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一般名称 ①ボリエチレングリコール処理人免疫グロブリン ②人免疫グロブリン	研究報告の公表状況 CDC/MMWR 58(28):773-778/2009/07/24	新医薬品等の区分 公表国 アメリカ	
販売名 (企業名) ①献血ヴェノグロブリン-IHヨシトミ (パネシス) ②グロブリン-Wf (パネシス)	てんかん発作、脳炎、脳症、ライ症候群と他の神経学的障害を含む神経学的合併症は、季節性インフルエンザ A または B ウイルスの気道感染に関連していることは以前に報告されているが、新型インフルエンザ A (H1N1) ウイルスでは報告されていなかった。 2009年5月28日、保健社会福祉省 (DCHHS) は新型インフルエンザ A (H1N1) ウイルス感染症と関連した神経学的合併症を発生し5月18日~5月28日にかけてテキサス州ダラスの病院に入院した小児4人について CDC に報告した。 この報告は、それら4人の症例の臨床的特徴をまとめたものである。 患者は7歳、10歳、11歳、17歳でインフルエンザ様疾患 (ILI) とてんかん発作の徴候、精神状態の変化が認められた。4人の患者のうち3人は、脳波図 (EEG) の異常を示した。 4人の患者全てにおいて、鼻咽喉頭液体から新型インフルエンザ A (H1N1) ウイルス RNA が検出されたが、脳脊髄液 (CSF) では検出されなかった。 抗ウイルス薬療法は、オセルタミビル (4人の患者) とリマンタジン (3人の患者) であった。 4人全ての患者は、完全に回復し、退院後、神経学的後遺症は見られなかった。 これらの所見は、新型インフルエンザ A (H1N1) ウイルスによる気道感染の後でも季節性インフルエンザと同様に神経学的合併症が発現することが示している。	使用上の注意記載状況・その他参考事項等 代表として献血ヴェノグロブリン-IHヨシトミの記載を示す。 2. 重要な基本的注意 (1) 本剤の原材料となる献血者の血液について は、HBs抗原、抗HCV抗体、抗HIV-1抗体、抗HIV-2抗体、抗HIV-1抗体陰性で、かつALT (GPT) 値でスクリーニングを実施している。 更に、プールした試験血漿については、HIV-1、HBV及びHCVについて核糖核酸検査 (NAT) を実施し、適合した血漿を本剤の製造に使用しているが、当該 NAT の検出限界以下のウイルスが混入している可能性が常に存在する。本剤は、以上の検査に適合した血漿を原料として、Cohn の低温エタノール分画で得た画分からボリエチレングリコール4000処理、DEAEセファデックス処理等により人免疫グロブリンを濃縮・精製した製剤であり、ウイルス不活化・除去を目的として、製造工程において (ナノフィルトレーション) 及び pH3.9~4.4 の条件下での液状加熱処理及び過酸処理を施しているが、投与に際しては、次の点に十分注意すること。	
研究報告の概要	報告企業の意見 新型インフルエンザ (H1N1) ウイルスについても、季節性インフルエンザと同様に神経学的合併症が発現し得るとの報告である。 インフルエンザ A (H1N1) はオルソミクソウイルス科に属し、ビリオンは球形で、直径80~120nmの脂質エンベロープを有する比較的大きなRNAウイルスである。万一、インフルエンザ A (H1N1) が原料血漿に混入したとしても、BVD をモデルウイルスとしたウイルスバリアレーション試験成績から、本剤の製造工程にて十分に不活化・除去されると考えられている。	今後の対応 本報告は本剤の安全性に影響を与えないと考慮するもので、特段の措置はとらない。	

(2)

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Neurologic Complications Associated with Novel Influenza A (H1N1) Virus Infection in Children --- Dallas, Texas, May 2009

Neurologic complications, including seizures, encephalitis, encephalopathy, Reye syndrome, and other neurologic disorders, have been described previously in association with respiratory tract infection with seasonal influenza A or B viruses (1--2), but not with novel influenza A (H1N1) virus. On May 28, 2009, the Dallas County Department of Health and Human Services (DCHHS) notified CDC of four children with neurologic complications associated with novel influenza A (H1N1) virus infection admitted to hospitals in Dallas County, Texas, during May 18--28. This report summarizes the clinical characteristics of those four cases. Patients were aged 7--17 years and were admitted with signs of influenza-like illness (ILI) and seizures or altered mental status. Three of the four patients had abnormal electroencephalograms (EEGs). In all four patients, novel influenza A (H1N1) viral RNA was detected in nasopharyngeal specimens but not in cerebrospinal fluid (CSF). Antiviral therapy included oseltamivir (four patients) and rimantadine (three patients). All four patients recovered fully and had no neurologic sequelae at discharge. These findings indicate that, as with seasonal influenza, neurologic complications can occur after respiratory tract infection with novel influenza A (H1N1) virus. For children who have ILI accompanied by unexplained seizures or mental status changes, clinicians should consider acute seasonal influenza or novel influenza A (H1N1) virus infection in the differential diagnosis, send respiratory specimens for appropriate diagnostic testing, and promptly initiate empirical antiviral treatment, especially in hospitalized patients.

