Bayfield-Ashland Counties EMS	T-4
TRAUMA	CRUSH INJURY

SYMPTOMS: Patients sustaining crush mechanism of injury, entrapment of extremity, compartment syndrome.

Assessment, Treatment, and Interventions

ALL LEVELS

- 1. Consider the event / mechanism of injury.
- 2. Assure scene safety for both rescuers and patient(s).
- 3. Identify any severe hemorrhage. If present, see Extremity Trauma/External Hemorrhage Management guideline [T-5].
- 4. Assess airway, breathing and circulation.
- 5. Assess for possible spinal injury; immobilize as appropriate.
- 6. Evaluate mental status, GCS.
- 7. Evaluate for possible accompanying injury.
- 8. Document vital signs.

EMR-O; EMT-R

- 9. Obtain SpO₂.
- 10. Administer oxygen as appropriate for dyspnea or distress with a target of greater than 93% saturation for most acutely ill patients.
- 11. Patient may initially present with very few signs and symptoms.
- 12. Monitor for development of compartment syndrome increased pressure within a compartment of the body or an extremity. Signs include:
 - a. Pain
 - b. Pale skin
 - c. Paresthesia (Numbness or tingling feeling)
 - d. Pulselessness / Loss of distal pulses
 - e. Paralysis or weakness
- 13. Consider interventions for pain control. (See Pain Management guideline M-11].)
- 14. Attach ECG cardiac monitor.

AEMT-R

- 15. Establish IV access and administer initial bolus of normal saline 10-15 ml/kg.
- 16. Continue resuscitation with normal saline [Adults: 500-1000ml/hr; Pediatrics: 20cc/kg/hr].
- 17. Avoid use of lactated Ringer's as it contains potassium.
- INT-R
 - 18. For significant crush injuries with ECG suggestive of hyperkalemia, administer sodium bicarbonate.
 - 19. If ECG suggestive of hyperkalemia consider albuterol 5 mg via small volume nebulizer.
- PARA-R
 - 20. Consider sodium bicarbonate for significant crush injuries or prolonged entrapment of an extremity.
 - 21. If ECG suggestive of hyperkalemia, administer normal saline IV fluids and consider administration of calcium gluconate (preferred). Note: Avoid lactated Ringer's solution as it contains potassium.