Suspection of MSK Infection

- Low Suspicion for MSK Infection
  - Afebrile, history of trauma < 24 hours
  - Continue usual UC management

- High Suspicion for MSK Infection
  - Fever AND refusal to bear weight, focal pain, limited use and/or immobility of extremity
  - Initial Diagnostic Management
    - Make patient NPO
    - Imaging: Radiograph of affected region
    - Labs: CBC with diff, CRP, ESR, blood culture
    - Consider BMP given potential for nephrotoxic drugs

  - Refusal to bear weight and fever present. Is radiograph consistent with infectious process OR does patient have at least one of the following predictors?
    - WBC > 12,000
    - CRP > 2mg/dl
    - ESR > 40

  - Low Risk for MSK infection
    - Trial NSAIDs
    - Does patient meet the following criteria?
      - Clinical improvement (Afebrile, able to ambulate)
      - Patient has reliable follow-up
    - Yes: Discharge home with PCP follow-up within 48 hours
    - No: Consult Ortho for disposition

  - High Risk for MSK infection
    - Concern for significant MSK Infection?
      - Yes: Admit to Hospitalist for scheduled NSAIDs (POV vs. Transport based on clinical/social factors)
      - No: Admit to Hospitalist for scheduled NSAIDs (POV vs. Transport based on clinical/social factors)

Inclusion Criteria
- 6 months to 21 years
- Suspicion of acute musculoskeletal infection (Symptoms less than 2 weeks): osteomyelitis, septic arthritis, pyomyositis

Exclusion Criteria
- Infants less than 6 months
- Chronic and subacute musculoskeletal infection (Symptoms greater than 2 weeks)
- Postoperative infection
- Penetrating trauma
- Patient with hardware
- Myelomeningocele
- Chronic recurrent multifocal osteomyelitis (CRMO)
- Immunocompromised

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Developed through the efforts of Children’s Healthcare of Atlanta and physicians on Children’s medical staff in the interest of advancing pediatric healthcare. This is a general guideline and does not represent a professional care standard governing providers' obligation to patients. Ultimately the patient’s physician must determine the most appropriate care.
## IV Antibiotic Table

<table>
<thead>
<tr>
<th>Patient Characteristics</th>
<th>Bacterial Targets</th>
<th>Drug</th>
<th>Dose</th>
<th>Max Single Dose</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 months - ≤ 4 years and medically stable</td>
<td>S. aureus, S. pyogenes (GAS), K. kingae</td>
<td>Clindamycin AND</td>
<td>13mg/kg IV q8h</td>
<td>900mg</td>
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<tr>
<td></td>
<td></td>
<td>Cefazolin</td>
<td>40mg/kg IV q8h</td>
<td>2000mg</td>
</tr>
<tr>
<td>6 months - ≤ 4 years and not fully immunized against H. Influenza or S. pneumoniae</td>
<td>S. aureus, S. pyogenes (GAS), K. kingae, H. influenzae, S. pneumoniae</td>
<td>Clindamycin AND</td>
<td>13mg/kg IV q8h</td>
<td>900mg</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ceftriaxone</td>
<td>75mg/kg IV q24h</td>
<td>2000mg</td>
</tr>
<tr>
<td>&gt; 6 months and ill appearing (Hemodynamically instability OR anticipated/existing need for intensive care)</td>
<td>S. aureus, S. pyogenes (GAS), K. kingae, H. influenzae, S. pneumoniae</td>
<td>Vancomycin AND 1</td>
<td>15mg/kg IV q6h</td>
<td>1000 mg</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ceftriaxone</td>
<td>75mg/kg IV q24h</td>
<td>2000mg</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Consider Clindamycin 2</td>
<td>13mg/kg IV q8h</td>
<td>900mg</td>
</tr>
<tr>
<td>&gt; 4 years old and medically stable</td>
<td>S. aureus, S. pyogenes (GAS)</td>
<td>Clindamycin</td>
<td>13mg/kg IV q8h</td>
<td>900mg</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Consider Ceftriaxone 3</td>
<td>75mg/kg IV q24h</td>
<td>2000mg</td>
</tr>
</tbody>
</table>

1. Recommended vancomycin starting dose. Goal trough 10-15µg/mL. Pharmokinetic service will monitor trough levels and adjust accordingly.

2. Consider adding clindamycin empirically in critically ill patients while waiting for confirmation of therapeutic vancomycin level.

3. If not fully immunized against H. influenzae or S. pneumoniae OR concern for Lyme disease or Gonorrhea, add ceftriaxone.