



# Quick Reference Guide

## for Physicians, Providers, Nurses, and Paramedics

*This document highlights updates to the Damage Control Resuscitation (DCR) Clinical Practice Guideline.*

	Goal	Updated Guidance	Actions
Triage / Rapid Assessment	To reduce mortality due to hemorrhage, rapidly recognize the need for early DCR and initiate early hemorrhage control and blood transfusion as close to time-of-injury as possible.	Maintain a target Systolic Blood Pressure (SBP) for DCR at 100 mmHg (100-110mmHg if TBI is presumed) when resuscitating with blood products.	<ul style="list-style-type: none"> <li><b>Triage:</b> Identify severe injury patterns requiring early hemorrhage control and blood transfusion.</li> <li><b>Initiate Rapid Casualty Assessment</b></li> <li><b>Assess for signs of hemorrhagic shock:</b> <ul style="list-style-type: none"> <li>- SBP &lt; 100 mmHg</li> <li>- Pulse &gt; 100 bpm</li> <li>- Physiologic signs of shock</li> <li>- Hematocrit &lt; 32%</li> <li>- pH &lt; 7.25</li> <li>- Clinical signs of coagulopathy</li> </ul> </li> </ul>
	To monitor the risk of coagulopathy during massive transfusion, assess International Normalized Ratio (INR).	Monitor International Normalized Ratio (INR) > 1.5 indicating risk for coagulopathy during massive transfusion.	<ul style="list-style-type: none"> <li>Limit use of crystalloids</li> <li>Obtain baseline INR level testing as early as possible and monitor during resuscitation.</li> <li><b>Assess risk of massive transfusion:</b> <ul style="list-style-type: none"> <li>- &gt;2 regions positive on FAST scan</li> <li>- Lactate concentration on admission &gt;2.5</li> <li>- Admission INR ≥ 1.5</li> <li>- Base Deficit &gt; 6 mEq/L</li> </ul> </li> </ul>
Hemorrhage Control	To stop or reduce hemorrhage as close to time-of-injury as possible.	Utilize <b>Resuscitative Endovascular Balloon Occlusion of the Aorta (REBOA) as an option</b> for the temporary control of non-compressible torso hemorrhage.	Apply: <ul style="list-style-type: none"> <li>• tourniquets,</li> <li>• pressure bandages,</li> <li>• hemostatic dressings, and</li> </ul> <b>assist with REBOA if assigned to a designated resuscitation team.</b>
Resuscitation	To treat and reverse hemorrhagic shock, provide warm whole blood as close to the time-of-injury as possible.	Prioritize using Low Titer O Whole Blood (LTOWB) as the <b>fluid of choice</b> for DCR.	<b>Administer DCR fluids from most to least preferred:</b> <ol style="list-style-type: none"> <li>1. Whole Blood (FDA-approved LTOWB preferred)</li> <li>2. Plasma, platelets, red blood cells (RBCs), and CRYO in a 1:1:1:1 ratio</li> <li>3. Whole blood in a recently tested donor</li> <li>4. Plasma and RBCs in a 1:1 ratio</li> <li>5. Plasma or RBCs alone</li> </ol>
	<b>NOTES:</b> <ul style="list-style-type: none"> <li>• Warm fluids to 37°C/98.6°F with approved devices to prevent hypothermia.</li> <li>• Consider transfusion during transport to ensure rapid transfer to a surgical team</li> </ul>		
Pharmacologic Adjuncts	To reduce mortality, fibrinolysis, and stabilize clot, administer TXA IV/IO within 3 HOURS of injury for casualties at high risk of hemorrhagic shock.	Consider administering undiluted TXA by slow IV push (over 1 minute) is acceptable <b>ONLY</b> if supplies or tactical situation prevents providing a diluted infusion.	<ul style="list-style-type: none"> <li>• Administer TXA 2g IV/IO in 100mL NS over 1 minute within 3 HOURS of injury</li> <li>•</li> </ul>
	<b>NOTES:</b> Rapid TXA IV push may cause hypotension.		
	To prevent hypocalcemia related to massive transfusion, monitor ionized calcium. Administer calcium early.	Provide IV/IO calcium to all hemorrhagic shock patients whenever blood transfusion occurs during or immediately after first unit of blood.	<ul style="list-style-type: none"> <li>• 1g calcium IV/IO immediately after first blood unit transfused, then again after every four units keeping ionized calcium above 1.2 mmol/L</li> </ul>
<b>NOTES:</b> Calcium gluconate is preferred for peripheral IV administration.			
<b>DISCONTINUE USE for DCR:</b> <ul style="list-style-type: none"> <li>• Hydroxyethyl starch (Hextend, Hespan)</li> <li>• Recombinant human activated factor VII (rhFVIIa)</li> </ul>			