Case Identification

Since April 22, DCHHS has requested all hospitals in Dallas County to report details concerning patients admitted with novel influenza A (H1N1) virus infection. As of July 20, DCHHS had identified 405 persons with laboratory-confirmed novel influenza A (H1N1) virus infection in the greater Dallas area, including 44 hospitalized patients. No deaths had been reported. Of confirmed novel influenza A (H1N1) virus infections, 83% were in patients aged <18 years. Among these pediatric cases, 145 children, including 26 who were hospitalized, were identified through the Children's Medical Center of Dallas (CMCD) laboratory-based surveillance program. Medical records from admission and discharge for all hospitalized H1N1 patients are routinely screened by DCHHS epidemiology staff. Characteristics of hospitalized patients are compiled on an ongoing basis, with further investigation of cases noted to have unusual features and severe illness.

A patient with acute neurologic complications associated with novel influenza A (H1N1) virus infection was defined as having laboratory-confirmed novel influenza A (H1N1) virus infection of the respiratory tract associated with seizures, encephalopathy, or encephalitis within 5 days of ILI symptom onset, without evidence of an alternative etiology. Encephalopathy was defined as

altered mental status lasting ≥ 24 hours. Encephalitis was defined as encephalopathy plus two or more of the following: fever $\geq 100.4^\circ\text{F}$ ($\geq 38.0^\circ\text{C}$), focal neurologic signs, CSF pleocytosis, EEG indicative of encephalitis, or abnormal neuroimaging indicative of infection or inflammation (1-2).

During April 22--July 20, seven possible cases of neurologic complications associated with novel A (H1N1) virus infection were identified. Three cases were excluded because the neurologic complications were determined to have alternative etiologies (e.g., hypocalcemia and apnea related to prematurity) or did not meet the case definition (e.g., altered mental status for < 24 hours). Of the remaining four cases described in this report, one patient (patient A) was initially reported by a community hospital in Dallas on May 18. The three other cases were reported by CMCD to DCHHS during May 23--27. No additional cases had been reported in Dallas County through July 20.

Nasopharyngeal swab specimens collected from all three patients admitted to CMCD were tested for influenza A and B antigens by either Directigen EZ Flu A+B rapid enzyme immunoassay (EIA) (BD [Becton, Dickinson, and Company], Sparks, Maryland), QuickVue Influenza A+B test (EIA) (Quidel, San Diego, California), or D3 Ultra direct fluorescent assay (Diagnostic Hybrids, Athens, Ohio). All positive specimens were sent to DCHHS, and novel influenza A (H1N1) virus was identified by real-time reverse transcription-polymerase chain reaction (rRT-PCR) using CDC-approved primers and probe sets. All CSF samples were tested at CDC using rRT-PCR for influenza, enteroviruses, parechovirus, adenovirus, and human parainfluenza virus serotype 3. CSF for patients B and D were tested for additional viruses by a commercial laboratory (Viracor).*

Case Reports

Patient A. On May 17, a previously healthy black male aged 17 years visited a community hospital emergency department after 1 day of fever reaching 102.6°F (39.2°C), cough, headache, dizziness, and weakness. Influenza A was diagnosed by EIA, and the patient was discharged home with a prescription for oseltamivir. The patient was admitted the next day to another community hospital because of increased generalized weakness, disorientation to place, and markedly slow and intermittent responsiveness to questions. On physical examination, the patient was noted to be confused and unable to provide history of his own illness. He also was unable to lift his arms above his shoulders or stand. He had taken 1 dose of oseltamivir the morning of admission. A computed tomography (CT) head scan revealed pan-sinusitis, and CSF was normal (Table). The patient received ceftriaxone for 2 days, which was discontinued when CSF bacterial cultures indicated no growth. He received oseltamivir throughout his hospital admission. His mental status returned to normal on day three. He was discharged on day four with no apparent sequelae and completed a 5-day total course of oseltamivir.

Patient B. On May 23, a previously healthy Hispanic male aged 10 years was taken to a Dallas community hospital via emergency medical services after a 3-minute generalized tonic-clonic seizure and subsequent postictal mental state. The seizure occurred after 4 days of fever reaching 104.0°F (40.0°C), cough, decreased appetite, and fatigue. His family reported that the patient had contact with another child with ILI symptoms before the patient's illness onset. Upon initial evaluation in the emergency department, the patient was afebrile. A chest radiograph revealed a left lower lobe infiltrate, and a CT head scan was normal except for an incidentally noted single punctuate calcification in left frontal cortex. Influenza A was detected in a nasopharyngeal swab specimen by EIA. Three hours later, the patient had a second 3-minute generalized seizure. Intravenous (IV) lorazepam and ceftriaxone were administered, and the patient was transferred to a CMCD intensive-care unit.

On admission to CMCD, the patient was febrile, confused, and drowsy. He had difficulty

answering questions and made frequent inappropriate attempts to get out of bed. CSF analysis was normal. He was administered IV fosphenytoin to prevent additional seizures, vancomycin and ceftriaxone for empirical treatment of bacterial pneumonia, supplemental oxygen via bilevel positive airway pressure for oxygen saturations $< 92\%$, and anticonvulsants. Over the ensuing 2 days, he had intermittent fevers reaching 102.0°F (38.9°C). On hospital day four, he had a prolonged partial complex seizure with focal onset (eye deviation to the right) and secondary generalization, lasting 30--40 minutes, which eventually was controlled by 4 doses of IV lorazepam and a bolus of IV fosphenytoin. Oseltamivir and rimantadine were initiated. Brain magnetic resonance imaging (MRI) with magnetic resonance angiography was normal, and an EEG was consistent with encephalopathy (Table). His mental status returned slowly to baseline by hospital day seven, when he was discharged without apparent sequelae to continue levetiracetam, amoxicillin, and clindamycin, and complete a 5-day course of oseltamivir.

