



CENTRAL NERVOUS SYSTEM (CNS)



IC – Intracranial Infection
(Brain Abscess, Subdural or Epidural Infection, Encephalitis)

(Last updated January 1, 2015)

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

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

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

- ☐ brain tissue

- ☐ dura

☐ Criterion 2: *(Last updated January 1, 2015)*

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

- ☐ abscess seen during **ONE** ☐ of the following:

- ☐ gross anatomic exam

- ☐ histopathologic exam

- ☐ evidence of intracranial infection on **ONE** ☐ of the following:

- ☐ gross anatomic exam

- ☐ histopathologic exam

☐ Criterion 3: *(Last updated January 1, 2015)*

- ☐ Patient has at least **TWO** ☐ of the following signs or symptoms: (\pm as documented in the medical record; * with no other recognized cause)

- ☐ headache*

- ☐ dizziness*

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

- ☐ localizing neurologic signs*

- ☐ changing level of consciousness*

- ☐ confusion*

AND

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

- ☐ organisms seen on microscopic examination of **ONE** ☐ of the following:

- ☐ brain tissue obtained during **ONE** ☐ of the following:

- ☐ needle aspiration

- ☐ invasive procedure

- ☐ autopsy

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☐ abscess tissue obtained by **ONE** ☐ of the following:

- ☐ needle aspiration
- ☐ invasive procedure
- ☐ autopsy

☐ positive non-culture diagnostic laboratory test (e.g., antigen test, PCR) on **ONE** ☐ of the following:

- ☐ blood
- ☐ urine

☐ imaging test evidence of infection (e.g. ultrasound, CT scan, MRI, radionuclide brain scan, or arteriogram)

☐ Choose **ONE** ☐ of the following:

- ☐ diagnostic single antibody titer (IgM)
- ☐ 4-fold increase in paired sera (IgG) for organism

☐ Criterion 4: *(Last updated January 1, 2015)*

☐ Patient ≤ 1 year of age has at least **TWO** ☐ of the following signs or symptoms: (\pm as documented in the medical record; * with no other recognized cause)

☐ fever ($>38.0^{\circ}\text{C}$) \pm

☐ hypothermia ($<36.0^{\circ}\text{C}$) \pm

☐ apnea*

☐ bradycardia*

☐ localizing neurologic signs*

☐ changing level of consciousness (e.g., irritability, poor feeding, lethargy)*

AND

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

☐ organisms seen on microscopic examination of **ONE** ☐ of the following:

☐ brain tissue obtained during **ONE** ☐ of the following:

- ☐ needle aspiration
- ☐ invasive procedure
- ☐ autopsy



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☐ abscess tissue obtained by **ONE** ☐ of the following:

- ☐ needle aspiration
- ☐ invasive procedure
- ☐ autopsy

☐ positive non-culture diagnostic laboratory test (e.g., antigen test, PCR) on **ONE** ☐ of the following:

- ☐ blood
- ☐ urine

☐ image test evidence of infection (e.g. ultrasound, CT scan, MRI, radionuclide brain scan, or arteriogram)

☐ choose **ONE** ☐ of the following:

- ☐ diagnostic single antibody titer (IgM)
- ☐ 4-fold increase in paired sera (IgG) for organism

REPORTING INSTRUCTIONS: *(Last updated January 1, 2015)*

- Report as MEN if meningitis (MEN) and encephalitis (IC) are present together.
- Report as IC if meningitis (MEN) and a brain abscess (IC) are present together after operation.
- Report as SA if meningitis and spinal abscess (SA) are present together after an operation.



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MEN – Meningitis or Ventriculitis

(Last updated January 1, 2015)

DEFINITION: Meningitis or ventriculitis must meet at least **ONE** ☐ of the following criteria:

☐ Criterion 1: (Last updated June, 2008)

- ☐ Patient has organisms cultured from cerebrospinal fluid (CSF)

☐ Criterion 2: (Last updated January 1, 2015)

- ☐ Patient has at least **TWO** ☐ of the following signs or symptoms: (*± as documented in the medical record; & this first element may not be used to meet the two required elements; * with no other recognized cause*)

- ☐ fever ($>38.0^{\circ}\text{C}$)*±* or headache[&]

