

## Massive Transfusion Protocol in Pediatric Patients

Age <14 years

Patient at risk for uncontrollable bleeding

- Active medical team
- STAT blood draw
  - Type and Screen (tall lavender tube)
  - DIC Panel (blue topped tube #1)
  - PT -PTT -Fibrinogen (blue topped tube #2)
  - CBC (lavender tube)
  - ABG with hgb/hct/lactate/cooximetry – NICU/PICU order set (heparinized syringe)

Immediate need for transfusion?

- If NO, then continue resuscitation and evaluation
- If YES, call Blood Bank (74329) and request emergency release 0-negative blood
  - Give in 10 ml/kg doses

Need to invoke Massive Transfusion Protocol?

- If NO, then continue conventional resuscitation and evaluate as needed
- If YES – **Attending Physician Calls the Blood Bank** (74239) and inform them of the need to trigger the Pediatric Massive Transfusion Protocol (This is equal to the second pack in Adult MTP)
  - -This MTP Pack includes
    - 4 units RBCs (volume of each unit is approximately 300cc)
    - 4 units FFP (volume of each unit is approximately 300cc)
      - Give each product in 10-15 ml/kg doses as needed
    - 1 apheresis pack of platelets (volume of each range from 180-300ml)
      - Transfuse in 10-15 ml/kg doses
    - 1 dose pooled Cryoprecipitate (one dose = 5 “units”)
      - Administer as 2 units/10kg (or 1 pooled dose/25 kg)

The Blood Bank will continue to issue 4 units RBCs, 4 units FFP, 1 dose of Platelets and 1 dose of Cryoprecipitate, repeating the cycle until the end of MTP is called.

Comments:

- In emergencies, transfuse roughly equal volumes of PRBCs and FFP.
- In pediatric patients, consider transfusing the platelets and cryoprecipitate each when halfway through the MTP pack (roughly every 2-4 PRBC transfusions of 10-ml/kg). When not emergent (blood loss is slowing), dose platelets based on target serum platelet value and dose cryoprecipitate to keep serum fibrinogen levels > 100mg/dL.
- Factor VIIa can be given after the second round if applicable.
- Blood must be warmed before given to patient
- A blood runner is assigned by the Blood Bank, but units may assign their own if one is ready and available. - Blood runner is to stay with patient until a hand-off to another blood runner is made OR until the end of MTP is called.