



The Department of Health requests that APSU conduct seasonal surveillance for severe complications of laboratory confirmed influenza in children aged < 15 years who are admitted to hospital between May – September 2020 inclusive. This surveillance will improve our understanding of severe influenza disease in children and inform management and vaccination policy.

Please note: due to the COVID-19 pandemic several additional questions related to co-infection with COVID-19 have been added in 2020.

Severe Complications of Influenza has been added to the routine monthly APSU report card. ***We ask that you report children that meet the case definition criteria as soon as possible by completing an online version of the case report form or by filling out the printable case report form and returning it to the APSU by e-mail or fax.***

**Aim:** To document, in children admitted to hospital with severe complications of influenza: the type of complication, clinical features, medical and vaccination history, treatment, outcomes and co-infection.

**Case Definition:**

Any child aged < 15 years with laboratory confirmed influenza **AND** admitted to hospital **AND** at least one of the following complications:

- Pneumonia (confirmed radiologically and/or microbiology)
- Acute Respiratory Distress Syndrome (ARDS)
- Laboratory proven viral co-infection including COVID-19
- Laboratory proven bacterial co-infection; Bacteraemia; Septicaemia
- Encephalitis / encephalopathy
- Seizures (including simple febrile seizure, prolonged or focal seizure or status epilepticus)
- Transverse myelitis
- Polyneuritis / mononeuritis
- Guillain-Barré syndrome
- Reye Syndrome
- Myocarditis; Pericarditis; Cardiomyopathy
- Rhabdomyolysis
- Purpura fulminans
- Disseminated intravascular coagulopathy
- Shock (requiring >40 ml/kg fluid resuscitation)
- Acute renal failure
- Death, including death at presentation to hospital
- Requirement for supplementary oxygen, non-invasive ventilation, invasive ventilation or Extracorporeal Membrane Oxygenation (ECMO)

**Please do not report children hospitalised for influenza who do not have severe complications**

If you have seen a case please report the child to the APSU as soon as possible by using this **secure web link to complete an online case report form:**

<https://redcap.sydney.edu.au/surveys/?s=4AXAYD7M9C>

OR please download and complete the printable case report form, scan and **email to** [SCHN-APSU@health.nsw.gov.au](mailto:SCHN-APSU@health.nsw.gov.au) or fax to (02) 9845 3082

Additional case report forms may be downloaded from: <http://apsu.org.au/studies/current/>

***If you require assistance with this surveillance study, please contact the APSU by phone (02) 9845 3005 or email [schn-apsu@health.nsw.gov.au](mailto:schn-apsu@health.nsw.gov.au)***

# Australian Paediatric Surveillance Unit

## Severe Complications of Influenza in Children < 15 Years and admitted to hospital

(1<sup>st</sup> May 2020 to 30<sup>th</sup> September 2020)

Please ring the APSU on (02) 9845 3005 if you require assistance with this questionnaire.

Additional questionnaires can be downloaded from [www.apsu.org.au](http://www.apsu.org.au)

*Instructions: Please answer each question by ticking the appropriate box or writing your response in the space provided. DK= Don't Know*

### REPORTING CLINICIANS DETAILS:

1. Dr Name: \_\_\_\_\_ Ph: \_\_\_\_\_ Email: \_\_\_\_\_  
2. Hospital: \_\_\_\_\_ APSU code (if known) \_\_\_\_\_ 3. Date questionnaire completed: / /

### PATIENT DETAILS:

4. First 2 letters of first name:   5. First 2 letters of surname:   6. Date of Birth: / /   
7. Sex:  M  F 8. Postcode of family:       9. Country of Birth:  Australia  Other (specify): \_\_\_\_\_  DK  
10. Ethnicity:  Aboriginal  Torres Strait Islander  Both Aboriginal and Torres Strait Islander  Caucasian  Asian  
 Pacific Islander  Middle Eastern  African  Other (specify): \_\_\_\_\_  DK

### SECTION A: Diagnosis, Presentation and Treatment

11. Date of onset of symptoms: / /  12. Date of 1<sup>st</sup> admission to hospital: / /   
13. Admitted to ICU?  Yes  No  DK 13(a). If yes, specify date of admission to ICU: / /   
13(b). Duration of ICU admission: \_\_\_\_\_ days  
14. How was influenza confirmed?  Nose swab  Nasopharyngeal aspirate  Other (specify): \_\_\_\_\_  
15. Which lab tests were +ve for influenza?  PCR  IF  Serology  Rapid Antigen Test  
16. Results: Influenza type?  A  B 17. Was further sub-typing done?  Yes  No  DK  
18. If Yes, Which sub-type was present? (e.g. H1N1-09, H3N2, Shanghai-like, Malaysia-like) \_\_\_\_\_

#### 19. Which of the following symptoms were apparent on presentation to hospital?

- Fever
- Cough
- Dyspnoea
- Sore throat
- Vomiting
- Diarrhoea
- Headache
- Malaise / lethargy
- Myalgia
- Confusion / disorientation
- Seizure / unconsciousness
- Rash
- Other (specify): \_\_\_\_\_

