Standardized Antibiotic Prophylaxis Protocol for Acute Open Fractures in the Emergency Department and on the Orthopaedic Trauma Service (edited 1.14.21)

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Proposed Changes:
- Beginning January 12, 2021, antibiotic prophylaxis for open fractures presenting to SHC ED will be determined by the algorithm below in Figure 1.
- The ED provider should order the appropriate antibiotic immediately (at the same time as placing the orthopaedic surgery consult) to expedite pharmacy release of the appropriate medication
- Antibiotic administration should occur as soon as possible, preferably within 1 hour after injury, however if this is not possible, the first dose of antibiotics should be administered no later than 1 hour from presentation to the ED.
- At the time of consult communication, the Orthopaedic Surgery consult resident will confirm that the appropriate antibiotic has been ordered as well as given according to the regimen outlined in Figure 1.

Figure 1:

- Metronidazole should be added if concern for fecal or farm/soil contamination, and/or high index of suspicion for Clostridium contamination. Consider ID consult inpatient.
- Vancomycin may be added in addition to the above regimen for patients known to be colonized with MRSA.
- Intravenous (IV) antibiotic doses may be adjusted when indicated with the assistance of Pharmacy staff.
- Soft-tissue coverage should occur within 1-week of definitive fixation if the wound bed is clean and the patient is able to tolerate the planned procedure.
- All antibiotics should be discontinued 24 hours after definitive wound closure unless there is a documented infection in which case the attending surgeon may continue antibiotics for a specific time frame per provider discretion.
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<thead>
<tr>
<th>Type</th>
<th>Description</th>
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<tbody>
<tr>
<td>I</td>
<td>Open fracture with a wound less than 1 cm long, low energy, without gross contamination</td>
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<tr>
<td>II</td>
<td>Open fracture with a wound 1–10 cm long, low energy, without gross contamination or extensive soft-tissue damage, flaps, or avulsions</td>
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<td>III</td>
<td>A Open fracture with a wound greater than 10 cm with adequate soft-tissue coverage, OR any open fracture due to high-energy trauma or with gross contamination, regardless of the size of the wound</td>
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<td>B Open fracture with extensive soft-tissue injury or loss, with periosteal stripping and bone exposure that requires soft-tissue coverage in the form of muscle rotation or transfer</td>
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<td>C Open fracture associated with arterial injury requiring repair</td>
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