Aim: To decrease variation in management of patients with musculoskeletal infections.

CONCERN FOR MUSCULOSKELETAL INFECTION?

DO:
- Make patient NPO
- Obtain labs including CBC with diff, CRP, ESR, blood cx, BMP (for creatinine). Consider Lyme, strep testing.
- Obtain imaging: Plain films, possibly US (if hip). MRI recommended even for septic joints, radiology + ortho to discuss contrast need.

DON’T: Give antibiotics unless instructed by Ortho, or ill-appearing

Likelihood of musculoskeletal infection

Low (or unsedated MRI feasible)
- MRI or admit to short stay, depending on MRI and bed availability

Medium/High (or sedated MRI needed)
- Consult Ortho, including decision about transfer to Minneapolis
- Explore MRI availability
- Transfer to Minneapolis campus if MRI available
- Ortho to speak with radiologist re: MRI strategy
- Ortho to coordinate OR options if indicated

MSK infection?
- Yes
- Admit to inpatient
- To OR with Ortho if indicated
- Start antibiotics (discuss with ortho first)
  – After bone/joint fluid cultured
  – If significantly ill-appearing
  – If no OR planned in >12 hours

No
- Off guideline

EXCLUSION GUIDELINES
Patients excluded from this guideline:
- ≥14 days of symptoms
- Critically ill
- Immunodeficiency
- Sickle Cell disease
- Trauma
- Post operative infection
- Skull/vertebral, hand/foot infection
- Concern for necrotizing fasciitis or unusual organism

Disclaimer: This guideline is designed for general use with most patients; each clinician should use his or her own independent judgment to meet the needs of each individual patient. This guideline is not a substitute for professional medical advice, diagnosis or treatment.
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See page 1 (ED/Inpatient guideline) for details on exclusions and initial workup

Admit to hospitalist service with Ortho and ID consults

- Initiate empiric antibiotic therapy once instructed by Ortho
- Assess for risk of DVT

Cefazolin (Ancef®)
40 mg/kg/dose (max 2000 mg/dose)
IV Q8H

Adjust antibiotics based on bone and blood culture results

Antibiotic Special Scenarios
- Add Vancomycin 15 mg/kg IV Q6 if clinically deteriorating
- Add Clindamycin 10 mg/kg IV Q8 if known MRSA carrier, history of MRSA abscesses in the family, recently or frequently hospitalized
- Confer with ID for antibiotic selection on patients at risk for non-staph/strep pathogens (e.g. sickle cell disease - Salmonella; underimmunized for age - H. flu; risk of gonorrhea)

Negative cultures
See page 3

Positive cultures
See page 4

D/C planning:
- ID follow-up within 1 week
- Ortho follow-up per ortho team
- DME (crutches, wheelchair if indicated)
- Physical therapy at discretion of orthopedist
- Child life oral med teaching (start 48 hr prior to anticipated discharge)

D/C criteria (and consider for oral therapy):
- Completed minimum 72 hr IV antibiotics
- Significant decline in CRP
- Afebrile x 48 hr
- Most recent blood cultures negative x 48H
- Regaining use of involved extremity
- Demonstrates oral intake including meds
- No further surgery planned
- No barrier to outpatient care

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**Aim:** To decrease variation in management of patients with musculoskeletal infections.

**NOTE 1.**
Patients with negative cultures who respond to Cefazolin AND Vancomycin are excluded from this guideline.

**NOTE 2.**
Consider transition to oral antibiotics if:
- Completed minimum 72 hr IV antibiotics
- Significant decline in CRP
- Most recent blood cultures negative x 48H
- Afebrile x 48 hr
- Regaining use of involved extremity
- Demonstrates oral intake including meds
- No further surgery planned
- No barrier to outpatient care

**INPATIENT GUIDELINE**

**MUSCULOSKELETAL (MSK) INFECTION**

Antibiotics at 72 hours if: No organism identified on any culture; on Cefazolin monotherapy (See Note 1)

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**INPATIENT GUIDELINE**

**MUSCULOSKELETAL (MSK) INFECTION**

*Antibiotics at 48 hours (organism identified on culture)*

**Aim:** To decrease variation in management of patients with musculoskeletal infections.

**MSSA, Group A Strep, Kingella**

- Continue Cefazolin
- Discontinue Vancomycin (if applicable)

**Responding and candidate for PO?** *(See Note 2)*

- Yes
  - Cephalexin 50 mg/kg/dose (max 1250 mg/dose) PO TID

- No

**MRSA sensitive to Clindamycin**

- Discontinue Cefazolin
- Change Vancomycin to Clindamycin 10 mg/kg/dose IV Q8 (max 600 mg/dose) *(See Note 1)*

**Responding and candidate for PO?** *(See Note 2)*

- Yes
  - Clindamycin 10 mg/kg/dose PO TID (max 600 mg/dose)

- No

**MRSA resistant to Clindamycin**

- Continue Vancomycin
- Discontinue Cefazolin

**Responding and candidate for PO?** *(See Note 2)*

- Yes
  - Consider switch to:
    - Daptomycin IV
    - Linezolid PO
    - Bactrim PO

- No

**For non-responders on appropriate antibiotics:**

- Consult with ID, Ortho
- Assess source control
- Consider re-imaging
- Consider alternate/additional diagnoses

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**NOTE 1.**
Only change from Vanco if most recent blood cultures negative x 48 hours and good source control.

**NOTE 2.**
Consider transition to oral antibiotics if:
- Completed minimum 72 hr IV antibiotics
- Significant decline in CRP
- Most recent blood cultures negative x 48H
- Afebrile x 48 hr
- Regaining use of involved extremity
- Demonstrates oral intake including meds
- No further surgery planned
- No barrier to outpatient care