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## Section F: Uncrossmatched Blood

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### I. Introduction

- 1 Uncrossmatched Blood is indicated if transfusion is required in less than 45 minutes from the time the specimen arrives in the BTL; that is, patient's clinical status indicates there is insufficient time to perform a blood group, antibody screen and/or crossmatch.
- 2 The attending physician is responsible for requesting uncrossmatched blood and must sign the [BTL requisition](#) in the section designated "UNCROSSMATCHED BLOOD." When possible, the recipient should be informed that all the pretransfusion compatibility testing has not been completed and consent should be obtained.
- 3 ALL uncrossmatched blood is ABO compatible with the patient; that is, either group O or patient's specific ABO group is issued; following confirmation of blood group with either a previous blood group on file or with a 2<sup>nd</sup> confirmatory specimen drawn and tested. SEE [Section B](#) – IV Processing an Order for BTL Confirmation Test (BTLCT).
- 4 Until the antibody screening test is completed, there is the potential that unexpected RBC antibodies may be present that could destroy transfused RBCs.
  - a. Antibody screen is negative; all uncrossmatched blood issued or already transfused is then known to be compatible with the patient.
  - b. Antibody screen is positive; the BTL will immediately notify the requesting physician or surgeon as well as the hematologist on call to discuss the options for transfusion.

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### II. Procedure for Requesting Uncrossmatched Blood

<b>Urgency of Order / Type of Scenario</b>	<b>Requesting Uncrossmatched Blood by Emergency Department #</b>	<b>Issuing Uncrossmatched Blood by Blood Transfusion Lab</b>
Patient has not arrived in ED. Report from transport indicates blood products will be required immediately <i>(very infrequent occurrence and will be monitored for abuse)</i>	Physician signs BTL requisition and as much information as is known is recorded on requisition e.g. adult male Requisition is brought to BTL.	BTL issues 4 units of Group O Neg* PRBC No labels will accompany blood. Blood will be issued in an igloo.
Patient is in hospital but is not yet registered in Cerner <i>(infrequent, and will be monitored for abuse)</i>	Physician signs BTL requisition and as much information as is known is recorded on requisition e.g. young female Requisition is brought to BTL.	BTL issues 4 units of Group O Neg* PRBC. No labels will accompany blood. For expediency (Igloo takes a few minutes to pack), blood will not be issued in igloo.
Patient is registered (Unknown or True ID), but urgency does <u>not</u> allow time to place order in Cerner <i>(common scenario)</i>	Physician signs BTL requisition, which is addressographed (if possible). At minimum, complete name and PIN should be legible on requisition. Requisition is brought to BTL	BTL issues 4 units of Group O Neg* PRBC in Cerner. Blood will be labeled and accompanied by a chart label. If time permits, blood will be issued in an igloo.
Patient is registered (Unknown or True ID), and order for blood products is placed in Cerner. - Specimen may or may not have been taken, received in the BTL and/or testing completed. <i>(common scenario)</i>	If not anticipating massive bleed, order PRBC (indicate # of units) and a PickUp by Ward Staff. Send staff to BTL to get blood. If massive transfusion anticipated, order: <ul style="list-style-type: none"> <li>Trauma Transfusion Pathway if Trauma patient <b>or</b></li> <li>Massive Transfusion Protocol if non-trauma patient.</li> </ul> Complete one of the printed labels and take to the BTL. If blood is uncrossmatched, ordering physician must also sign the BTL requisition.	BTL will issue as requested. Group O Neg* will be issued if blood group not confirmed. If group is confirmed, ABO specific blood will be issued. If antibody screen is not completed, blood will be labeled uncrossmatched.

# If extreme urgent need for blood, a heads-up phone call to the BTL ensures that they are prepared and/or have seen the order in Cerner. It may also allow them time to pack an igloo.

\*Group O Positive if there is a shortage of O Negative blood and it is known that the patient is male or female greater than 50 years of age.