Patient C. On May 26, a white male aged 7 years with a history of a simple febrile seizure 1 year previously was taken to a Dallas community hospital via emergency medical services after a seizure and 2 days of cough, nasal congestion, and fatigue. On the day of admission, he had been found at home on the floor, with tonic movements of his upper and lower extremities lasting at least 2 minutes. On admission to the community hospital, he was noted to have postictal drowsiness and a temperature of 100.8°F (38.2°C). A diagnosis of influenza A was made by EIA. Blood tests, CSF, and a CT head scan were normal (Table).

The patient was transferred the same day to CMCD, where he exhibited normal mental status and no fever or seizures. A brain MRI showed nonspecific white matter abnormalities not characteristic of infection or inflammation. Localized cerebral dysfunction was evident on EEG (Table). Oseltamivir and rimantadine were started on hospital day one, and the patient was discharged on hospital day three without any neurologic sequelae, to complete a 5-day course of both antivirals and to continue levetiracetam until reassessment by neurologists in 3 months.

Patient D. On May 27, a black male aged 11 years with a history of asthma was taken to CMCD because of 1 day of fever and vomiting. A household contact, his grandmother, had an upper respiratory infection 3 days before his illness. One day before admission, he had a fever of 102.0°F (38.9°C), fatigue, headache, abdominal pain, and vomiting, and was given bismuth subsalicylate twice and one 81 mg aspirin. At CMCD, he was febrile. Neurologic examination revealed ataxia. Soon after admission, the patient had a seizure consisting of episodic eye rolling and tongue thrusting. An EIA test for influenza A was positive, and oseltamivir, rimantadine, cefotaxime, and acyclovir were initiated.

During the first 2 hospital days, the patient was disoriented, had visual hallucinations, had difficulty responding to questions and following commands, had slow speech, and required supplemental oxygen via facemask for mild hypoxia and hypopnea attributed to decreased respiratory drive associated with encephalopathy. Chest radiograph was normal. An EEG was consistent with encephalopathy, and a CT head scan was normal (Table). The patient's mental status returned to normal by hospital day four. He completed a 5-day course of oseltamivir.

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Editorial Note: Infection with seasonal influenza virus can be associated with neurologic complications (1-2), but the frequency with which these occur with novel influenza A (H1N1) virus infection is unknown. This is the first report describing patients with neurologic

complications associated with novel influenza A (H1N1) virus infection. The severity of the neurologic disease in the four patients described in this report was less than the typical disease described in two studies of neurologic complications associated with seasonal influenza (1-2), which included reports of severe static encephalopathy and death. Only two of the four patients described in this report had seizures, and none died or had neurologic sequelae at discharge. Considering that clusters of influenza-associated encephalopathy in children have been reported during previous community outbreaks of seasonal influenza (1-2) and that children appear to be infected with novel influenza A (H1N1) virus more frequently than adults (3), additional neurologic complications in children are likely to be reported as the pandemic continues. Clinicians should consider influenza associated encephalopathy in the differential diagnosis of children with ILI and seizures or mental status changes, and remain aware of the potential for severe neurologic sequelae associated with seasonal or novel influenza A (H1N1) virus infection.

Neurologic complications in children associated with seasonal influenza have included acute cognitive and behavioral problems, focal neurologic deficits, and death from neurologic complications (4). Influenza-associated neurologic complications are estimated to account for up to 5% of cases of acute childhood encephalitis or encephalopathy (4) and were reported in 6% of influenza-associated deaths among children during one influenza season (2003-04) in the United States (5). The epidemiology of influenza-associated encephalopathy has been described extensively in Japan, where incidence has appeared to be higher than in other countries (1). In Japan, approximately 80% of influenza-associated encephalopathy cases occur in children aged <5 years (1,6), and neurologic signs typically develop within 1-2 days of influenza symptom onset (1,6). Manifestations have included seizures, altered consciousness, incoherence, irritability, and psychotic behaviors (1,6). Outcomes reported in one case-series from Japan ranged from complete resolution (in nearly 50% of cases), to mild (20%) or severe neurologic sequelae (10%), to death (20%) (6).

Neuroimaging results in influenza-associated encephalopathy might be normal, but in severe cases, abnormalities can include diffuse cerebral edema and bilateral thalamic lesions. EEG might show diffuse abnormalities (1,2,4). Only rarely is influenza virus detected in CSF, suggesting that neurologic manifestations might be an indirect effect of influenza respiratory tract infection (2,7).

For patients with respiratory illness and neurologic signs, diagnostic testing for possible etiologic pathogens associated with neurologic disease, including influenza viruses, is recommended (8). Health-care providers also should consider a diagnosis of Reye syndrome in patients with viral illness and altered mental status. Although one of the patients described in this report, patient D, received a salicylate-containing product and aspirin, no evidence of Reye syndrome was observed. Salicylates and salicylate-containing products should not be administered to children with influenza or other viral infections because of the increased risk for developing Reye syndrome (9).

