

**APPENDIX G: WOUND MANAGEMENT SUMMARY TABLE**

Goals of Wound Care	
<ul style="list-style-type: none"> <li>• Hemorrhage control</li> <li>• Minimize risk of infection</li> <li>• Promote optimal healing</li> <li>• Reduce discomfort</li> <li>• Minimize disability/loss of function associated with treatment</li> <li>• Implement definitive care when possible</li> </ul>	
Types of Wounds	
<ul style="list-style-type: none"> <li>• Abrasion</li> <li>• Burn</li> <li>• Puncture</li> <li>• Laceration</li> </ul>	<ul style="list-style-type: none"> <li>• Gunshot</li> <li>• Blast</li> <li>• Crush injury</li> </ul>
① Telemedicine	
<ul style="list-style-type: none"> <li>• Large or complex wounds</li> <li>• Associated injury to bone, blood vessel, tendon, nerve</li> <li>• Penetrating chest or abdominal wound</li> <li>• Infected wounds</li> <li>• Chronic, nonhealing wounds</li> </ul>	
Irrigation	
<b>Best</b>	Irrigate wounds with dilute Dakin's solution or sterile isotonic solution.
<b>Better</b>	Irrigate wounds with clean potable tap water.
<b>Minimum</b>	Irrigate wounds with the cleanest water available (nonpotable water should be boiled for a minimum of 3 minutes and then cooled to body temperature).
Debridement	
<b>Best</b>	Use an assistant, remove nonviable tissue using sharp dissection (sterile scalpel or scissors) and control bleeding using tourniquet, topical hemostatic dressings, direct pressure, clamping, suture ligation, and/or electrocautery. Questionably viable tissue may be retained with repeat debridement once every 24–48 hours until arrival at surgical facility.
<b>Better</b>	Remove nonviable tissue using sharp dissection, control bleeding using tourniquet, topical hemostatic dressings, direct pressure, clamping, and/or suture ligation. Repeat debridement or delayed primary closure in 3–5 days.
<b>Minimum</b>	When unable to evacuate and resources for serial debridement every 24–48 hours are not available, remove all nonviable and questionably viable tissue using sharp dissection (clean blade or scissors) and control bleeding with tourniquet and/or direct pressure. Leave clean dressing in place then delayed primary closure in 4–7 days if no sign of infection (ICRC wound care method).
Dressings – Shallow wounds or abrasions	
<b>Best</b>	<ul style="list-style-type: none"> <li>• Abrasions: Apply antibiotic ointment (e.g., Bacitracin or Silvadene) to skin, place nonadherent dressing over the area (e.g., Adaptic or Telfa), cover with absorbent gauze dressing, repeat daily. Alternative: Apply Silverlon dressing to a clean wound, cover with gauze, moisten gauze daily. Replace Silverlon every 3–5 days.</li> <li>• Puncture wounds or small open wounds: Apply absorbent gauze dressing, change when saturated with exudate or otherwise dirty, or at least once every 24 hours.</li> <li>• Small, clean lacerations: suture or Dermabond</li> </ul>
<b>Better</b>	Apply any available sterile gauze dressing.
<b>Minimum</b>	Apply any available clean dressing.

Dressings – Deep or large open wounds	
<b>Best</b>	<p>NPWT</p> <ul style="list-style-type: none"> <li>• Commercial available kits such as the KCI Wound VAC device can be used to both cover the wound and promote wound healing.</li> <li>• Field expedient wound VAC devices can be improvised from absorbent gauze, Tegaderm or Ioban, and suction tubing hooked up to a suction device.</li> <li>• Change NPWT dressings every 2–3 days.</li> <li>• Change NPWT dressings placed over infected wounds, along with wound debridement and irrigation, daily.</li> </ul>
<b>Better</b>	<p>Wet-to-dry dressing</p> <ul style="list-style-type: none"> <li>• Wet-to-dry dressings using sterile isotonic fluid or clean water.</li> <li>• Change the dressing 1–2 times per day unless the situation dictates a less frequent approach.</li> <li>• For wounds that are draining heavily, a dry-to-wet dressing may be used instead.</li> </ul>
<b>Minimum</b>	Place a bulky dressing with dry gauze, absorbent padding, and elastic bandage; leave in place 4–7 days if wound is clean without sign of infection.
Infection prevention	
<ul style="list-style-type: none"> <li>• Tetanus prophylaxis if immunization status unknown</li> <li>• In addition to wound care, treat open wounds with antibiotics as soon as possible after injury and continue for 24 hours with one of the following antibiotics: <ul style="list-style-type: none"> <li>• Moxifloxacin 400mg PO × 1 dose or levofloxacin 750mg PO × 1 dose</li> <li><b>Note:</b> levofloxacin is preferred in wet/jungle environment</li> <li>• Clindamycin 300mg PO every 8 hours</li> <li>• Cefazolin 2g IV every 8 hours</li> <li>• Ertapenem 1g IV 1 dose</li> </ul> </li> <li>• If following the ICRC wound care method, continue antibiotics for 5 days or until delayed primary closure.</li> </ul>	
Infection treatment	
<ul style="list-style-type: none"> <li>• Remove all dressings and inspect wound.</li> <li>• Wounds that have been closed must be reopened.</li> <li>• Repeat wound debridement to drain pus and remove all dead, infected tissue. If necessary, extend the wound with an incision in the long axis of the extremity.</li> <li>• Worst-case scenario may require amputation of an extremity to control life-threatening infection.</li> <li>• Increase the frequency of dressing changes to once or twice daily.</li> <li>• Continue antibiotics for 7–10 days, moxifloxacin 400 mg PO daily or levofloxacin 750mg PO daily or ertapenem 1g IV daily, or alternative broad-spectrum antibiotic as available.</li> <li>• Use Dakin's solution for the wet-to-dry dressing, particularly for suspected fungal and pseudomonal infections.</li> <li>• Daily sugar or honey dressings for infected wounds may successfully treat infection in very austere settings</li> </ul>	

NPWT, negative pressure wound therapy; VAC, vacuum-assisted closure.