**NOTE: Do not return uncrossmatched blood and exchange it for crossmatched blood.**

- When the antibody screen test is completed and is negative, all previously uncrossmatched blood issued for the patient is compatible and now equivalent to crossmatched blood.
- If the antibody screen test is positive (blood group antibodies detected in patient's serum) and/or a unit of blood is found to be incompatible, the BTL will immediately notify the requesting physician or surgeon and the hematologist on call, to discuss options for transfusion support. This may involve requesting that all PRBCs not yet transfused be returned to BTL.

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**III. Severe or out of control bleeding situation**

See [Algorithm](#) to determine correct order  
(Trauma Transfusion Pathway vs Massive Transfusion Protocol)

**a. Trauma Transfusion Pathway**

In order to provide the appropriate transfusion therapy for a trauma patient, [a specific algorithm](#) has been designed and approved by the Blood Transfusion Service and the Trauma Service. Strict adherence to the following is required:

1. The [Trauma Transfusion Pathway](#) is to be ordered in Cerner after the patient has been accessed by the trauma team and it is felt that the patient may require multiple units of blood products. If extreme urgent need for blood, a heads-up phone call to the BTL ensures that they have seen the order.
2. Once the pathway has been activated, the BTL will ensure that there are 4 PRBC crossmatched, 4 plasma thawed and 1 set of platelets available. Products will be issued by the BTL staff in the pre-approved ratio. Blood products must be ordered in "Trauma Packs" using the labels that printed when Trauma Transfusion Pathway order was placed in Cerner. BTL will provide Trauma Packs, which include 4 PRBC and 4 FFP. 1 set of platelets will be issued with every other Trauma Pack.  
**NOTE:** Issue of PRBCs will **not** be delayed; if FFP and platelets are not immediately available, they will follow the PRBCs ASAP.
3. Both the BTL and the Trauma Resuscitation room have a copy of the [pathway](#). The BTL documents on their form all products that have been dispensed in order to ensure correct ratio of products. The Trauma Resuscitation room copy is to be put into the patient's chart and the clinical team is responsible for documenting the transfusion of all products.
4. Laboratory tests (CBC, INR, PTT and Fibrinogen levels) must be drawn at the [specified times](#) during the pathway.
5. Cryoprecipitate is only issued upon request of the attending physician and should be based on a Fibrinogen level of <1.0g/L.
6. If attending physician / surgeon / anesthetist would like to transfuse in a different ratio than the pre-approved ratios, cancel the Trauma Transfusion Pathway and order the Massive Transfusion Protocol.
7. The BTL must be notified to discontinue issuing as per [Trauma Transfusion Pathway](#) when:
  - a. Bleeding is controlled, *and/or*
  - b. Patient is transferred to CCTC, *and/or*
  - c. FFP/PLT are no longer required per Trauma Transfusion Pathway

