

Massive Transfusion Protocol

1. Triggered when there is an emergent need for large amounts of blood in a short period of time.
2. Call the transfusion service ext. 3283.
Give patient ID, location and hospital contact person.
3. Locate the tackle box. It contains the proper tubes for labs to be drawn after each round of blood products is given. Also, there is a blood gas syringe and instructions. Label and fill the tubes, put back in the bag and send stat to the Lab.
4. Write an order for the Massive Transfusion Protocol in the chart.
5. The Lab will know what to do with the tubes and will enter the secondary orders.
First tests are:
 - Type and cross
 - Coag panel (INR, PTT, Fibrinogen, Platelets, CBC, CMP.)
6. Keep the instructions from the bag. They will have the following recommendations:
 - A. If INR >2.0 give 30 units/kg of [Kcentra](#) (Prothrombin Complex Concentrate)
 - B. If fibrinogen <150 mg/dl (200 mg/dl if pregnant) give 10 units of cryoprecipitate.
 - C. After 4 units of blood are given, give either 10 ml of calcium gluconate or 3 ml Calcium chloride with each additional 1-2 units of blood.
 - D. If PH <7, give 50 MEQ of NaHCO₃
 - E. After 4 units of blood are given, give 1 unit FFP with each additional unit of RBC's.
 - F. Give 1 unit of platelets for every 10-12 units of RBC's.
 - G. If factor VIIa is to be considered, give 40 mcg/kg.
7. Take the box and tubes to the blood bank and return with a cooler that contains:
 - A. 4 units Type O Rh negative blood and 2 units AB plasma.
 - B. Tubes to be labeled and drawn, after the first 4 units are given (and after each additional set of 4 units of RBC's.)
These tests include INR, PTT, fibrinogen, CBC.
8. Take this second set of tubes to the blood bank and return with a cooler filled with the next 4 units of blood and the tubes to be drawn after these 4 units have been given.
9. Continue until there is no further need for massive transfusion.
10. Option to give [Tranexamic Acid](#) 2gms over 20 minutes X 1
Order if desired.

Massive Transfusion works best with 5 people available:

- A. 2 anesthesia providers
 1. One to start IV's and to manage the anesthesia.

2. Second one to gather transfusion equipment, sign off and give the transfusions (including a final check when spiking the bag); also orders additional clotting factors or calcium when needed. Call in help if needed.

B. The circulation Nurse and an assistant who will:

1. Stay in phone contact with the transfusion service.
2. Co-sign after checking blood and blood products.
3. Draw blood for further lab testing.
4. Call in extra help if needed.

C. A runner to take lab samples to the lab and return with blood products.

During nights and weekends initially there may be only a single anesthesia provider and there may be no additional help for the circulator. Also, a runner may not be available.

Extra help may come from the clinical advisor or the respiratory therapist. In post partum patients, the OB nurses may also be able to help.

As on-call help arrives these additional people may return to their normal duties.