- ☐ meningeal sign(s)*

- ☐ cranial nerve sign(s)*

AND

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

- ☐ **ALL** ☐ of the following found in the CSF (per reporting laboratory's reference range):

- ☐ increased white cells

- ☐ elevated protein

- ☐ decreased glucose

- ☐ organisms seen on Gram stain of CSF

- ☐ organisms cultured from blood

- ☐ positive non-culture diagnostic laboratory test of **ONE** ☐ of the following:

- ☐ CSF

- ☐ blood

- ☐ urine

- ☐ choose **ONE** ☐ of the following:

- ☐ diagnostic single antibody titer (IgM) for organism

- ☐ 4-fold increase in paired sera (IgG) for organism

☐ Criterion 3: (Last updated January 1, 2015)

- ☐ Patient ≤ 1 year of age has at least **TWO** ☐ of the following elements: (*± as documented in the medical record; & this element may not be used to meet the two required elements; * with no other recognized cause*)

- ☐ fever ($>38.0^{\circ}\text{C}$)*±*; hypothermia ($<36.0^{\circ}\text{C}$)*±*; apnea; bradycardia; or irritability[&]

- ☐ meningeal signs*

- ☐ cranial nerve signs*



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AND

- Patient has at least **ONE** **△** of the following:
 - △ ALL** **□** of the following found in CSF (per reporting laboratory's reference range):
 - increased white cells
 - elevated protein
 - decreased glucose
 - △** organisms seen on Gram stain of CSF
 - △** organisms cultured from blood
 - △** positive non-culture diagnostic laboratory test of **ONE** **□** of the following:
 - CSF
 - blood
 - urine
 - △** choose **ONE** **□** of the following:
 - diagnostic single antibody titer (IgM) for organism
 - 4-fold increase in paired sera (IgG) for organism

REPORTING INSTRUCTIONS: *(Last updated January 1, 2015)*

- Report meningitis in the newborn as healthcare-associated *unless* there is compelling evidence indicating the meningitis was acquired transplacentally (i.e., unless it was apparent on the day of birth or the next day).
- Report CSF shunt infection as SSI-MEN if it occurs within 90 days of placement; if later or after manipulation/access, it is considered CNS-MEN and is not reportable under this module.
- Report ME if meningitis (MEN) and encephalitis (IC) are present together.
- Report IC if meningitis (MEN) and brain abscess (IC) are present together after an operation.
- Report SA if meningitis (MEN) and spinal abscess (SA) are present together after an operation.



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SA – Spinal Abscess Without Meningitis

(Last updated January 1, 2015)

DEFINITION: An abscess of the spinal epidural or subdural space, without involvement of the cerebrospinal fluid or adjacent bone structures, must meet at least **ONE** ☐ of the following criteria:

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

- ☐ Patient has organisms cultured from abscess in **ONE** ☐ of the following:
 - ☐ epidural space
 - ☐ subdural space

☐ Criterion 2: *(Last updated January 1, 2015)*

- ☐ Patient has an abscess in **ONE** ☐ of the following:
 - ☐ epidural space seen during **ONE** ☐ of the following:
 - ☐ gross anatomic exam
 - ☐ histopathologic exam
 - ☐ subdural space seen during **ONE** ☐ of the following:
 - ☐ gross anatomic exam
 - ☐ histopathologic exam

☐ Criterion 3: *(Last updated June, 2015)*

- ☐ Patient has at least **ONE** ☐ of the following localized signs or symptoms: (**± as documented in the medical record; * with no other recognized cause**)
 - ☐ fever (>38.0°C)**±**
 - ☐ back pain* or tenderness*
 - ☐ radiculitis*
 - ☐ paraparesis*
 - ☐ paraplegia*

AND
- ☐ Patient has at least **ONE** ☐ of the following:
 - ☐ organisms cultured from blood in a patient with imaging test evidence of spinal abscess
 - ☐ imaging test evidence of a spinal abscess (e.g. myelography, ultrasound, CT scan, MRI, or other scans [gallium, technetium, etc.]

REPORTING INSTRUCTIONS: *(Last updated January 1, 2014)*

- Report IC if meningitis (MEN) and a brain abscess (IC) are present together after an operation.
- Report SA if meningitis (MEN) and spinal abscess (SA) are present together after an operation.