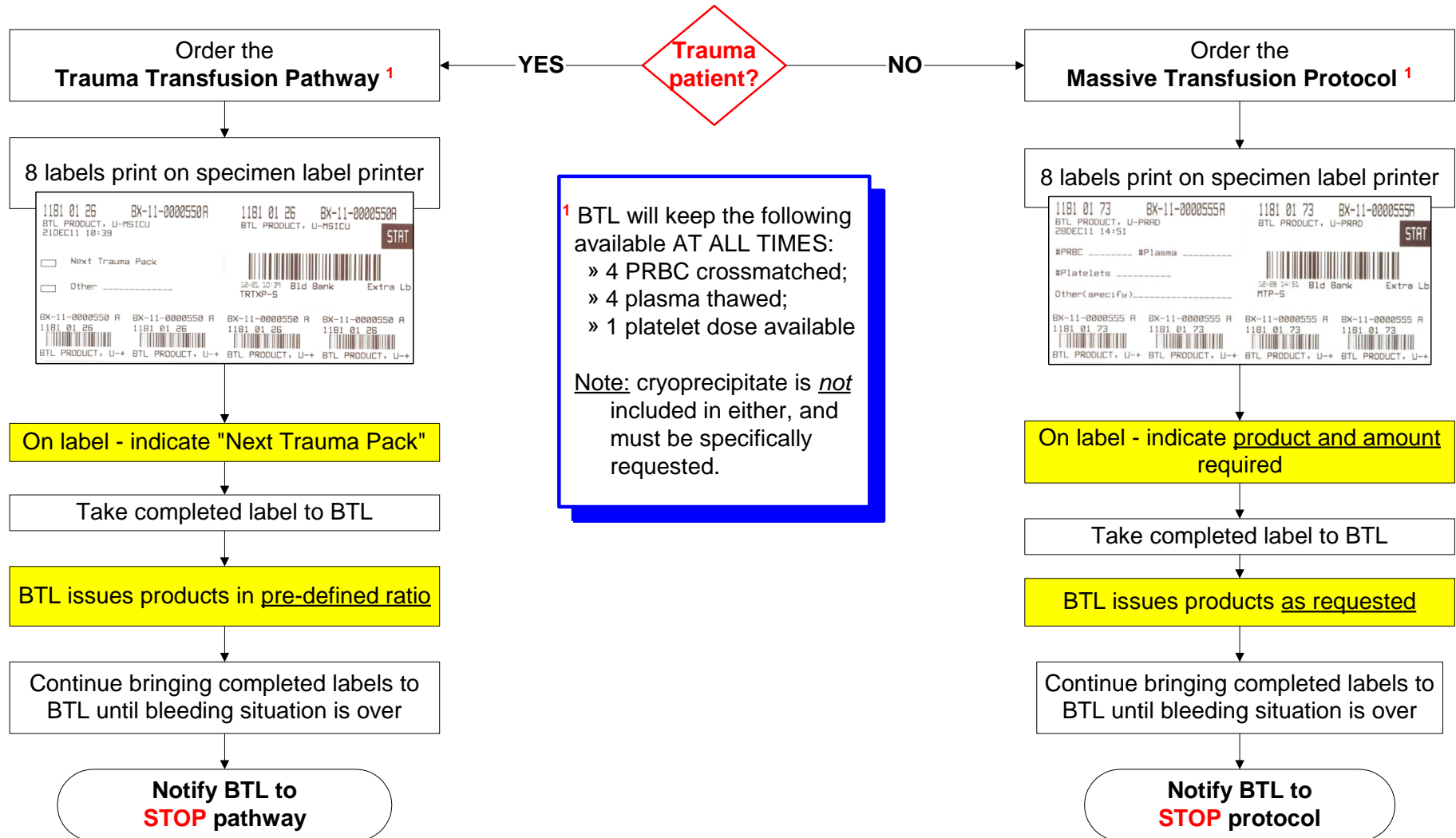
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### b. Massive Transfusion Protocol (MTP)

1. The Massive Transfusion Protocol ([LHSC](#), [St. Joseph's](#)) is activated when there is a severe or out of control bleeding situation in a non-trauma patient.
2. Once the MTP is activated, the BTL will ensure that there are 4 PRBC crossmatched, 4 plasma thawed and 1 set of platelets available. Products will **NOT** be issued by the BTL staff in a specific ratio.
3. When the MTP is ordered in Cerner, 8 labels will print to the specimen label printer. One of these labels is completed and taken down to the BTL every time additional products are needed. The attending physician / surgeon / anesthetist must order the specific blood products required based on laboratory test results and/or clinical situation.
4. Continued laboratory monitoring (CBC, INR, PTT and Fibrinogen levels) every 6 – 8 PRBC is recommended.
5. The BTL should be notified to discontinue MTP when the bleeding is controlled. The MTP will auto-stop if no products are issued in a 4 hour period.

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### Severe or Out of Control Bleeding Situation



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