Medical Control Guideline: TRAUMATIC HEMORRHAGE CONTROL

PRINCIPLES:

1. Applying direct continuous pressure to the area of bleeding should be the first management technique to control external bleeding.

2. Tourniquets have been demonstrated to be safe and effective when used appropriately and can be lifesaving.

3. A hemorrhage control tourniquet should be used if external bleeding from an extremity cannot be controlled by direct pressure to an exposed wound.

4. Poorly perfusing patients with an isolated penetrating extremity injury and those with amputations or mangled extremities should have a tourniquet applied even if minimal to no visible bleeding.

5. Tourniquet application may be the initial method to control extremity bleeding when scene safety concerns, resource limitations, or patient positioning/entrapment preclude direct pressure application.

6. Tourniquet application frequently results in severe pain. Pain management should be provided as necessary.

7. Hemostatic Agents are only to be utilized by approved providers.

8. Tranexamic acid (TXA) acts to prevent clot breakdown and improves outcomes for trauma patients with hemorrhagic shock if administered within 3 hours of injury, with increasing benefit the sooner it is administered.

GUIDELINES:

1. First, remove any bandages applied by patient or bystanders (this may include tourniquets if they are inappropriately applied, ineffective or obstructing care), identify the area of bleeding, and apply continuous, firm, focused pressure directly to source of bleeding using gauze or hemostatic agents as appropriate.

2. If unable to control hemorrhage with direct pressure, or if scene or patient safety precludes application of direct pressure, prepare for tourniquet application.

3. Explain usage of tourniquet to the patient if patient’s condition allows.

4. Follow manufacturer’s instructions for application of the tourniquet.

5. Apply tourniquet 2-3 inches proximal to the bleeding site but not over a joint or the hemorrhaging injury.

6. Ensure that bleeding is stopped and distal pulses are absent after the application of the tourniquet.

7. Once a tourniquet is applied, the patient should be reassessed at least every 5 minutes

for continued absence of distal pulse and/or bleeding.

8. If bleeding is not controlled with one tourniquet, a second tourniquet may be applied proximal to the first tourniquet. Do not remove the first tourniquet after applying the second tourniquet.

9. Once a tourniquet is properly applied by EMS it should not be loosened or removed without physician approval.

10. Provide analgesia when tourniquets are placed per *MCG 1345* and refer to *TP 1244 or 1244-P, Traumatic Injury* and *TP 1242 or 1242-P, Crush Injury/Syndrome* as appropriate for dosing.

11. For adult patients within 3 hours of injury and uncontrolled external/extremity bleeding despite applying pressure, and use of hemostatic agents and tourniquets where appropriate, administer TXA per MCG 1317.41.

12. For adult patients within 3 hours of injury with suspected uncompressible truncal hemorrhage and systolic blood pressure (SBP) <90mmHg OR heart rate>SBP, administer TXA per MCG 1317.41.

13. Paramedics shall make Base hospital contact and transport in accordance with *Ref. 1200.1* and *Ref. 502, Patient Destination*. In general, patients requiring tourniquets and/or TXA should be transported to a Trauma Center.

14. Paramedic shall document the time tourniquet applied on the tourniquet and on the EMS electronic Patient Care Record (ePCR). Remaining patient documentation will be in accordance with *Ref. 606, Documentation of Prehospital Care*.