Antiviral treatment should be initiated as soon as possible for any hospitalized patient with neurologic symptoms and suspected seasonal influenza or novel influenza A (H1N1) virus infection (2).† Although respiratory specimens should be obtained for appropriate diagnostic testing before administering antiviral agents, clinicians should not wait for the results before beginning treatment. Antiviral medications have been shown to decrease the risk for complications from influenza (10); however, the effectiveness of antiviral treatment to prevent influenza-associated encephalopathy sequelae is unknown. Clinicians also should send respiratory specimens for appropriate diagnostic testing. Although no vaccination against novel influenza A (H1N1) virus is available currently, CDC recommends that all children aged >6 months receive annual seasonal influenza vaccination to prevent illness and complications from infection with seasonal influenza virus strains.§

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References

- Morishima T, Togashi T, Yokota S, et al. Encephalitis and encephalopathy associated with an influenza epidemic in Japan. *Clin Infect Dis* 2002;35:512-7.
- Maricich SM, Neul JL, Lotze TE, et al. Neurologic complications associated with influenza A in children during the 2003-2004 influenza season in Houston, Texas. *Pediatrics* 2004;114:e626-33.
- Dawood FS, Jain S, Finelli L, et al. Emergence of a novel swine-origin influenza A (H1N1) virus in humans. *N Engl J Med* 2009;360:2605-15.
- Amin R, Ford-Jones E, Richardson SE, et al. Acute childhood encephalitis and encephalopathy associated with influenza: a prospective 11-year review. *Pediatr Infect Dis J* 2008;27:390-5.
- Bhat N, Wright JG, Broder KR, et al. Influenza-associated deaths among children in the United States, 2003-2004. *N Engl J Med* 2005;353:2559-67.
- Wada T, Morishima T, Okumura A, et al. Differences in clinical manifestations of influenza-associated encephalopathy by age. *Microbiol Immunol* 2009;53:83-8.
- Ito Y, Ichihama T, Kimura H, et al. Detection of influenza virus RNA by reverse transcription-PCR and proinflammatory cytokines in influenza-virus-associated encephalopathy. *J Med Virol* 1999;58:420-5.
- Tunkel A, Glaser C, Bloch K, et al. Management of encephalitis: clinical practice guidelines of the Infectious Diseases Society of America. *Clin Infect Dis* 2008;47:303-27.
- Belay ED, Bressee JS, Holman RC, Khan AS, Shahriari A, Schonberger LB. Reye's syndrome in the United States from 1981 through 1997. *N Engl J Med* 1999;340:1377-82.
- Kaiser L, Wat C, Mills T, Mahoney P, Ward P, Hayden F. Impact of oseltamivir treatment on influenza-related lower respiratory tract complications and hospitalizations. *Arch Intern Med* 2003;163:1667-72.

* Viruses detected by the Luminex multiplex respiratory viral panel [xTAG] are influenza A and B; parainfluenza 1, 2, and 3; respiratory syncytial virus A and B; adenovirus; human metapneumovirus; and rhinovirus.

† CDC guidance on antiviral therapy available at <http://www.cdc.gov/h1n1flu/recommendations.htm>.

§ CDC recommendations for seasonal influenza vaccination available at <http://www.cdc.gov/mmwr/pdf/rr/tr5707.pdf>.

TABLE. Selected characteristics and laboratory, radiologic, and neurodiagnostic results for four patients with neurologic complications associated with novel influenza A (H1N1) virus infection* — Dallas, Texas, May 2009

Characteristic	Patient A	Patient B	Patient C	Patient D
Age (yrs)	17	10	7	11
Sex	Male	Male	Male	Male
Race/Ethnicity	Black, non-Hispanic	Hispanic	White, non-Hispanic	Black, non-Hispanic
Dates of hospitalization	May 18-21	May 23-29	May 26-28	May 27-30

Neurologic complication(s) diagnosed	Encephalopathy	Seizures, encephalopathy	Seizures	Encephalopathy
Interval from respiratory illness onset to neurologic symptoms (days)	1	4	2	1
Fever (maximum temperature)	102.6°F (39.2°C)	104.0°F (40.0°C)	100.8°F (38.2°C)	102.0°F (38.9°C)
Admission laboratory data				
Serum electrolytes, chemistry	Normal (except initial creatinine 1.3 mg/dL [normal range for age: 0.3--1.0 mg/dL])	Normal	Normal (except sodium 131 mmol/L [normal range: 134--146 mmol/L])	Normal
Liver function tests (U/L)	ND†	AST§ 28, ALT¶ 51, GGT** 29	AST 36, ALT 12, GGT 29	AST 41, ALT 27, GGT <10, ammonia 28 mmol/L (repeat testing normal)
Blood bacterial culture	ND	<i>S. epidermidis</i> , <i>Micrococcus</i> (contaminants), no growth x2	No growth	No growth
Urine bacterial culture	ND	ND	ND	No growth
Other	Creatine kinase 75 U/L (normal range: 22--269 U/L)	Urine toxicology screen positive for benzodiazepines only	---	Urine toxicology screen positive for caffeine, salicylate, and acetaminophen; serum salicylate level <1 mg/dL
Cerebrospinal fluid (CSF) analysis				
WBC†† (per mm3) (differential)	2 (differential ND)	2 (65%L 31%M)	4 (differential ND)	4 (95%L 5%M)
RBC§§ (per mm3)	18	0	2	1
Glucose (mg/dL) (normal range: 50--80 mg/dL)	39	63	58	65
Protein (mg/dL) (normal range: 10--45 mg/dL)	37	50	15	21
Bacterial culture	No growth	No growth	No growth	No growth
Neurodiagnostic testing				
Computed tomography	No intra-parenchymal abnormality; pan-sinusitis	Single punctuate calcification in left frontal cortex	No intracranial abnormality	No intracranial abnormality; sphenoid sinusitis Cortical nonspecific

