## 2021 NHSN Bone and Joint Infection (BJ) Checklist

### Documentation Review Checklist

#### BJ - Bone and Joint Infection

#### BONE-Osteomyelitis

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<tr>
<th>Element</th>
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**Osteomyelitis must meet at least one of the following criteria:**

1. Patient has organism(s) identified from bone by culture or non-culture based microbiologic testing method, which is performed for purposes of clinical diagnosis and treatment, for example, not Active Surveillance Culture/Testing (ASC/AST).  
   - [ ]

2. Patient has evidence of osteomyelitis on gross anatomic or histopathologic exam.  
   - [ ]

3. Patient has at least two of the following localized signs or symptoms:
   - Fever (>38.0°C)  
     - [ ]
   - Swelling*  
     - [ ]
   - Pain or tenderness*  
     - [ ]
   - Heat*  
     - [ ]
   - Drainage*  
     - [ ]

AND at least one of the following:

a. Organism(s) identified from blood by culture or non-culture based microbiologic testing method, which is performed for purposes of clinical diagnosis and treatment, for example, not Active Surveillance Culture/Testing (ASC/AST)  
   - [ ]

   **AND** Imaging test evidence suggestive of infection (for example, x-ray, CT scan, MRI, radiolabel scan [gallium, technetium, etc.]), which if equivocal is supported by clinical correlation, specifically, physician documentation of antimicrobial treatment for osteomyelitis.

b. Imaging test evidence suggestive of infection (for example, x-ray, CT scan, MRI, radiolabel scan [gallium, technetium, etc.]), which if equivocal is supported by clinical correlation, specifically, physician documentation of antimicrobial treatment for osteomyelitis.  
   - [ ]

*With no other recognized cause*

### Reporting instructions:

- Report mediastinitis following cardiac surgery that is accompanied by osteomyelitis as SSI-MED rather than SSI-BONE.
- If a patient meets both organ space JNT and BONE report the SSI as BONE.
- After an HPRO or a KPRO if a patient meets both organ space PJI and BONE report the SSI as BONE.
Vertebral disc space infection must meet at least one of the following criteria:

1. Patient has organism(s) identified from vertebral disc space by culture or non-culture based microbiologic testing method, which is performed for purposes of clinical diagnosis and treatment, for example, not Active Surveillance Culture/Testing (ASC/AST).

2. Patient has evidence of vertebral disc space infection on gross anatomic or histopathologic exam.

3. Patient has at least one of the following localized signs or symptoms:
   - Fever (>38.0°C)
   - Pain* at the involved vertebral disc space

AND at least one of the following:

a. Organism(s) identified from blood by culture or non-culture based microbiologic testing method, which is performed for purposes of clinical diagnosis and treatment, for example, not Active Surveillance Culture/Testing (ASC/AST) AND

   Imaging test evidence suggestive of infection (for example, x-ray, CT scan, MRI, radiolabel scan [gallium, technetium, etc.]), which if equivocal is supported by clinical correlation, specifically, physician documentation of antimicrobial treatment for vertebral disc space infection.

b. Imaging test evidence suggestive of infection (for example, x-ray, CT scan, MRI, radiolabel scan [gallium, technetium, etc.]), which if equivocal is supported by clinical correlation, specifically, physician documentation of antimicrobial treatment for vertebral disc space infection.

*With no other recognized cause
## BJ - Bone and Joint Infection

**JNT-Joint or bursa infection (not for use as Organ/Space SSI after HPRO or KPRO procedures)**

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<tbody>
<tr>
<td>Joint or bursa infections must meet at least <strong>one</strong> of the following criteria:</td>
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<tr>
<td>1. Patient has organism(s) identified from joint fluid or synovial biopsy by culture or non-culture based microbiologic testing method, which is performed for purposes of clinical diagnosis and treatment, for example, not Active Surveillance Culture/Testing (ASC/AST).</td>
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<td>2. Patient has evidence of joint or bursa infection on gross anatomic or histopathologic exam.</td>
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<td>3. Patient has at least <strong>two</strong> of the following:</td>
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<tr>
<td>• Swelling*</td>
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<td>• Pain* or tenderness*</td>
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<tr>
<td>• Heat*</td>
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<td>• Evidence of effusion*</td>
<td>☐</td>
<td></td>
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<td>• Limitation of motion*</td>
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<td><strong>AND</strong> at least <strong>one</strong> of the following:</td>
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<tr>
<td>a. Elevated joint fluid white blood cell count (per reporting laboratory’s reference range) <strong>OR</strong> positive leukocyte esterase test strip of joint fluid.</td>
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<td>b. Organism(s) and white blood cells seen on Gram stain of joint fluid.</td>
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<tr>
<td>c. Organism(s) identified from blood by culture or non-culture based microbiologic testing method, which is performed for purposes of clinical diagnosis and treatment, for example, not Active Surveillance Culture/Testing (ASC/AST).</td>
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<tr>
<td>d. Imaging test evidence suggestive of infection (for example, x-ray, CT scan, MRI, radiolabel scan [gallium, technetium, etc.]), which if equivocal is supported by clinical correlation, specifically, physician documentation of antimicrobial treatment for joint or bursa infection.</td>
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*With no other recognized cause*

**Reporting instruction:**
- If a patient meets both organ space JNT and BONE report the SSI as BONE.
### BJ - Bone and Joint Infection

**PJI-Periprosthetic Joint Infection (for use as Organ/Space SSI following HPRO and KPRO only)**

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Joint or bursa infections must meet at least **one** of the following criteria:

1. **Two** positive periprosthetic specimens (*tissue or fluid*) with at least one matching organism, identified by culture or non-culture based microbiologic testing method, which is performed for purposes of clinical diagnosis and treatment, for example, not Active Surveillance Culture/Testing (ASC/AST).

2. A sinus tract* communicating with the joint identified on gross anatomic exam.

3. **Three** of the following minor criteria:
   - a. Elevated serum C-reactive protein (CRP; >100 mg/L) and erythrocyte sedimentation rate (ESR; >30 mm/hr.).
   - b. Elevated synovial fluid white blood cell (WBC; >10,000 cells/μL) count OR “++” (or greater) change on leukocyte esterase test strip of synovial fluid.
   - c. Elevated synovial fluid polymorphonuclear neutrophil percentage (PMN% >90%).
   - d. Positive histological analysis of periprosthetic tissue (>5 neutrophils (PMNs) per high power field).
   - e. Organism(s) identified from a single positive periprosthetic specimen (*tissue or fluid*) by culture or non-culture based microbiologic testing method, which is performed for purposes of clinical diagnosis and treatment, for example, not Active Surveillance Culture/Testing (ASC/AST).

* A sinus tract is defined as a narrow opening or passageway that can extend in any direction through soft tissue and results in dead space with potential for abscess formation.

**Comments:**
- A matching organism is defined on page 17-1. Organism(s) identified from hip or knee hardware can be used to meet criterion 1.
- 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*).
- The standard laboratory cutoff values in criteria 3a - 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.

**Reporting instruction:**
- After an HPRO or a KPRO if a patient meets both organ space PJI and BONE report the SSI as BONE.