

CARD – Myocarditis or Pericarditis

(Revised January 1, 2016)

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

☐ **Criterion 1:** (Revised January 1, 2016)

- ☐ Patient has organisms cultured from **ONE** ☐ of the following:[#]

- ☐ pericardial tissue

- ☐ pericardial fluid

[#] By a culture or non-culture based microbiologic testing method which is performed for purposes of clinical diagnosis or treatment (e.g. not Active Surveillance Culture/Testing (ASC/AST)).

☐ **Criterion 2:** (Revised January 1, 2016)

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

- ☐ fever (>38.0°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

- ☐ evidence of with **ONE** ☐ of the following:

- ☐ myocarditis on histologic examination of heart tissue

- ☐ pericarditis on histologic examination of heart tissue

- ☐ 4-fold rise in paired sera from IgG antibody titer

- ☐ pericardial effusion identified by **ONE** ☐ of the following:

- ☐ echocardiogram

- ☐ CT scan

- ☐ MRI

- ☐ angiography

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☐ **Criterion 3:** (Revised January 1, 2016)

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

- ☐ fever ($>38.0^{\circ}\text{C}$)
- ☐ hypothermia ($<36.0^{\circ}\text{C}$)
- ☐ 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
 - ☐ evidence of with **ONE** ☐ of the following:
 - ☐ myocarditis on histologic examination of heart tissue
 - ☐ pericarditis on histologic examination of heart tissue
 - ☐ 4-fold rise in paired sera from IgG antibody titer
 - ☐ pericardial effusion identified by **ONE** ☐ of the following:
 - ☐ echocardiogram
 - ☐ CT scan
 - ☐ MRI
 - ☐ angiography

COMMENT: (Revised Jan 1, 2016)

- Most cases of post cardiac surgery or post myocardial infarction pericarditis are not infectious.

ENDO – Endocarditis

(Revised January 1, 2016)

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

☐ **Criterion 1:** (Revised January 1, 2016)

- Patient has organisms identified from **ONE** ☐ of the following: #
 - △ cardiac vegetation^ documented as originating from **ONE** ☐ of the following:
 - ☐ cardiac source
 - ☐ intracardiac abscess
 - △ embolized vegetation (e.g., solid organ abscess) documented as originating from **ONE** ☐ of the following:
 - ☐ cardiac source
 - ☐ intracardiac abscess

☐ **Criterion 2:** (Revised January 1, 2016)

- Patient has organisms seen on histopathologic exam of **ONE** ☐ of the following:
 - △ cardiac vegetation
 - △ embolized vegetation (e.g., solid organ abscess) documented as originating from cardiac source
 - △ intracardiac abscess

☐ **Criterion 3:** (Revised January 1, 2016)

- Patient has endocarditis seen on histopathologic exam of **ONE** ☐ of the following:
 - △ cardiac vegetation
 - △ intracardiac abscess

☐ **Criterion 4:** (Revised January 1, 2016)

- Patient has at least **ONE** ☐ of the following echocardiographic evidence of endocarditis^:
 - △ vegetation on **ONE** ☐ of the following:
 - ☐ cardiac valve
 - ☐ supporting structures
 - △ intracardiac abscess
 - △ new partial dehiscence of prosthetic valve

AND at least

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☐ ONE ☐ of the following:

- ☐ typical infectious endocarditis organisms[†] (i.e., *Viridans* group streptococci, *Streptococcus bovis*, *Haemophilus* spp., *Actinobacillus actinomycetemcomitans*, *Cardiobacterium hominis*, *Eikenella corrodens*, *Kingella* spp., *Staphylococcus aureus*) identified from ≥ 2 blood collections drawn on separate occasions (on same or consecutive days)[#]
- ☐ *Coxiella burnetii* identified from blood[#] or identified by anti-phase I IgG antibody titer $>1:800$

☐ Criterion 5: (Revised January 1, 2016)

☐ Patient has at least THREE of the following:

ANY ☐ of the following:

- ☐ prior endocarditis
- ☐ prosthetic valve
- ☐ uncorrected congenital heart disease
- ☐ history of rheumatic heart disease
- ☐ hypertrophic obstructive cardiomyopathy
- ☐ known IV drug use

fever ($>38.0^{\circ}\text{C}$)

ANY ☐ of the following vascular phenomena:

- ☐ major arterial emboli, including ANY ☐ of the following:
 - ☐ embolic stroke
 - ☐ renal infarct
 - ☐ splenic infarct or abscess
 - ☐ digital ischemic/gangrene from embolic source
- ☐ septic pulmonary infarcts
- ☐ mycotic aneurysm as seen by ANY ☐ of the following:
 - ☐ documented by imaging
 - ☐ seen in surgery
 - ☐ described in gross pathological specimen
- ☐ intracranial hemorrhage
- ☐ conjunctival hemorrhages
- ☐ Janeway's lesions documented

