

Infection Control Response to the Intentional Use of a Biothreat Agent

Attachment 3: Syndromic Surveillance Case Definitions

Case Definitions derived from the ED Case Definitions in NC DETECT

(<https://ncdetect.org/case-definitions/>)

Case Definition for Fever and Rash

Clinical Description

Acute (≤ 2 days) onset of generalized (predominantly on face, arms, legs) rash and fever of unknown origin (FUO) ($\geq 38^{\circ}\text{C}$).

Specific Signs & Symptoms

***Must have at least one rash sign or symptom AND one constitutional sign or symptom. May also have other symptoms. ***

1. Rash: blister, bumps, chickenpox, dot, erythema, hives, itchiness, measles, mouth sores, petechial rash, hemorrhagic rash, maculopapular rash, monkeypox, pox, pocks, pustule, red spots (tongue, mouth, skin), RMSF, shingles, skin inflammation, skin irritation, skin redness, skin sores, varicella, variola, welps, welts
2. Constitutional: achy, backache, body aches, chills/shivers/rigors, diaphoresis/sweaty, dizziness, drowsy/exhausted/fatigue/tired, fever ($\geq 38^{\circ}\text{C}$)/febrile/fever of unknown origin (fuo)/temperature, headache, H/A, hurts all over, joint pain, lightheaded, loss of appetite/poor/decreased/no appetite, malaise, muscle aches, myalgias, prostration, weariness, wooziness...Pediatric cases: fussiness, cranky, irritable
** OR any of these diagnoses by themselves: **
3. Anthrax, (Bubonic) Plague, Smallpox, Tularemia

Comments:

- This syndrome represents many possible diagnoses both specific and non-specific. Included conditions: fever and septicemia**** (not otherwise specified), unspecified viral illness
- Excluded conditions: allergic or inflammatory skin conditions such as contact or seborrheic dermatitis, rosacea, rash due to poison ivy or sunburn, eczema
- Diagnoses of particular concern:
 - Category A agents: plague, smallpox, viral hemorrhagic fevers (Ebola, Marburg, Old World Lassa, Junin, Machupo)
 - Other diagnoses of public health priority: vaccine preventable diseases (rubella, varicella, measles)

Case Definition for Gastrointestinal Illness (GI)

Clinical Description

Acute (</= 7 days) onset of upper or lower gastrointestinal tract disease. Excludes chronic conditions.

Specific Signs and Symptoms

Must have at least one gastrointestinal AND one constitutional sign or symptom. May also have other symptoms.

1. Gastrointestinal: abdominal bloating, abdominal pain, anorexia, loss of appetite, poor/decreased/no appetite, ascites, bloody stool/diarrhea, bloody vomiting/hematemesis, diarrhea, emesis, flatus, gassiness, nausea, vomiting
2. Constitutional: achy, backache, body aches, chills/shivers/rigors, diaphoresis/sweaty, dizziness, drowsy/exhausted/fatigue/tired, fever (>/= 38°C), febrile, temperature, fever of unknown origin (fuo), headache, H/A, hurts all over, joint pain, lightheaded, loss of appetite, poor/decreased/no appetite, malaise, muscle aches, myalgias, prostration, weariness, wooziness

Pediatric cases: fussiness, cranky, irritable

**OR Any of these diagnoses by themselves: **

3. Anthrax

Comments:

- This syndrome represents many possible diagnoses both specific and non-specific.
- Patients may exhibit other symptoms: cyanosis, edema, toxemia.
- Excluded conditions: IBS, Crohn's
- Diagnoses of particular concern:
 - Category A agents: anthrax (gastrointestinal)
 - Other diagnoses of public health priority: foodborne diseases, *Shigella*, *Salmonella*, *E.coli*, O157:H7
- Chemical agents:
 - Vesicants/Blister Agents: sulfur mustard, lewisite, nitrogen mustard, mustard lewisite, phosgene-oxime
 - Ricin (Castor bean oil extract)
 - T-2 mycotoxins: *Fusarium*, *Myrotecium*, *Trichoderma*, *verticimonosporium*, *Stachybotrys*