Magnetic resonance imaging	ND	No parenchymal abnormality	scattered T2 hyperintense foci within the cerebral white matter	No intracranial abnormality
Electroencephalogram	ND	Generalized continuous polymorphic delta slowing, without epileptogenic focus; consistent with mild/moderate encephalopathy	Midline parietal intermittent polymorphic delta slowing, without epileptogenic focus; consistent with localized cerebral dysfunction	Posterior background slowing, no epileptiform activity; consistent with mild encephalopathy
Viral testing and antiviral therapy				
Influenza EIA¶¶	Positive***	Positive	Positive	Positive
Influenza DFA†††	ND	ND	ND	Positive
CSF influenza rRT-PCR§§§	Negative	Negative	Negative	Negative
rRT-PCR	Enteroviruses: negative	Enteroviruses: negative	Enteroviruses: negative	Enteroviruses: negative
	Parechovirus: negative	Parechovirus: negative	Parechovirus: negative	Parechovirus: negative
	Adenovirus: negative	Adenovirus: negative	Adenovirus: negative	Adenovirus: negative
HPIV-3¶¶¶	negative	HPIV-3: negative	HPIV-3: negative	HPIV-3: negative

TABLE. (Continued) Selected characteristics and laboratory, radiologic, and neurodiagnostic results for four patients with neurologic complications associated with novel influenza A (H1N1) virus infection — Dallas, Texas, May 2009

Characteristic	Patient A	Patient B	Patient C	Patient D
Other testing	ND	CSF respiratory viral panel (RVP)****	ND	HSV†††† rRT-PCR: negative
Antiviral therapy	Oseltamivir	Oseltamivir and rimantadine	Oseltamivir and rimantadine	Oseltamivir and rimantadine

* A patient with acute neurologic complications associated with novel influenza A (H1N1) virus infection was defined as having laboratory-confirmed novel influenza A (H1N1) virus infection of the respiratory tract associated with seizures, encephalopathy, or encephalitis within 5 days of influenza-like illness symptom onset, without evidence of an alternative etiology. Encephalopathy was defined as altered mental status lasting ≥24 hours. Encephalitis was defined as encephalopathy plus two or more of the following: fever ≥100.4°F (≥38.0°C), focal

neurologic signs, cerebrospinal fluid pleocytosis, an electroencephalogram indicative of encephalitis, or abnormal neuroimaging indicative of infection or inflammation.

† Not done.

§ Aspartate transaminases (normal range: 10--45 U/L).

¶ Alanine aminotransferase (normal range: 10--50 U/L).

** Gamma glutamyltranspeptidase (normal range: 3--30 U/L).

†† White blood cell count.

§§ Red blood cell count.

¶¶ Enzyme immunoassay. All four patients had nasopharyngeal specimens obtained and tested for influenza A and B antigen by using Directigen EZ Flu A+B (ELA), QuickVue Influenza A+B test (ELA), or direct fluorescent assay using D3 Ultra.

*** All four patients' nasopharyngeal specimens were confirmed positive for novel influenza A (H1N1) virus by Dallas County Department of Health and Human Services, using CDC-approved primers and probes.

††† Direct fluorescent assay.

§§§ Real-time reverse--transcription polymerase chain reaction (performed at CDC).

¶¶¶ Human parainfluenza virus type 3.

**** CSF viral PCR testing was performed by Viracor, using the Luminex multiplex respiratory viral panel (xTAG), which tests for 10 different viruses (influenza A and B; parainfluenza 1, 2, and 3; respiratory syncytial virus A and B; adenovirus; human metapneumovirus; and rhinovirus).

†††† Herpes simplex virus.

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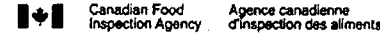
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識別番号・報告回数	回	報告日 年 月 日	第一報入手日 2009年4月14日	新医薬品等の区分 該当なし	総合機構処理欄
一般的名称	研究報告の公表状況		Swine Influenza - Advice for Veterinarians and Swine Producers. http://www.inspection.gc.ca/english/animal/diseases/swigri/swigri_fse.shtml		公表国 カナダ
販売名(企業名)	カナダ食品検査庁(CFIA)はブタインフルエンザへの感染に関する報告を発表した。カナダ食品検査庁(CFIA)はアメリカ南部およびメキシコでブタインフルエンザの感染を公表した。また、ヒト-ヒト感染経路によるブタインフルエンザ感染が確認されている。これまでカナダにおけるブタの感染や死亡が増加している兆候は認められていないが、予防策としてCFIAは養豚業者、獣医および研究所にブタ疾患の監視や報告といった体制を強化するよう要請している。またブタインフルエンザ感染が疑われるブタが認められた場合は獣医、地域の保健局またはCFIAに報告するよう要請している。同時に、カナダ公衆衛生局(PHAC)は重篤なインフルエンザ様症状が出現した場合には医療機関に連絡するよう勧告している。		使用上の注意記載状況・その他参考事項等 BYL-2009-0374 New England Journal of Medicine 360 2605-2615 The Lancet Infectious Disease 9; 339-340, 2009 http://ec.europa.eu/food/animal/diseases/influenzaAHN1/docs/Conclusions_AHN1_090609.pdf http://www.who.int/media/centre/news/statements/2009/h1n1_pandemic_phase6_20090611/en/index.html http://www.cdc.gov/travel/content/outbreak-notice/novel-h1n1-flu-global-situation.aspx		
研究報告の概要	報告企業の意見 本製品に使用されている原材料の原産国外でのウイルス感染発症の報告である。ウイルス病原体はエンペロブウイルスであり、本製品の製造工程におけるウイルス除去・不活化工程は、エンペロブウイルスに対しては効果的である。したがって、本報告は本製品の安全性に大きな影響を与えていないと考える。		今後の対応 現時点で新たな安全対策上の措置を講じる必要はないと考える。		

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Animals > Animal Diseases > Swine Influenza

Swine Influenza - Advice for Veterinarians and Swine Producers

The Canadian Food Inspection Agency (CFIA) has been notified of cases of human swine influenza (swine flu) in the southern United States and Mexico. Information to date indicates that human-to-human transmission of the virus has occurred. The Public Health Agency of Canada (PHAC) is currently coordinating the Canadian response to this situation, and the CFIA is providing support and expertise as required. For more information, visit <http://www.phac-aspc.gc.ca>.

