

## CARD – Myocarditis or Pericarditis

**DEFINITION:** Myocarditis or pericarditis must meet at least **ONE** ☐ of the following criteria:

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

- Patient has organisms cultured from **ONE** ☐ of the following:
  - ☐ pericardial tissue obtained during an invasive procedure
  - ☐ pericardial fluid obtained during an invasive procedure

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

- Patient has at least **TWO** ☐ of the following signs or symptoms: (\* *with no other recognized cause*)
    - ☐ fever (>38°C)
    - ☐ chest pain\*
    - ☐ paradoxical pulse\*
    - ☐ increased heart size\*
- AND**
- Patient has at least **ONE** ☐ of the following:
    - ☐ abnormal EKG consistent with **ONE** ☐ of the following:
      - ☐ myocarditis
      - ☐ pericarditis
    - ☐ positive laboratory test on blood (e.g., antigen tests for *H. influenzae*, *S. pneumoniae*)
    - ☐ evidence of with **ONE** ☐ of the following:
      - ☐ myocarditis on histologic examination of heart tissue
      - ☐ pericarditis on histologic examination of heart tissue
    - ☐ evidence of with **ONE** ☐ of the following:
      - ☐ 4-fold rise in type-specific antibody **with** isolation of virus from **ONE** ☐ of the following:
        - ☐ pharynx
        - ☐ feces
      - ☐ 4-fold rise in type-specific antibody **without** isolation of virus from **ONE** ☐ of the following:
        - ☐ pharynx
        - ☐ feces
    - ☐ pericardial effusion identified by **ONE** ☐ of the following:
      - ☐ echocardiogram

- ☐ CT scan
- ☐ MRI
- ☐ angiography

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

- Patient ≤1 year of age has at least **TWO** ☐ of the following signs or symptoms: (\* **with no other recognized cause**)

- ☐ fever (>38°C core)
- ☐ hypothermia (<37°C core)
- ☐ apnea\*
- ☐ bradycardia\*
- ☐ paradoxical pulse\*
- ☐ increased heart size\*

**AND**

- Patient has at least **ONE** ☐ of the following:
  - ☐ abnormal EKG consistent with **ONE** ☐ of the following:
    - ☐ myocarditis
    - ☐ pericarditis
  - ☐ positive laboratory test on blood (e.g., antigen tests for *H. influenzae*, *S. pneumoniae*)
  - ☐ evidence of with **ONE** ☐ of the following:
    - ☐ myocarditis on histologic examination of heart tissue
    - ☐ pericarditis on histologic examination of heart tissue
  - ☐ evidence of with **ONE** ☐ of the following:
    - ☐ 4-fold rise in type-specific antibody **with** isolation of virus from **ONE** ○ of the following:
      - pharynx
      - feces
    - ☐ 4-fold rise in type-specific antibody **without** isolation of virus from **ONE** ○ of the following:
      - pharynx
      - feces
  - ☐ pericardial effusion identified by **ONE** ☐ of the following:
    - ☐ echocardiogram

- ☐ CT scan
- ☐ MRI
- ☐ angiography

**COMMENT:** (Last updated June, 2008)

- Most cases of postcardiac surgery or postmyocardial infarction pericarditis are not infectious.

---

**ENDO – Endocarditis**

**DEFINITION:** Endocarditis of a natural or prosthetic heart valve must meet at least **ONE** ☐ of the following criteria:

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

- Patient has organisms cultured from **ONE** ☐ of the following:
  - ☐ valve
  - ☐ vegetation

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

- Patient has **TWO** ☐ or more of the following signs or symptoms: (\* with no other recognized cause)
  - ☐ fever (>38°C)
  - ☐ **ONE** ☐ of the following:
    - ☐ new murmur\*
    - ☐ changing murmur\*
  - ☐ embolic phenomena\*
  - ☐ skin manifestations (e.g. petechiae, splinter hemorrhages, painful subcutaneous nodules)\*
  - ☐ congestive heart failure\*
  - ☐ cardiac conduction abnormality\*

**AND**

- Patient has at least **ONE** ☐ of the following:
  - ☐ organisms cultured from two or more blood cultures
  - ☐ organisms seen on Gram's stain of valve when culture is **ONE** ☐ of the following:
    - ☐ negative
    - ☐ not done
  - ☐ valvular vegetation seen during **ONE** ☐ of the following:
    - ☐ invasive procedure
    - ☐ autopsy

△ 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

△ evidence of new vegetation seen on echocardiogram

**AND**

○ If diagnosis is made antemortem, physician institutes appropriate antimicrobial therapy

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

○ Patient ≤1 year of age has **TWO** △ or more of the following signs or symptoms: (\* *with no other recognized cause*)

△ fever (>38°C core)

△ hypothermia (<37°C core)

△ apnea\*

△ bradycardia\*

△ **ONE** ☐ of the following:

☐ new murmur\*

☐ changing murmur\*

△ embolic phenomena\*

△ skin manifestations (e.g. petechiae, splinter hemorrhages, painful subcutaneous nodules)\*