Case Definition for Respiratory Illness

Clinical Description

Acute (</= 14 days) onset of lower respiratory tract disease (from larynx to lungs). Excludes certain chronic conditions

Specific Signs & Symptoms

***Must have at least one respiratory AND one constitutional sign or symptom. May also have other symptoms. ***

1. Respiratory:

cough, cyanosis, difficulty breathing, hemoptysis, hypoxia, pleural effusion, pleurisy, pneumonia, respiratory stridor, shortness of breath/SOB/dyspnea, tachypnea/increased respiratory rate

2. Constitutional:

achy, body aches, chills/shivers/rigors/shakes, diaphoresis/sweaty, dizziness, drowsy/sleepy/tired/ exhausted/fatigue, fever (>/= 38°C)/febrile/FUO/temperature, hurts all over, joint pain, light headed, loss of appetite/ poor/decreased/no appetite, malaise, muscle aches, myalgia, prostration, weariness, wooziness

Pediatric cases: cranky, fussiness, irritable

**OR Any of these conditions by themselves: **

3. Anthrax, Plague, SARS, Tularemia, influenza

Comments:

- This syndrome represents many possible diagnoses both specific and non-specific.
- Excluded conditions: CHF
- Diagnoses of particular concern:
 - Category A agents: anthrax, plague, tularemia
 - Other diagnoses of public health priority: SARS, influenza
- Chemical Agents:
 - Vesicants/Blister Agents: sulfur mustard, lewisite, nitrogen mustard, mustard lewisite, phosgene-oxime
 - Pulmonary/Choking Agents: phosgene, chlorine, diphosgene, chloropicrin, oxide of nitrogen, sulfur dioxide
 - Ricin (Castor bean oil extract)
 - T-2 mycotoxins: Fusarium, Myrotecium, Trichoderma, verticimonosporium, Stachybotrys

Case Definition for Neurological Illnesses

Clinical Description

Acute (\leq 14 days, typically \leq 48 hours) onset of neurological disease of the CNS. Excludes chronic conditions

Specific Signs & Symptoms

**Must have at least one neurological AND one constitutional sign or symptom. **

1. Neurological:

altered mental status/AMS, blurred vision, coma, convulsions/seizures, cranial palsy, descending flaccid paralysis, difficulty focusing to near point, difficulty swallowing, diplopia/double vision, dizziness, dysarthria/slurred speech, dysphagia/difficulty swallowing, forgetfulness, headache, H/A, lack of feeling/sensation, loss of consciousness/unconscious, muscle weakness, nuchal rigidity/stiff neck, numbness/facial numbness, prostration, ptosis/drooping eyelids, respiratory paralysis, shake, somnolence, spasm, stiff neck, stupor, tingling, tremor

2. Constitutional:

achy, backache, body aches, chills/shivers/rigors, diaphoresis/sweaty, exhausted/fatigue/tired, fever (\geq 38°C)/febrile/fever of unknown origin (fuo)/temperature, hurts all over, lightheaded, loss of appetite/poor/decreased/no appetite, malaise, muscle aches, myalgias, prostration, weariness, wooziness
Pediatric cases: fussiness, cranky, irritable

Comments:

- This syndrome represents many possible diagnoses both specific and non-specific.
- Patients may exhibit other symptoms: constipation, nausea, vomiting, eye pain, rash, dry mouth.
- Excluded conditions: chronic, hereditary, or degenerative conditions of the CNS (obstructive hydrocephalus, Parkinson's, Alzheimer's), head injuries.
- Diagnoses of particular concern:
 - Diagnoses of public health priority: meningococcal/pneumococcal meningitis, viral encephalitis (WNV, EEE, CAL)
 - Chemical agents:
 - Nerve: Sarin (GB), Tabun (GA), Soman (GD), Cyclohexyl Sarin (GF), VX, Novichok agents, organophosphorous compounds (carbamates & pesticides)
 - Cyanides: hydrogen cyanide (HCN), cyanogen chloride
 - T-2 mycotoxins: Fusarium, Myrothecium, Trichoderma, verticimonosporium, Stachybotrys