At this point, there are no signs of increased disease or death in Canadian swine. However, as a precaution, the CFIA is asking producers, veterinarians and labs to increase their vigilance in monitoring for and reporting swine disease. Suspected cases of illness in pigs should be reported to veterinarians, provincial authorities or the CFIA. Similarly, PHAC recommends that anyone who is experiencing severe flu-like symptoms contact their health care provider.

What is swine influenza?

Swine influenza is a contagious respiratory disease of pigs. The disease is commonly seen in North and South America, Asia and Europe. Illness is caused by type A Influenza viruses, which also affect a range of other animals, as well as humans.

Are humans affected by swine influenza?

Yes, but human cases of swine influenza are normally uncommon. Most often, cases involve people who have had close contact with pigs, such as farmers and veterinarians. Some cases of human-to-human transmission have been reported. Symptoms of human illness are similar to regular flu: cough, nausea, body aches, fatigue, runny nose and congestion.

Although the risk of human illness is low, anyone having contact with pigs or potentially contaminated equipment should thoroughly wash their hands and limit contact with possibly infected pigs.

Swine, avian and human influenza viruses can combine within pig cells to form new influenza viruses. Flu-like symptoms in swine or people that may have had contact with swine should be reported to animal or public health professionals. Doing so will allow health authorities to maintain a current understanding of the viruses circulating in the animal and human populations.

What are the symptoms in pigs?

Signs of swine influenza include the following:

- fever
- loss of appetite
- weight loss
- coughing
- sneezing
- nasal discharge
- difficulty breathing

- reduced fertility or abortion

Swine influenza generally does not lead to death, and affected animals usually recover within five to seven days.

How do pigs become infected?

Normally, virus spreads when infected pigs cough or sneeze in close quarters with other pigs. Contaminated equipment or other objects may also play a role in transmitting virus. Influenza virus from birds and humans can also infect pigs.

How can pigs be protected?

The following actions can potentially prevent swine influenza:

- vaccinating animals
- ensuring farm working maintain good hygiene
- following strict biosecurity practices
- providing adequate ventilation in barns
- identifying and segregating sick animals as early as possible

What roles do veterinarians and producers play?

Veterinarians should work closely with clients to develop management strategies to limit the incidence and spread of swine influenza. As part of this approach, veterinarians suffering from the "flu" should limit contact with pigs, and farm workers should follow similar advice. Given the current situation, particular caution should be exercised with visitors to farms, especially those who may have recently returned from the southern United States or Mexico.

Does swine influenza affect food safety?

No, swine influenza is not a food safety concern.

For additional information: www.inspection.gc.ca

Date modified: 2009-04-26

医薬品 研究報告 調査報告書

識別番号・報告回数	報告日	第一報入手日	新医薬品等の区分	総合機構処理欄
人血清アルブミン 赤十字アルブミン20(日本赤十字社) 赤十字アルブミン25(日本赤十字社) 赤十字アルブミン4g/50mL(日本赤十字社) 赤十字アルブミン10g/50mL(日本赤十字社) 赤十字アルブミン25%静注12.5g/50mL(日本赤十字社)	2009. 7. 21	該当なし	公表国 日本	使用上の注意記載状況・その他参考事項等 赤十字アルブミン20 赤十字アルブミン25 赤十字アルブミン20%静注 4g/20mL 赤十字アルブミン20%静注 10g/50mL 赤十字アルブミン25%静注 12.5g/50mL 血液を原料とすることによる る感染症伝播等
研究報告の公表状況 ○日本におけるインフルエンザA型(HINI)ウイルス感染の疫学:2009年5月~6月 2009年5月9日~6月4日の期間中、日本の16の都道府県から、インフルエンザA型(HINI)ウイルス確定症例が合計401例報告された。最も感染の多かった2地域は、高校でアウトブレイクが発生し休校に至った大阪府と神戸市であった。報告時(2009年6月18日)において、いずれの症例の症状も季節性インフルエンザと同様であり、重症または死亡症例は報告されていない。	報告の公表状況 研究報告の公表状況 18:14(24). pii: 19244.	Shimada T, Gu Y, Kamiya H, Komiya N, Odaira F, Sunagawa T, Takahashi H, Toyokawa T, Tsuchihashi Y, Yasui Y, Tada Y, Okabe N. Euro Surveill. 2009 Jun 18;14(24). pii: 19244.	公表国 日本	使用上の注意記載状況・その他参考事項等 赤十字アルブミン20 赤十字アルブミン25 赤十字アルブミン20%静注 4g/20mL 赤十字アルブミン20%静注 10g/50mL 赤十字アルブミン25%静注 12.5g/50mL 血液を原料とすることによる る感染症伝播等
報告企業の意見 2009年5月9日~6月4日の期間中、日本における新型インフルエンザ(HINI)確定症例が合計401例報告され、報告時(2009年6月18日)において重症または死亡症例はなかったとの報告である。 インフルエンザウイルスは脂質膜を持つRNAウイルスである。本剤によるインフルエンザウイルス感染の報告はない。本剤の製造工程には、平成11年8月30日付医薬品第1047号に沿ったウイルス・プロセッシング・セッションによって検証された2つの異なるウイルス除去・不活化工程が含まれているため、本剤の安全性は確保されていると考える。	今後の対応 日本赤十字社では、問診で発熱などの体調不良者を献血不適としている。更に、平成21年5月18日付薬食発第0518001号「新型インフルエンザの国内発生に係る血液製剤の安全性確保について」に基づき、新型インフルエンザの患者又は罹患の疑いのある患者と7日以内に濃厚な接触があった人の献血を制限するほか、献血後に新型インフルエンザと診断された場合には当該献血の使用を禁止している。新型インフルエンザが流行した場合、献血者減少につながることも予想されることから、今後引き続き続き情報の収集に努める。	公表国 日本	公表国 日本	使用上の注意記載状況・その他参考事項等 赤十字アルブミン20 赤十字アルブミン25 赤十字アルブミン20%静注 4g/20mL 赤十字アルブミン20%静注 10g/50mL 赤十字アルブミン25%静注 12.5g/50mL 血液を原料とすることによる る感染症伝播等
研究報告の概要				

