Massive Transfusion Protocol (MTP) – Pediatric

**Appropriate Initial Interventions:**

- Intravenous access – by weight (kg):
  - 1-5 kg: 22-24 gauge
  - 6-10 kg: 20-24 gauge
  - 11-25 kg: 18-22 gauge
  - 25-50 kg: 16-20 gauge

Admission weight (kg)

Admission labs:
- T&S, CBC, INR/PT, PTT, Fibrinogen, Electrolytes, BUN/Cr, ionized calcium, ABG, lactate
- Continuous monitoring of vital
- Aggressive re-warming
- Prevent / Reverse acidosis
- Minimize crystalloid – avoid dilutional coagulopathy

**Other considerations:**
- Antifibrinolytic therapy:
  - Amicar 100 mg/kg bolus then 33.3 mg/kg/hour
- Cell salvage: Anesthesia Tech via Mott OR Front Desk 76-32430

**Additional help:**
- Anesthesia: page 1534
- Pediatric Surgical Fellow – page via web or operator

General Guidelines for Lab-based Blood Component Replacement in Children with Massive Bleeding:

<table>
<thead>
<tr>
<th>Product</th>
<th>Threshold</th>
<th>Dose</th>
</tr>
</thead>
<tbody>
<tr>
<td>RBCs (360 ml/unit)</td>
<td>No threshold</td>
<td>30 ml/kg</td>
</tr>
<tr>
<td>FFP (250 ml/unit)</td>
<td>INR &gt; 1.5</td>
<td>20 ml/kg</td>
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<tr>
<td>Platelets (50 ml/unit)</td>
<td>&lt; 100,000</td>
<td>20 ml/kg</td>
</tr>
<tr>
<td>Cryoprecipitate (15 ml/unit)</td>
<td>Fibrinogen &lt; 100</td>
<td>0.2 units/kg</td>
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</tbody>
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**Identify and Manage Bleeding**

(Surgery, Angiographic Embolization, Endoscopy)

≥ 30 mls/kg and ongoing uncontrolled bleeding

**Clinical Team Activates MTP & Designates Clinical Contact**

Clinical Contact phones Blood Bank (BB) at 936-6888 and:
- Provides name of clinical contact person to BB
- Provides MR#, sex, name, location and weight of patient
- Records name of BB contact, calls if location/contact information changes
- Sends person to pick up the cooler
- Ensures that MTP protocol electronic order is entered in CareLink

**BB Prepares Peds MTP Pack per weight**

Transfuse as 1:1:1 Ratio

**Hemostasis & resolution of coagulopathy?**

YES

- Stop MTP
  - Notify BB & return any unused blood ASAP
  - Resume standard orders
  - D/C MTP Electronic order

NO

- Repeat Labs
  - CBC, Platelets
  - INR/PT, PTT
  - Fibrinogen
  - ABG (ionized Calcium, Potassium, Lactate, Hematocrit)

**Consider rFVIIa**
- Persistent coagulopathy
- 90 μ/kg dose

Clinical Contact calls BB at 6-6888 for another Peds MTP pack
- **MD can adjust pack based on labs PRN**