Case Definition for Botulism-Like Illness

Clinical Description

Acute (\leq 14 days, typically \leq 48 hours) onset of neurological disease of the CNS. Excludes chronic conditions

Specific Signs & Symptoms

Must have at least one neurological AND one constitutional sign or symptom.

1. Neurological:

altered mental status/AMS, aphasia, areflexia/hyporeflexia/decreased reflexes, ataxia, blurred/blurry vision, coma, difficulty focusing to near point, difficulty reading, difficulty seeing, dry mouth, dysphagia/difficulty swallowing, difficulty walking/unsteady gait, diplopia/double vision, drooping/droopy eyelids, drooling/difficulty handling secretions, dysarthria/slurred speech/difficulty speaking, facial droop, hypotonia/decreased tone, lethargy, loss of consciousness/LOC, loss of head control, numbness, nystagmus, palsy, ptosis, pupils dilated, pupils fixed, paralysis (descending flaccid, gaze, & respiratory muscle), somnolence, stupor, unconscious, visual changes, weakness (arm, leg, muscle)

2. Constitutional:

anorexia/poor/decreased/loss of/no appetite/not eating, constipation, difficulty breathing, diarrhea, drowsy, dyspnea, emesis/vomiting, exhausted/exhaustion, fatigue, hypoxia, malaise, nausea, prostration, SOB/shortness of breath, sleepy, tired, tremor, weariness, wooziness
Pediatric cases: fussiness, cranky, irritable

** Or any of these diagnoses by themselves: **

3. Botulism

Comments:

- Diagnoses of particular concern: Category A agent Botulism
- Excluded conditions: myasthenia gravis, head injuries

Case Definition for Meningoencephalitis Illnesses

Clinical Description

Acute (\leq 14 days, typically \leq 48 hours) onset of neurological disease of the CNS.

Specific Signs & Symptoms

1. Neurological:

altered mental status/AMS, back ache/back pain, blurred/blurry vision, coma, confusion, convulsion, disoriented/disorientation, drowsy/sleepy, eye pain, bulging fontanel/soft spot, forgetfulness, headache, irritable/irritability, lethargy, light sensitivity/sensitivity to light, loss of consciousness/LOC, meningismus, muscle weakness, neck pain, nuchal rigidity, numbness, photophobia, seizures, shake/shaking, somnolence, spasm, stupor, stiff neck, tingling, tremor, unconscious

2. Constitutional:

achy, backache, body aches, chills/shivers/rigors, diaphoresis/sweaty, dizziness, exhausted/fatigue/tired, fever (\geq 38°C)/febrile/fever of unknown origin (fuo)/temperature, hurts all over, lightheaded, loss of appetite/poor/decreased/no appetite, malaise, muscle aches, myalgias, prostration, weariness, wooziness
Pediatric cases: fussiness, cranky, irritable

Comments:

- This syndrome represents many possible diagnoses both specific and nonspecific.
- Excluded conditions: head injuries
- Diagnoses of particular concern
 - Diagnoses of public health priority: meningococcal/pneumococcal meningitis, viral encephalitis (WNV, EEE, CAL)
 - Chemical agents:
Nerve: Sarin (GB), Tabun (GA), Soman (GD), Cyclohexyl Sarin (GF), VX, Novichok agents, organophosphorous compounds (carbamates & pesticides)
Cyanides: hydrogen cyanide (HCN), cyanogen chloride
T-2 mycotoxins: Fusarium, Myrothecium, Trichoderma, verticimonosporium, Stachybotrys