Rapid communications

EPIDEMIOLOGY OF INFLUENZA A(H1N1)V VIRUS INFECTION IN JAPAN, MAY - JUNE 2009

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Between 9 May and 4 June 2009, a total of 401 laboratory-confirmed cases of influenza A(H1N1)v virus were reported in Japan, from 16 of the 47 Japanese prefectures. The two areas most affected were Osaka prefecture and Kobe city where outbreaks in high schools occurred leading to school closures. To date all cases have had symptoms consistent with seasonal influenza and no severe or fatal cases have been reported.

Following the emergence of a new influenza A(H1N1) virus (henceforth: influenza A(H1N1)v virus) and the relevant declarations by the World Health Organization (WHO) [1], the Ministry of Health, Labour and Welfare (MHLW) of Japan launched a case-based surveillance for influenza A(H1N1)v virus infection in addition to the existing sentinel surveillance system for seasonal influenza and imposed entry screening on travelers from affected areas (Canada, Mexico and the United States) starting from 28 April 2009 [2].

The following case definitions of suspected and confirmed cases have been used:

A **suspected case** of influenza A(H1N1)v virus infection is defined as a person with high fever (>38°C) OR at least two acute respiratory symptoms (nasal obstruction/rhinorrhoea, sore throat, cough, fever/feverishness) AND who meets at least one of the following criteria:

- within the last seven days returned from a country or region with an epidemic of influenza A(H1N1)v;
- was in close contact (within two meters) with a confirmed case within the past seven days;
- handled samples suspected of containing influenza A(H1N1)v virus in a laboratory or other setting within the past seven days;

A **confirmed case** of influenza A(H1N1)v virus infection is defined as a person with high fever (>38°C) OR at least two acute respiratory symptoms (nasal obstruction/rhinorrhoea, sore throat, cough, fever/feverishness) AND influenza A(H1N1)v virus infection that has been laboratory confirmed by real-time PCR and/or viral isolation.

For all travellers from the affected areas who are febrile at the entry, a quarantine officer performs a rapid diagnostic test for influenza. If the result of rapid test is positive for influenza A, a PCR test for influenza A(H1N1)v is done. The Quarantine Law and the Pandemic Influenza Preparedness Action Plan of the Japanese Government request confirmed cases and close contacts of confirmed cases to be hospitalised/isolated for seven days considered to be the infectious period [3,4].

The primers for conventional and real-time RT-PCR for the detection of A(H1N1)v virus were developed by the National Institute of Infectious Diseases and became available on 29 April. All 75 prefectural and municipal public health institutes and quarantine stations in Japan became ready to perform conventional and real-time RT-PCR test by 4 May. Since the first laboratory-confirmed cases were reported on 9 May, the number of cases of influenza A(H1N1)v increased continuously, resulting in a total of 401 laboratory-confirmed cases as of 4 June 2009. This report summarises the epidemiological characteristics of the confirmed cases reported in Japan from May to June.

The first four laboratory-confirmed cases of influenza A(H1N1)v were reported at the Narita International Airport quarantine station on 9 May 2009. The patients were travellers who returned from Canada on 9 May. Although all of them showed mild symptoms, they were hospitalised in an isolation ward of a designated hospital for seven days, in accordance with the Quarantine Law and the Pandemic Influenza Preparedness Action Plan of the Japanese Government [3,4].

The first laboratory-confirmed cases without travel history were detected on 16 May as follows:

A high school in Ibaraki city, in Osaka prefecture near the border with Hyogo prefecture, noticed an increase in the number of absentees due to influenza-like symptoms in the middle of May 2009. On 16 May the school was closed in conformity with the School Health Law [5]. According to this law (enacted in 1958), influenza-like illness/seasonal influenza is one of the infectious diseases that can trigger school closure. The number of absentees that leads to school closure is decided by the school authorities. In many cases, 5 to 10 absentees in a class may lead to closing the class; 2-3 closed classes may lead to school closure.

