

## BONE – Osteomyelitis

**DEFINITION:** Osteomyelitis must meet at least **ONE** ☐ of the following criteria:

☐ **Criterion 1:** *(Last updated June, 2008)*

- Patient has organisms cultured from bone

☐ **Criterion 2:** *(Last updated January 1, 2013)*

- Patient has evidence of osteomyelitis on direct examination of the bone during **ONE** ☐ of the following:
  - ☐ invasive procedure
  - ☐ histopathologic examination

☐ **Criterion 3:** *(Last updated January 1, 2013)*

- Patient has at least **TWO** ☐ of the following signs or symptoms: (\* *with no other recognized cause*)
    - ☐ fever (>38°C)
    - ☐ localized swelling\*
    - ☐ tenderness\*
    - ☐ heat\*
    - ☐ drainage at suspected site of bone infection\*
- AND**
- Patient has at least **ONE** ☐ of the following:
    - ☐ organisms cultured from blood
    - ☐ positive laboratory test on blood (e.g. antigen tests for *H. influenzae*, *S. pneumoniae*)
    - ☐ imaging test evidence of infection (e.g. abnormal findings on x-ray, CT scan, MRI, radiolabel scan [gallium, technetium, etc. ])

**REPORTING INSTRUCTIONS:** *(Last updated June, 2008)*

- Report mediastinitis following cardiac surgery that is accompanied by osteomyelitis as SSI-MED rather than SSI-BONE.

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## DISC – Disc Space Infection

**DEFINITION:** Vertebral disc space infection must meet at least **ONE** ☐ of the following criteria:

☐ **Criterion 1:** *(Last updated January 1, 2013)*

- Patient has organisms cultured from vertebral disc space tissue obtained during invasive procedure

**□ Criterion 2:** *(Last updated June, 2008)*

- Patient has evidence of vertebral disc space infection seen during **ONE** **△** of the following:
  - △** invasive procedure
  - △** histopathologic examination

**□ Criterion 3:** *(Last updated January 1, 2013)*

- Patient has **ONE** **△** of the following: (*\* with no other recognized cause*)
  - △** fever (>38°C)
  - △** pain at the involved vertebral disc space\*

**AND**
- Patient has imaging test evidence of infection (e.g. abnormal findings on x-ray, CT scan, MRI, radiolabel scan [gallium, technetium, etc.]).

**□ Criterion 4:** *(Last updated January 1, 2013)*

- Patient has **BOTH** **△** (*\* with no other recognized cause*)
  - △** fever (>38°C)
  - △** pain at the involved vertebral disc space\*

**AND**
- Patient has positive laboratory test (e.g., antigen tests for *H. influenzae*, *S. pneumoniae*, *N. meningitidis*, or Group B *Streptococcus*) on **ONE** **△** of the following:
  - △** blood
  - △** urine

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**JNT – Joint or Bursa Infection**

**DEFINITION:** Joint or bursa infections must meet at least **ONE** **□** of the following criteria:

**□ Criterion 1:** *(Last updated June, 2008)*

- Patient has organisms cultured from **ONE** **△** of the following:
  - △** joint fluid
  - △** synovial biopsy

**Criterion 2:** (Last updated January 1, 2013)

- Patient has evidence of **ONE** ☐ of the following:
  - ☐ joint infection seen during **ONE** ☐ of the following:
    - ☐ invasive procedure
    - ☐ histopathologic examination
  - ☐ bursa infection seen during **ONE** ☐ of the following:
    - ☐ invasive procedure
    - ☐ histopathologic examination

**Criterion 3:** (Last updated April 1, 2013)

- Patient has at least **TWO** ☐ of the following signs or symptoms with no other recognized cause:
    - ☐ joint pain
    - ☐ swelling
    - ☐ tenderness
    - ☐ heat
    - ☐ evidence of effusion
    - ☐ limitation of motion
- AND**
- Patient has at least **ONE** ☐ of the following:
    - ☐ **BOTH** ☐ of the following:
      - ☐ organisms seen on Gram's stain of joint fluid
      - ☐ white blood cells seen on Gram's stain of joint fluid
    - ☐ **ONE** ☐ of the following positive lab testing:
      - ☐ positive blood culture
      - ☐ positive appropriate laboratory antigen test on **ONE** ☐ of the following:
        - ☐ blood
        - ☐ urine
        - ☐ joint fluid
    - ☐ **BOTH** ☐ of the following:
      - ☐ cellular profile of joint fluid with **BOTH** ☐ of the following:
        - ☐ compatible with infection
        - ☐ **not** explained by an underlying rheumatologic disorder

☐ chemistries of joint fluid meeting **BOTH** ☐ of the following:

☐ compatible with infection

☐ **not** explained by an underlying rheumatologic disorder

☐ imaging test evidence of infection (e.g. abnormal findings on x-ray, CT scan, MRI, radiolabel scan [gallium, technetium, etc.])

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### **PJI – Periprosthetic Joint Infection (following HPRO and KPRO only)**

**DEFINITION:** Joint or bursa infections must meet at least **ONE** ☐ of the following criteria:

☐ **Criterion 1:** *(Last updated January 1, 2014)*

☐ Two positive cultures from **ONE** ☐ of the following:

☐ periprosthetic tissue

☐ periprosthetic fluid

☐ **Criterion 2:** *(Last updated January 1, 2014)*

☐ A sinus tract communicating with the joint

☐ **Criterion 2:** *(Last updated January 1, 2014)*

☐ Have **THREE** ☐ of the following minor criteria:

☐ **BOTH** ☐ of the following:

☐ elevated serum C-reactive protein (CRP; >100 mg/L)

☐ erythrocyte sedimentation rate (ESR; >30 mm/hr)

☐ **ONE** ☐ of the following:

☐ elevated synovial fluid white blood cell (WBC; >10,000 cells/μL) count

☐ ++ (or greater) change on leukocyte esterase test strip of synovial fluid

☐ elevated synovial fluid polymorphonuclear neutrophil percentage (PMN% >90%)

☐ positive histological analysis of periprosthetic tissue (>5 neutrophils (PMNs) per high power field)

☐ a single positive culture from **ONE** ☐ of the following:

☐ periprosthetic tissue

☐ periprosthetic fluid

**COMMENTS:** *(Last updated January 1, 2014)*

- Identical organisms mean matching at genus and species level but they do not have to have matching antibiograms.



**TENNESSEE DEPARTMENT OF HEALTH**  
**HEALTHCARE-ASSOCIATED INFECTIONS AND ANTIMICROBIAL RESISTANCE PROGRAM**  
**HAI Surveillance Definitions**  
**BONE AND JOINT INFECTION (BJ)**



- A sinus tract is defined as a narrow opening or passageway underneath the skin that can extend in any direction through soft tissue and results in dead space with potential for abscess formation
- The NHSN definition of PJI is closely adapted from the Musculoskeletal Infection Society's (MSIS's) definition of PJI (*Proceedings of the International Consensus Meeting on Periprosthetic Joint Infection. 2013*). However, the standard laboratory cutoff values in criteria 3a to 3d are provided by NHSN for HPRO and KPRO SSI surveillance purposes only. The NHSN laboratory cutoffs are not intended to guide clinicians in the actual clinical diagnosis and management of acute or chronic PJI. Clinicians should refer to the MSIS consensus definition for clinical use.