



## PEDIATRIC Transfusion Guidelines

<p><b>ALL CHILDREN</b></p> <ul style="list-style-type: none"> <li>• Documented coagulopathy and bleeding or thrombosis</li> <li>• DIC, massive transfusion, ECMO or CPB</li> <li>• Replacement therapy for clinically significant factor deficiency</li> <li>• Multiple coagulation factor deficiency (liver disease)</li> <li>• Specific factor concentrate not available</li> <li>• Emergent correction of Vitamin K deficiency or warfarin reversal</li> <li>• TTP</li> </ul>	<p><b>ALL CHILDREN</b></p> <p><b>Plasma</b> (approx 200-325 mL/unit)</p> <p><b>Dose:</b> 10-20 mL/kg of body weight</p>
<p><b>ALL CHILDREN</b></p> <ul style="list-style-type: none"> <li>• Hypofibrinogenemia (fibrinogen &lt;125mg/dL or Dysfibrinogenemia with active bleeding or invasive procedure</li> <li>• Replacement therapy in Factor XIII deficiency with active bleeding or undergoing an invasive procedure</li> <li>• Hemophilia A (deficiency in factor VIII) or von Willebrand disease-<b>only</b> when virally-inactivated or recombinant concentrate is unavailable or DDaVP is not appropriate.</li> </ul>	<p><b>ALL CHILDREN</b></p> <p><b>Cryoprecipitate</b></p>
<p><b>ALL CHILDREN</b></p> <ul style="list-style-type: none"> <li>• BM/ or HPC transplant recipients or donors</li> <li>• Infants ≤12 months of age</li> <li>• Immune deficiency</li> <li>• Patients with hematological malignancies, Hodgkin's lymphoma, congenital/acquired</li> </ul>	<p><b>ALL CHILDREN</b></p> <p><b>Irradiated Products (RBCs, Platelets)</b></p>
<p><b>ALL CHILDREN</b></p> <ul style="list-style-type: none"> <li>• Intrauterine/exchange transfusions</li> <li>• Patients receiving purine analog drugs</li> <li>• Donations from blood relatives</li> <li>• HLA-matched platelets</li> </ul>	<p><b>ALL CHILDREN</b></p> <p><b>Leukoreduced Products (RBCs, Platelets); considered equivalent to leukoreduced products</b></p>
<p><b>ALL CHILDREN</b></p> <ul style="list-style-type: none"> <li>• Chronic transfusion regimen</li> <li>• Sickle cell disease</li> </ul>	<p><b>ALL CHILDREN</b></p> <p><b>Phenotype-matched RBCs</b></p>
<p><b>ALL CHILDREN</b></p> <ul style="list-style-type: none"> <li>• Large volume transfusions (exchange transfusion, CV surgery)</li> <li>• Discuss with Transfusion Service Medical Director</li> </ul>	<p><b>ALL CHILDREN</b></p> <p><b>Saline washing, volume reduction or HLA matched platelets</b></p>
<p><b>If suspected reaction: 1. STOP transfusion 2. Obtain vital signs, assess patient 3. Keep IV patent 4. Notify ordering MD &amp; Blood Bank</b></p>	

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Component	Indications for Pediatric Transfusion
<p><b><u>CHILDREN &lt; 4 MONTHS of AGE</u></b></p> <p><b>Leukoreduced Red Blood Cells:</b> Supplied as 90mL/pedi unit or 40mL/pedi unit</p> <p><b>Dose:</b> 10-15 mL/kg body weight; Hgb ↑2-3 gm/dL (Hct ↑6%)</p>	<ul style="list-style-type: none"> <li>• Massive blood loss</li> <li>• Hgb &lt;8g/dL (Hct &lt;24%) in stable neonates with s/s anemia</li> <li>• Hgb &lt;10g/dL (Hct &lt;30%) in neonates with:               <ul style="list-style-type: none"> <li>• Oxygen requirements &lt;35% by hood or nasal cannula</li> <li>• On CPAP or stable ventilator settings</li> <li>• Significant apnea, bradycardia, tachycardia or tachypnea</li> <li>• Low weight gain</li> </ul> </li> <li>• Hgb &lt;12g/dL (Hct &lt;35%) in neonates with:               <ul style="list-style-type: none"> <li>• FiO2 requirements ≥35%</li> <li>• Deteriorating respiratory status</li> <li>• Hypotension, shock, use of vasopressors</li> <li>• After major surgery or traumatic brain injury</li> </ul> </li> <li>• Hgb &lt;15g/dL (Hct &lt;45%) in infants with cyanotic heart disease</li> </ul>
<p><b><u>CHILDREN &gt; 4 MONTHS of AGE</u></b></p> <p><b>Leukoreduced Red Blood Cells:</b> (approx. 300-350 mL)</p> <p><b>Dose:</b> 10-15 mL/kg body weight; if weight &gt;50 kg, give 1 adult unit; Hgb ↑2-3g/dL (Hct ↑6%)</p>	<ul style="list-style-type: none"> <li>• Acute blood loss (&gt;15% total blood volume)</li> <li>• Hgb &lt;8g/dL:               <ul style="list-style-type: none"> <li>• Emergent/urgent surgery</li> <li>• Symptomatic anemia</li> <li>• Chemotherapy/radiation therapy</li> <li>• Hemodynamically stable pediatric ICU pt</li> </ul> </li> <li>• Hgb &lt;10g/dL: Severe brain injury</li> <li>• Hgb &lt;13g/dL:               <ul style="list-style-type: none"> <li>• Cyanotic heart disease; use of ECMO; severe pulmonary disease</li> </ul> </li> <li>• Patients with hemoglobinopathy on chronic transfusion regimen</li> </ul>
<p><b><u>ALL CHILDREN: Leukoreduced Platelets (SDP):</u></b> (approx. 250 mL/apheresis unit)</p> <p><b>Dose:</b> : 10-15 mL/kg body weight (neonate)</p> <p>-If wt. &lt;10 kg, give ¼ adult apheresis unit</p> <p>-If wt. 10-30 kg, give ½ adult unit</p> <p>-If wt. &gt;30 kg, give 1 adult unit</p> <p>Expected Plt rise: 30,000-50,000/µL(all doses)</p>	<ul style="list-style-type: none"> <li>• Active bleeding or prior to invasive procedure               <ul style="list-style-type: none"> <li>• Platelet &lt;50,000/µL</li> <li>• Platelet &lt;100,000/µL in sick preterm neonate, PICU patient or CNS surgery</li> <li>• Platelet dysfunction</li> </ul> </li> <li>• Massive transfusion protocol</li> <li>• Prophylactic use if platelet &lt;10,000/µL based on age &amp; other risks for bleeding</li> </ul>

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