HEMORRHAGE CONTROL/TOURNIQUET/HEMOSTATIC AGENTS

<table>
<thead>
<tr>
<th>ADULT</th>
<th>PEDIATRIC (&lt;34 KG)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>BLS</strong></td>
<td>Same as Adult</td>
</tr>
</tbody>
</table>

- **Universal Algorithm**
- **Hemorrhage control**
  - Direct Pressure,
  - Elevation and use of pressure points,
  - Tourniquet application - see notes below,
  - Hemostatic dressing after all other measures fail and/or uncontrolled hemorrhage in a location not amendable to tourniquet use i.e. scalp wound, junctional areas

<table>
<thead>
<tr>
<th><strong>BLS Optional</strong></th>
</tr>
</thead>
</table>
- Pulse Oximetry – O2 administration per Airway Management Policy #602

<table>
<thead>
<tr>
<th><strong>ALS Standing Orders</strong></th>
</tr>
</thead>
</table>
- **IV Access** - Normal Saline X 1 TKO with warm fluid and extension tubing if available
- **Hypotension**
  - BP of <90 mmHg (manual) or unable to palpate peripheral pulses - administer a 250-500cc fluid bolus - may repeat X1
  - If hypotension continues and initial fluid bolus is ineffective - establish a second IV with saline lock and contact Base Physician to request additional fluid boluses
- Tourniquet Removal – see notes below

<table>
<thead>
<tr>
<th><strong>Base Hospital Orders Only</strong></th>
</tr>
</thead>
</table>
- Consultation for tourniquet removal
- Same as Adult

**Notes**

- **Indications**
  - Life threatening, persistent hemorrhage that cannot be controlled by other means
  - Serious or life threatening hemorrhage and tactical considerations in the use of standard hemorrhage control techniques

- **Contraindications for tourniquet use**
  - Non-extremity hemorrhage
  - Proximal extremity (junctional) locations where tourniquet application is not practical

- **TOURNIQUET PLACEMENT - BLS**
  - Visually inspect injured extremity and avoid placement of tourniquet over joint, angulation or open fracture, stab/penetrating or gunshot wound sites
  - Assess and document circulation, motor and sensation distal to injury site
  - Apply approved tourniquet proximal to wound (usually 2-4 inches) per manufacturer recommendations
  - Tighten tourniquet rapidly to least amount of pressure required to stop bleeding and/or distal
pulses are affected
   o Cover wound with appropriate clean/sterile dressing/bandage
   o DO NOT cover tourniquet – keep visible
   o Re-assess and document absence of bleeding distal to tourniquet
   o Remove any improvised tourniquets that may have been applied after approved tourniquet is applied
   o Document time of placement ON the tourniquet device
   o Inform receiving facility and personnel of tourniquet placement and time of placement

- **TOURNIQUET REMOVAL – ALS ONLY**
  o When the ALS personnel on scene determine:
    ▪ The tourniquet was inappropriately or improperly placed
    ▪ Absence of bleeding distal to the tourniquet confirmed
  o **Base Hospital contact prior to tourniquet removal**
  o **PROCEDURE**
    ▪ Obtain IV access
    ▪ Monitor ECG
    ▪ Maintain firm pressure over wound for minimum of 5 minutes before releasing
    ▪ Slowly release tourniquet and monitor for reoccurrence of bleeding
    ▪ Document time of release
    ▪ Bandage, reassess and document circulation, motor and sensation distal to the wound site

- **HEMOSTATIC AGENT USE – requires additional training by provider agency**
  o If bleeding persist for greater than 3 min. apply (pack) approved hemostatic gauze directly to (over) bleeding site according to manufacture’s direction
  o Replace absorbent pad/pressure dressing
  o Apply direct pressure and/or replace tourniquet per manufacture’s recommendation

Approved Tourniquet and Hemostatic Agents listed in Attachment 706-A