APPENDIX B: POST-INJURY ANTIMICROBIAL AGENT SELECTION AND DURATION BASED UPON INJURY PATTERN

INJURY	PREFERRED AGENT(S)	ALTERNATE AGENT(S)	DURATION
EXTREMITY WOUNDS (INCLUDES SKIN, SOFT TISSUE, BONE)			
Skin, soft tissue, no open fractures	Cefazolin, 2 gm IV q6-8h†‡	Clindamycin (300-450 mg PO TID or 600 mg IV q8h)	1-3 days
Skin, soft tissue, with open fractures, exposed bone, or open joints	Cefazolin 2 gm IV q6-8h†‡§	Clindamycin 600 mg IV q8h	1-3 days
THORACIC WOUNDS			
Penetrating chest injury without esophageal disruption	Cefazolin, 2 gm IV q6-8h†‡	Clindamycin (300-450 mg PO TID or 600 mg IV q8h)	1 day
Penetrating chest injury with esophageal disruption	Cefazolin 2 gm IVq 6-8h†‡ PLUS metronidazole 500 mg IV q8-12h	Ertapenem 1 gm IV x 1 dose, OR moxifloxacin 400 mg IV x 1 dose	1 day after definitive washout
ABDOMINAL WOUNDS			
Penetrating abdominal injury with suspected/known hollow viscus injury and soilage; may apply to rectal/perineal injuries as well	Cefazolin 2 gm IV q 6-8h†‡ PLUS metronidazole 500 mg IV q8-12h	Ertapenem 1 gm IV x 1 dose, OR moxifloxacin 400 mg IV x 1 dose	1 day after definitive washout
MAXILLOFACIAL AND NECK WOUNDS			
Open maxillofacial fractures, or maxillofacial fractures with foreign body or fixation device	Cefazolin 2 gm IV q6-8h†‡	Clindamycin 600 mg IV q8h	1 day
CENTRAL NERVOUS SYSTEM WOUNDS			
Penetrating brain injury	Cefazolin 2 gm IV q6-8h.†‡ Consider adding metronidazole 500 mg IV q8-12h if gross contamination with organic debris	Ceftriaxone 2 gm IV q24h. Consider adding metronidazole 500 mg IV q8-12h if gross contamination with organic debris. For penicillin allergic patients, Vancomycin 1 gm IV q12h PLUS ciprofloxacin 400 mg IV q8- 12h	5 days or until CSF
Penetrating spinal cord injury	Cefazolin 2 gm IV q6-8h.†‡ ADD metronidazole 500 mg IV q8-12h if abdominal cavity is involved	As above. ADD metronidazole 500 mg IV q8- 12h if abdominal cavity is involved	5 days or until CSF leak is closed, whichever is longer
EYE WOUNDS			
Eye injury, burn or abrasion	Topical: Erythromycin or Bacitracin ophthalmic ointment QID and PRN for symptomatic relief Systemic: No systemic treatment required	Fluoroquinolone 1 drop QID	Until epithelium healed (no fluoroescein staining)

INJURY	PREFERRED AGENT(S)	ALTERNATE AGENT(S)	DURATION
Eye injury, penetrating	Levofloxacin 500 mg IV/PO once daily. Prior to primary repair, no topical agents should be used unless directed by ophthalmology		7 days or until evaluated by an ophthalmologist
BURNS			
Superficial burns	Topical antimicrobials with twice daily dressing changes (include mafenide acetate** or silver sulfadiazine; may alternate between the two), OR silver impregnated dressing changed q3-5d, OR Biobrane	Silver nitrate solution applied to dressings	Until healed.
Deep partial thickness burns	Topical antimicrobials with twice daily dressing changes, OR silver impregnated dressing changed q3-5d, PLUS excision and grafting	Silver nitrate solution applied to dressings PLUS excision and grafting	Until healed or grafted
Full thickness burns	Topical antimicrobials with twice daily dressing changes PLUS excision and grafting	Silver nitrate solution applied to dressings PLUS excision and grafting	Until healed or grafted
POINT OF INJURY/DELAYED EVACUATION††			
Expected delay to reach surgical care	Moxifloxacin 400 mg PO x 1 dose. Ertapenem 1 g IV or IM if penetrating abdominal injury, shock, or unable to tolerate PO medications	Levofloxacin 500 mg PO x 1 dose. Cefotetan 2 g IV or IM q12h if penetrating abdominal injury, shock, or unable to tolerate PO medications	Single dose therapy

*Post-injury antimicrobial agents are recommended to prevent early post-traumatic infectious complications, including sepsis, secondary to common bacterial flora. Selection is based on narrowest spectrum and duration required to prevent early infections prior to adequate surgical wound management. This narrow spectrum is selected to avoid selection of resistant bacteria. The antimicrobials listed are not intended for use in established infections, where multidrug-resistant (MDR) or other nosocomial pathogens may be causing infection.

†Cefazolin may be dosed based on body mass: 1 gram if weight < 80 kg (176 lbs), 2 grams if weight 81-160 kg (177-352 lbs), 3 grams if weight > 160 kg (>352 lbs); doses up to 12 grams daily are supported by FDA-approved package insert.

‡Pediatric dosing: cefazolin, 20-30 mg/kg IV q6-8h (maximum, 100 mg/kg/day); metronidazole, 7.5 mg/kg IV q6h; clindamycin 25-40mg/kg/day IV divided q6- 8h; ertapenem, 15 mg/kg IV or IM q12 (children up to 12 years) or 20 mg/kg IV or IM once daily (children over 12 years; maximum, 1 gm/day); ceftriaxone, 100 mg/kg/day IV divided q12-24h (dosing for CNS injury); levofloxacin, 8 mg/kg IV or PO q12h (levofloxacin is only FDA-approved in children for prophylaxis of inhalational anthrax in children > 6 months of age, but this dose is commonly used for other indications); vancomycin 60 mg/kg/day IV divided q6h (dosing for CNS injury); ciprofloxacin, 10mg/kg IV (or 10-20mg/kg PO) q12h.

§These guidelines do not advocate adding enhanced Gram negative bacteria coverage (i.e., addition of fluoroquinolone or aminoglycoside antimicrobials) in type III fractures.

**Mafenide acetate is contraindicated in infants less than 2 months of age.

††Post-injury antimicrobial therapy as suggested by the Committee on Tactical Combat Casualty Care (CoTCCC).