ANY ☐ of the following immunologic phenomena:

- ☐ glomerulonephritis as seen by ANY of the following:
 - documented in chart
 - white blood cell or red blood cell casts on urinalysis

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- ☐ Osler's nodes
- ☐ Roth's spots
- ☐ positive rheumatic factor

AND

- ☐ **ONE** of the following
 - typical infectious endocarditis organisms (*i.e.*, **Viridans group streptococci**, *Streptococcus bovis*, *Haemophilus spp.*, *Actinobacillus actinomycetemcomitans*, *Cardiobacterium hominis*, *Eikenella corrodens*, *Kingella spp.*, *Staphylococcus aureus*) identified from ≥ 2 blood collections drawn on separate occasions (on same or consecutive days)[#]
 - *Coxiella burnetii* identified from blood[#] or identified by anti-phase I IgG antibody titer >1:800

☐ **Criterion 6:** (Revised January 1, 2016)

- Patient has **at least one** ☐ of the following:[†]
 - ☐ echocardiogram evidence of vegetation on at least **ONE** of the following:
 - cardiac valve
 - supporting structures
 - ☐ intracardiac abscess seen on echocardiogram
 - ☐ new partial dehiscence of prosthetic valve seen on echocardiogram

and

Patient has at least **THREE** ☐ of the following:

- ☐ **ANY** of the following:
 - prior endocarditis
 - prosthetic valve
 - uncorrected congenital heart disease
 - history of rheumatic heart disease
 - hypertrophic obstructive cardiomyopathy
 - known IV drug use

☐ fever (>38.0°C)

☐ **ANY** of the following vascular phenomena:

- major arterial emboli, including **ANY** ☐ of the following:
 - ☐ embolic stroke
 - ☐ renal infarct
 - ☐ splenic infarct or abscess

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- ☐ ☐ digital ischemic/gangrene from embolic source
- ☐ septic pulmonary infarcts
- ☐ mycotic aneurysm as seen by **ANY** ☐ of the following:
 - ☐ documented by imaging
 - ☐ seen in surgery
 - ☐ described in gross pathological specimen
- ☐ intracranial hemorrhage
- ☐ conjunctival hemorrhage
- ☐ Janeway's lesions documented
- ☐ **ANY** ☐ of the following immunologic phenomena:
 - ☐ glomerulonephritis as seen by **ANY** ☐ of the following:
 - ☐ documented in chart
 - ☐ white cell or red blood cell casts on urinalysis
 - ☐ Osler's nodes
 - ☐ Roth's spots
 - ☐ positive rheumatoid factor
- ☐ identification of an organism from the blood by at least **ONE** ☐ of the following methods:
 - ☐ recognized pathogen identified from blood [#]
 - ☐ same common commensal organism identified from ≥ 2 blood collections drawn on separate occasions (on same or consecutive days)[#]

☐ **Criterion 7:**

- ☐ Patient meets all of the ☐ following criteria:

- ☐ **ANY** ☐ of the following:
 - ☐ prior endocarditis
 - ☐ prosthetic valve
 - ☐ uncorrected congenital heart disease
 - ☐ history of rheumatic heart disease
 - ☐ hypertrophic obstructive cardiomyopathy
 - ☐ IV drug use

- ☐ fever ($>38.0^{\circ}\text{C}$)

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☐ **ANY** ☐ of the following vascular phenomena:

- ☐ major arterial emboli, including **ANY** ☐ of the following:
 - ☐ embolic stroke
 - ☐ renal infarct
 - ☐ splenic infarct or abscess
 - ☐ digital ischemic/gangrene from embolic source
- ☐ septic pulmonary infarcts
- ☐ mycotic aneurysm as seen by **ANY** ☐ of the following:
 - ☐ documented by imaging
 - ☐ seen in surgery
 - ☐ described in gross pathological specimen
- ☐ intracranial hemorrhage
- ☐ conjunctival hemorrhage
- ☐ Janeway's lesions documented

☐ **ANY** ☐ of the following immunologic phenomena:

- ☐ glomerulonephritis as seen by **ANY** ☐ of the following:
 - ☐ documented in chart
 - ☐ white cell or red blood cell casts on urinalysis
- ☐ Osler's nodes
- ☐ Roth's spots
- ☐ positive rheumatoid factor

☐ identification of an organism from the blood by at least **ONE** ☐ of the following methods:

- ☐ recognized pathogen identified from blood [#]
- ☐ same common commensal organism identified from ≥ 2 blood collections drawn on separate occasions (on same or consecutive days)[#]

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Reporting Instructions: (Revised January 1, 2016)

^“Cardiac vegetation” includes vegetation on a pacemaker / defibrillator lead.

