Influenza-Associated Encephalopathy Pediatric Cases

01/15/2004

CDC would like to receive clinical, laboratory, and neuro-imaging results on all cases of influenza associated encephalopathy.

**Influenza Viral Isolates**

If influenza viral isolates were obtained, CDC would like to receive the isolates. If a lumbar puncture was performed and CSF is available, frozen CSF should be shipped for RT-PCR testing for influenza viruses.

For any fatal cases or encephalopathy cases in which influenza viruses have been isolated, send the isolates to CDC for antigenic characterization. The attached form should be used to send isolates and any frozen CSF specimens – please indicate on the form that these are from fatal cases or encephalopathy cases.

**Fatal influenza-associated pediatric cases**

For fatal cases, send clinical information and laboratory results. Autopsy reports should be sent with autopsy tissue specimens. Immuno-histochemical staining can be performed for influenza A and B viruses, and testing for other pathogens can also be done.

**Fatal “unexplained” pediatric deaths (pneumonia cases, sudden deaths, or other cases suspicious for influenza with or without fever):**

Send any available clinical information and laboratory results. Autopsy reports should be sent with autopsy tissue specimens. Immuno-histochemical staining can be performed for influenza A and B viruses, and testing for other pathogens can also be done.

Clinical, laboratory, and neuroimaging results

Send available clinical, laboratory results (especially with documentation of influenza virus infection) for fatal influenza-associated cases, influenza-associated encephalopathy cases, and “unexplained” pediatric deaths to the OPH central laboratory in New Orleans which will forward them to CDC.
### Influenza-associated Encephalopathy

**Updated: 12.06.03**

**Case Reporting Form**  
**CASE ID:__________**

### Demographic Information

1. **Patient last name** (or initial):  
2. **Patient first name** (or initial):

3. **Gender**  
   a. male  
   b. female

4. **Date of birth**: ____/____/____ (mm/dd/yy)

5. **Race**  
   a. Caucasian  
   b. African-American  
   c. Asian/Pacific Islander  
   d. American Indian/Alaska native  
   e. Other (specify):  
   f. Unknown

6. **Ethnicity**  
   a. Hispanic  
   b. Non-Hispanic  
   c. Unknown

### Clinical Information

- **Hospital Name:** ________________  
- **City:** ________________  
- **State:** _______

7. **Hospital Medical Record Number:** ________________

8. **Underlying conditions:**  
   a. None  
   b. Developmental delay  
   c. Seizure disorder  
   d. Previous febrile seizures  
   e. Asthma  
   f. Other neurologic disorder (specify):  
   g. Other medical condition (specify):  
   h. Unknown

9. **Did patient receive influenza vaccine this season?**  
   a. Yes  
   Number of vaccine doses received: ___  
   Dates of influenza vaccinations: ___/___/___  
   b. No  
   c. Unknown  
   d. Injected  
   e. Nasal spray

10. **Did the patient receive influenza vaccine in a previous season?**  
   a. Yes  
   b. No  
   c. Unknown

11. **Date of illness onset:** ____/____/____  
12. **Date of fever onset:** ____/____/____

13. **Date of hospital admission:** ____/____/____

14. **Date of neurologic symptoms onset:** ____/____/____  
   (seizures or altered mental status)

15. **Signs and symptoms associated with this illness:** (check all that apply)

   a. fever  
   b. chills/rigors  
   c. rhinorrhea/congestion  
   d. cough  
   e. shortness of breath  
   f. sore throat  
   g. vomiting  
   h. diarrhea  
   i. myalgia  
   k. rash  
   j. joint pain/swelling  
   i. if yes to rash, description:  
   l. altered mental status  
   m. seizures  
   n. If yes, status epilepticus at any point?
<table>
<thead>
<tr>
<th>n. irritability without fever</th>
<th>o. behavioral/psychiatric symptoms</th>
<th>If yes, describe:</th>
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<tbody>
<tr>
<td>p. ataxia/gait abnormality</td>
<td>q. slurred or garbled speech</td>
<td>r. headache</td>
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<tr>
<td>r. Other symptoms (please specify, e.g. abdominal pain, confusion):</td>
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**Medications**

16. List medications received during illness at home and in the hospital (e.g., aspirin or other non-steroidal anti-inflammatory drugs, over the counter medications, antibiotics, analgesics, herbal remedies, anti seizure medications, immunosuppressive agents):

**Testing**

17. **Head CT** performed?  
   a. Yes  
   b. No  
   z. Unknown

18. Head CT results:  
   a. Normal  
   b. Abnormal  
19. With **contrast**?  
   a. Yes  
   b. No

   (List abnormal findings):

20. **Brain MRI** performed?  
    a. Yes  
    b. No  
    z. Unknown

21. MRI results:  
    a. Normal  
    b. Abnormal  
    (List abnormal findings):

22. **EEG** performed?  
    a. Yes  
    b. No  
    z. Unknown

23. EEG results:  
    a. Normal  
    b. Abnormal  
    (list abnormal findings):

24. Other pertinent testing performed:

   **CSF** results:  
   WBC:______________  
   differential:_________________  
   protein:___________  
   glucose:__________

   **CSF** bacterial culture results: ________________________________

   **CSF** viral culture results: ________________________________

   **Admission peripheral WBC**:______________  
   differential:_________________  
   **Serum ammonia** level:___________  
   **salicylate** (aspirin) level:___________  
   **Serum glucose**:___________  
   **AST**:___________  
   **ALT**:___________  
   **LDH**:___________  

   **Serologies (list)**:__________________________

   **Other** abnormal tests: ________________________________

**Influenza Diagnostic Testing**

25. Lab testing for influenza performed?  
   a. Yes  
   b. No  
   z. Unknown

26. **Influenza testing method** (check all that apply):

   a. viral culture  
   If Yes, isolated at what laboratory: ________________________________

   b. rapid antigen test  
   If Yes, (result): positive negative A B A/B  
   Test kit name: ________________________________
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<tr>
<td><strong>c. immunofluorescence</strong></td>
<td>i. Direct (DFA)</td>
<td>ii. Indirect (IFA)</td>
</tr>
<tr>
<td><strong>d. Serology (paired sera)</strong></td>
<td>e. RT-PCR</td>
<td>f. Other: __________</td>
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27. **Specimens used for influenza testing** (check all that apply):

   - Nasopharyngeal swab/wash/aspirate
   - Nasal swab/wash
   - Throat swab
   - Lung/respiratory tract tissue
   - Blood/serum

28. **Other specimens obtained** (e.g., cerebrospinal fluid (CSF), autopsy brain tissue):

   ____________________________________________________________________________


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<tr>
<th><strong>Outcome</strong></th>
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<tr>
<td><strong>a. Alive, no neurologic sequelae</strong></td>
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<tr>
<td><strong>c. Alive, severe neurologic sequelae</strong></td>
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30. **Outcome of illness:**

31. **Discharge diagnosis:**

32. **Date of hospital discharge:** ____/____/____

33. **Date of death** (if fatal outcome): ____/____/____

### Reporting Information

34. Date this form was completed: ____/____/____ (mm/dd/yyyy)

35. **Name of person reporting case to CDC:** Job title:

36. **Contact address:**

37. Phone number: (   )   - 38. Second Phone number: (   )   -

39. Fax number: (   )   - 40. Email address:

41. **Hospital name and address:**