△ congestive heart failure\*

△ cardiac conduction abnormality\*

**AND**

○ Patient has at least **ONE** △ of the following:

△ organisms cultured from two or more blood cultures

△ organisms seen on Gram's stain of valve when culture is **ONE** ☐ of the following:

☐ negative

☐ not done

△ valvular vegetation seen during **ONE** ☐ of the following:

☐ invasive procedure

☐ autopsy

△ 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



TENNESSEE DEPARTMENT OF HEALTH  
HEALTHCARE-ASSOCIATED INFECTIONS AND ANTIMICROBIAL RESISTANCE PROGRAM  
HAI Surveillance Definitions  
**CARDIOVASCULAR SYSTEM (CVS)**



△ evidence of new vegetation seen on echocardiogram

**AND**

- If diagnosis is made antemortem, physician institutes appropriate antimicrobial therapy

---

**MED – Mediastinitis**

**DEFINITION:** Mediastinitis must meet at least **ONE** □ of the following criteria:

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

- Patient has organisms cultured from **ONE** △ of the following:
  - △ mediastinal tissue obtained during an invasive procedure
  - △ mediastinal fluid obtained during an invasive procedure

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

- Patient has evidence of mediastinitis seen during **ONE** △ of the following:
  - △ invasive procedure
  - △ histopathologic examination

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

- Patient has at least **ONE** △ of the following signs or symptoms: *(\* with no other recognized cause)*
  - △ fever (>38°C)
  - △ chest pain\*
  - △ sternal instability\*

**AND**

- Patient has at least **ONE** △ of the following:
  - △ purulent discharge from mediastinal area
  - △ organisms cultured from **ONE** □ of the following:
    - blood from mediastinal area
    - discharge from mediastinal area
  - △ mediastinal widening on imaging test

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

- Patient ≤1 year of age has at least **ONE** △ of the following signs or symptoms: *(\* with no other recognized cause)*
  - △ fever (>38°C core)

△ hypothermia (<37°C core)

△ apnea\*

△ bradycardia\*

△ sternal instability\*

**AND**

○ Patient has at least **ONE** △ of the following:

△ purulent discharge from mediastinal area

△ organisms cultured from **ONE** □ of the following:

□ blood from mediastinal area

□ discharge from mediastinal area

△ mediastinal widening on imaging test

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

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

---

**VASC – Arterial or Venous Infection**

**DEFINITION:** Arterial or venous infection must meet at least **ONE** □ of the following criteria:

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

○ Patient has organisms cultured from **ONE** △ of the following:

△ arteries removed during an invasive procedure

△ veins removed during an invasive procedure

**AND**

○ Choose **ONE** △ of the following:

△ blood culture not done

△ no organisms cultured from blood

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

○ Patient has evidence of **ONE** △ of the following:

△ arterial infection seen during **ONE** □ of the following:

□ invasive procedure


□ histopathologic examination





△ venous infection seen during **ONE** □ of the following:

□ invasive procedure

□ histopathologic examination

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




- Patient has at least **ONE**  of the following signs or symptoms: (*\* with no other recognized cause*)

-  fever ( $>38^{\circ}\text{C}$ )
-  pain\*
-  erythema\*
-  heat at involved vascular site\*

**AND**

- Patient has more than 15 colonies cultured from intravascular cannula tip using semiquantitative culture method




**AND**

- Patient has **ONE**  of the following:
  -  blood culture not done
  -  no organisms cultured from blood

**□ Criterion 4:** *(Last updated June, 2008)*









- Patient has purulent drainage at involved vascular site

**AND**

- Patient has **ONE**  of the following:
  -  blood culture not done
  -  no organisms cultured from blood

**□ Criterion 5:** *(Last updated January 1, 2013)*

- Patient  $\leq 1$  year of age has at least **ONE**  of the following signs or symptoms: (*\* with no other recognized cause*)

-  fever ( $>38^{\circ}\text{C}$  core)
-  hypothermia ( $<37^{\circ}\text{C}$  core)
-  apnea\*
-  bradycardia\*
-  lethargy\*
-  pain\*
-  erythema\*
-  heat at involved vascular site\*

**AND**



TENNESSEE DEPARTMENT OF HEALTH  
HEALTHCARE-ASSOCIATED INFECTIONS AND ANTIMICROBIAL RESISTANCE PROGRAM  
HAI Surveillance Definitions  
**CARDIOVASCULAR SYSTEM (CVS)**



- Patient has more than 15 colonies cultured from intravascular cannula tip using semiquantitative culture method

**AND**

- Patient has **ONE**  $\Delta$  of the following:
  - $\Delta$  blood culture not done
  - $\Delta$  no organisms cultured from blood

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

- Report infections of an arteriovenous graft, shunt, or fistula or intravascular cannulation site without organisms cultured from blood as CVS-VASC.
- Report intravascular infections with organisms cultured from the blood as BSI-LCBI.