#### 20. Please tick all complications present during the hospital stay

- Pneumonia (radiologically confirmed)
- Acute Respiratory Distress Syndrome (ARDS)
- Encephalitis / encephalopathy
- Seizure (specify type): \_\_\_\_\_
- Myocarditis  Pericarditis  Cardiomyopathy
- Rhabdomyolysis
- Purpura fulminans  Disseminated intravascular coagulopathy
- Transverse myelitis  Polyneuritis  Mononeuritis
- Guillain-Barré syndrome
- Shock (requiring > 40 ml/kg fluid resuscitation)
- Acute renal failure  Reye Syndrome
- Other (specify): \_\_\_\_\_
- Laboratory proven **bacterial co-infection**; specify organism and site of infection: \_\_\_\_\_
- Laboratory proven **viral co-infection**; specify organism and site of infection: \_\_\_\_\_
- Laboratory proven **COVID-19** Co-infection

21. Was respiratory support required?  Yes  No  DK  
21(a). If yes, please indicate:  Oxygen therapy only  Non-invasive ventilation (e.g. CPAP)  
 Invasive ventilation  Extracorporeal Membrane Oxygenation (ECMO) Duration? \_\_\_\_\_ days  
22. Was the child treated with:  
22(a).  Oseltamivir (Tamiflu)  Zanamivir (Relenza)  Neither  Other (please specify): \_\_\_\_\_  DK  
Date commenced: / /   
22(b).  Antibiotics If Yes, which ones? \_\_\_\_\_  
22(c).  Ibuprofen (e.g. Nurofen)  Other NSAIDS  Aspirin

**SECTION B: Underlying medical conditions and history**

23. Is the child immunocompromised (e.g. HIV+ve, primary immunodeficiency, treated for malignancy)?  Yes  No  DK

If Yes, specify \_\_\_\_\_

24. Has the child any other chronic illness that might increase the risk of influenza complications?  Yes  No  DK

24(a). If yes, which one(s)?  Cystic fibrosis  Congenital heart disease  Neuromuscular disorder  Asthma

Other chronic lung disease, specify: \_\_\_\_\_  Prematurity  Cerebral Palsy

Other (please specify): \_\_\_\_\_

25. Has the child had previous infection with COVID-19?  Yes  No  DK

26. Did the child receive the Flu vaccine in the last 12 months?  Yes  No  DK If yes, when? \_\_\_\_\_  DK

26(a). If yes, which vaccine? \_\_\_\_\_  DK

27. Has the child been vaccinated against pneumococcus?  Yes  No  DK If yes, when? \_\_\_\_\_  DK

28. Prior to admission did the child have contact with a person with laboratory confirmed influenza?  Yes  No  DK

28(a). If yes, what was the relationship to the child? (e.g. Parent, sibling, friend): \_\_\_\_\_

28(b). If yes, was the contact person a:  Child  Adult Age of contact if known: \_\_\_\_\_

29. Did the child travel overseas in the 10 days before onset of symptoms?  Yes  No  DK If yes, where? \_\_\_\_\_

30. Has the child had close contact with farm animals in the past 10 days?  Yes  No  DK If yes, what type? \_\_\_\_\_

**SECTION C: COVID-19**

31. If the child has co-infection with COVID-19, did the child acquire it overseas?  Yes  No  DK

32. Is there a known contact?  Yes  No  DK If yes, was the contact adult or child?  Adult  Child  DK

33. Was the infection of the contact:  Overseas acquired  locally acquired or part of a known cluster

Locally acquired, contact not identified  Contact under investigation  DK

**SECTION D: Outcome**

34. At the time of reporting, was the child:  In ICU  Hospitalised  Discharged Alive  Died  DK

35. Date of Discharge: / /

36. Were there any ongoing problems on discharge?  Yes  No  DK If yes, specify: \_\_\_\_\_

37. If died, date of death: / /  Was a cause of death determined?  Yes  No  DK If yes, specify: \_\_\_\_\_

**If the child is still in ICU or hospital at the time of this report we will contact you in one month to see if the child has been discharged well or with problems or has died.**

Please return this case report form ASAP by email to [SCHN-APSU@health.nsw.gov.au](mailto:SCHN-APSU@health.nsw.gov.au) or via FAX: (02) 9845 3082

Thank you for your help with this research project.

Please return this questionnaire to the APSU via email to [SCHN-APSU@health.nsw.gov.au](mailto:SCHN-APSU@health.nsw.gov.au) or by mail to: Australian Paediatric Surveillance Unit, Kids Research, Locked Bag 4001, Westmead NSW 2145 - even if you don't complete all items.

The APSU is affiliated with the Royal Australasian College of Physicians (Paediatrics and Child Health Division) and Faculty of Medicine and Health, The University of Sydney.

The APSU is funded by the Australian Government Department of Health.

This study has been approved by a Human Research Ethics Committee properly constituted under NHMRC guidelines