordering physician/authorized practitioner only group O Rh positive units are available; the ordering physician/authorized practitioner will accept responsibility for the transfusion. Blood bank is not required to consult the TM physician on-call prior to issuing the red cells.

4.4 Record the patient information, if available, on the following:
- Emergency uncrossmatched red cell tag attached to the red cell unit
- RoT
- The BTS laboratory supplying the emergency red cells will have recorded the donor red cell unit blood group, donor red cell unit donation number and the group confirmed (by and date) on the tag

4.5 Remove a segment from the red cell unit prior to issue for post-transfusion crossmatch:
- Affix a donor unit label from the red cell unit to the segment
- Bag and store in controlled-storage blood bank refrigerator

4.6 Issue the red cell units. For non-eTraceLine sites refer to *Issuing Blood and Blood Components/Return within a Facility of Previously Issued Blood and Blood Components,* 160-INV-14

4.7 Complete the appropriate blood bank log with as much information as is available or becomes known:

4.7.1 Ensure RoT is complete with signed declaration by the ordering physician/authorized practitioner at start of transfusion

4.7.2 Make a copy of completed RoT

4.8 Send the following to the BTS laboratory supplying the stock emergency red cells (e.g., eTraceLine testing site or CBS crossmatch lab) as soon as possible:
- Pre-transfusion blood specimen
- Completed request form
- Donor segment
- Bottom portion of RoT with completed start and end date and time of transfusion for each unmatched emergency unit transfused
- If stock emergency red cells were supplied by an eTraceLine hub site (non-testing site) send sample to CBS crossmatch lab

4.9 Order replacement stock as soon as possible

4.10 Retain copy of completed RoT according to *Appendix 8: Record Retention Policy*, 10-APP-07

5.0 Reporting

5.1 Ensure all documentation in the blood bank log is complete

5.2 Ensure all required documentation on emergency uncrossmatched red cell tag attached to the unit is complete

5.3 Ensure all required documentation on RoT is complete

5.4 Ensure all required documentation on request form is complete

6.0 Procedural Notes

N/A