By a culture or non-culture based microbiologic testing method which is performed for purposes of clinical diagnosis or treatment (e.g., not Active Surveillance Culture/Testing (ASC/AST)).

*Which if equivocal is supported by clinical correlation (i.e., physician documentation of antimicrobial treatment for endocarditis).

MED – Mediastinitis

(Revised January 1, 2016)

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

☐ Criterion 1: (Revised January 1, 2016)

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

- ☐ mediastinal tissue[#]

- ☐ mediastinal fluid[#]

[#]by a culture or non-culture based microbiologic testing method which is performed for purposes of clinical diagnosis or treatment (e.g. not Active Surveillance Culture/Testing (ASC/AST))

☐ Criterion 2: (Revised January 1, 2016)

- Patient has evidence of mediastinitis on **ONE** ☐ of the following:

- ☐ gross anatomic exam

- ☐ histopathologic exam

☐ Criterion 3: (Revised January 1, 2016)

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

- ☐ fever (>38.0°C)

- ☐ chest pain*

- ☐ sternal instability*

AND

- Patient has at least **ONE** ☐ of the following:

- ☐ purulent drainage from mediastinal area

- ☐ mediastinal widening on imaging test

☐ Criterion 4: (Revised January 1, 2016)

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

- ☐ fever (>38.0°C)

- ☐ hypothermia (<36.0°C)




- ☐ apnea*

- ☐ bradycardia*

- ☐ Sternal instability*

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AND

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

REPORTING INSTRUCTIONS: (Revised January 1, 2016)

- Mediastinal space is the area under the sternum and in front of the vertebral column, containing the heart and its large vessels, trachea, esophagus, thymus, lymph nodes, and other structures and tissues. It is divided into anterior, middle, posterior, and superior regions.
- Report mediastinitis following cardiac surgery that is accompanied by osteomyelitis as SSI- MED rather than SSI-BONE.

VASC – Arterial or Venous Infection

(Revised January 1, 2016)

Note: If a patient meets the criteria for an LCBI in the presence of an intravascular infection report as an LCBI not has a VASC.

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

☐ Criterion 1: (Revised January 1, 2016)

- Patient has organisms identified from **ONE** ☐ of the following:[#]
 - ☐ extracted arteries
 - ☐ extracted veins

☐ Criterion 2: (Revised January 1, 2016)

- Patient has evidence of **ONE** ☐ of the following:
 - ☐ arterial infection seen during **ONE** ☐ of the following:
 - ☐ gross anatomic exam
 - ☐ histopathologic exam
 - ☐ venous infection seen during **ONE** ☐ of the following:
 - ☐ gross anatomic exam
 - ☐ histopathologic exam

☐ Criterion 3: (Revised January 1, 2016)

- Patient has at least **ONE** ☐ of the following signs or symptoms: (* *with no other recognized cause*)
 - ☐ fever (>38.0°C)
 - ☐ pain*
 - ☐ erythema*
 - ☐ heat at involved vascular site*

AND

- Patient has more than 15 colonies cultured from intravascular cannula tip using semi quantitative culture method.

☐ Criterion 4: (Revised January 1, 2016)

- Patient has purulent drainage at involved vascular site.

☐ Criterion 5: (Revised January 1, 2016)

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

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- △ fever ($>38.0^{\circ}\text{C}$)
- △ hypothermia ($<36.0^{\circ}\text{C}$) △ apnea*
- △ bradycardia*
- △ lethargy*
- △ pain*
- △ erythema*
- △ heat at involved vascular site*

AND

- Patient has more than 15 colonies cultured from intravascular cannula tip using semi quantitative culture method.

*With no other recognized cause

by a culture or non-culture based microbiological testing method which is performed for purposes of clinical diagnosis or treatment (e.g. not Active Surveillance Culture/Testing (ASC/AST)).

REPORTING INSTRUCTIONS: (Revised January 1, 2016)

- 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 identified from the blood and meeting the LCBI criteria, as BSI-LCBI. However, if BOTH of the following are present at the site of an arteriovenous fistula, arteriovenous shunt, peripheral IV, or non-accessed central line, within the Infection Window period, mark the data field for risk factor "Central line" as "No".

- Pus at the site

AND

- Positive site culture with at least one matching organism to the positive blood culture.
- Report Organ Space VASC infections as an SSI and not an LCBI when you have an SSI with secondary BSI.