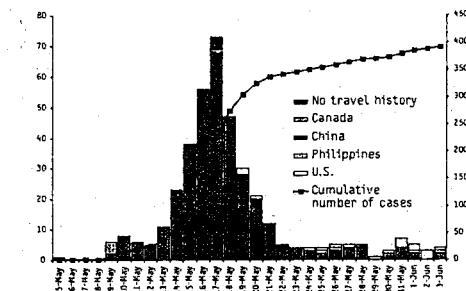
None of the sick high school pupils in Ibaraki had travel history to the countries affected by the new influenza. On 16 May, five teenagers were confirmed with influenza A(H1N1)v virus infection: one from the school in Ibaraki in Osaka prefecture, and four from Kobe City in the neighbouring Hyogo prefecture. Subsequently, outbreaks in three schools were reported during the next few days in these adjacent prefectures. The local governments of Kobe City and Osaka prefecture implemented extensive school closures, deciding to close-not only schools with infected students but all schools in both districts, for one to two weeks from 16 May. As a result, over

4,200 schools with around 650,000 children/students were closed. By 19 May, the number of confirmed cases reported in the two districts reached 172. However, after school closures, the number of new confirmed cases decreased (Figure 1). By 4 June a total of 357 cases were reported from the two prefectures.

Outside these two prefectures only sporadic cases were reported, the majority of whom had a travel history abroad or an epidemiological link to a traveller from affected areas including

FIGURE 1

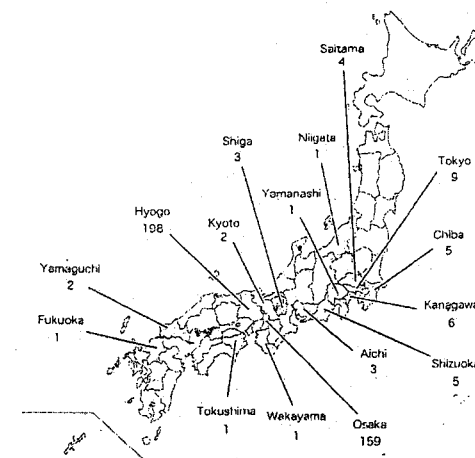
Confirmed cases of influenza A(H1N1)v virus infection in Japan, by date of onset and cumulative number as of 4 June 2009 (n=392)*



* Nine cases without the record of onset of illness were excluded

FIGURE 2

Geographical distribution of confirmed cases of influenza A(H1N1)v virus infection in Japan as of 4 June 2009 (n=401)



Osaka (Figure 2). In all, confirmed cases were reported from 16 of the total of 47 Japanese prefectures.

Reflecting the outbreaks in high schools described above, confirmed cases in the age group of 15-19 years accounted for 64% (256) of all cases, followed by 10% (40) of cases in the age group of 10-14 years. Only four cases (1%) were over 60 years of age (Figure 3). Overall, the median age of cases was 16.0 (range 1-69 years). Male cases accounted for 63% (254) and female cases for 37% (147) of all cases. Large outbreaks observed in high schools may have contributed to the difference in gender (as more boys than girls attend the affected schools).

Information on clinical symptoms was available for 217 confirmed cases (Figure 4). The most frequent were fever (208, 95%), cough (128, 59%), and sore throat (85, 39%). Thirteen cases (6%) reported diarrhoea and five cases (2%) had nausea.

FIGURE 3

Age distribution of confirmed cases of influenza A(H1N1)v virus infection in Japan as of 4 June 2009 (n=401)

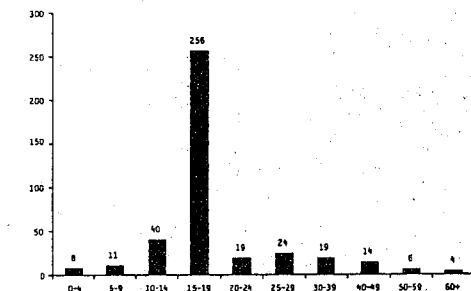
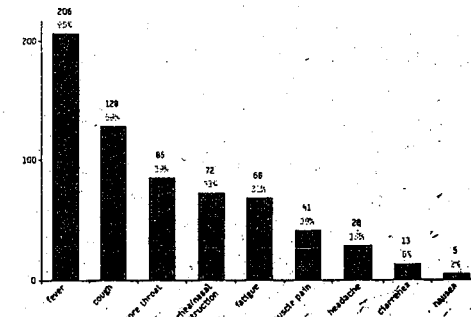


FIGURE 4

Clinical symptoms of confirmed cases of influenza A(H1N1)v virus infection in Japan as of 4 June 2009 (n=217)



Antiviral treatment of either oseltamivir or zanamivir was prescribed to about 90% of the 217 confirmed cases with known clinical symptoms.

No cases with pneumonia and/or respiratory failure, requiring ventilatory support, were reported. Other severe symptoms such as multiple organ failure were not reported either. Only three cases required hospitalisation due to underlying medical conditions, although a total of 135 cases were hospitalised for the purpose of isolation based on the Quarantine Law and the Pandemic Influenza Preparedness Action Plan of the Japanese Government [3,4].

Among the confirmed cases, six (including two cases aged over 60 years) had underlying diseases: asthma (3), asbestosis (1), epilepsy (1), myodystrophia (1); and one case was pregnant. As of 4 June 2009, no severe or fatal case had been reported.

The epidemiological characteristics of the patients with influenza A(H1N1)v virus infection have been reported by the investigation teams including members of IDSC/NIID and local government, who conclude that the severity of disease is similar to that of seasonal influenza [6,7].

The next steps include addressing the questions of how to improve the surveillance system to detect, monitor, and control the cases of influenza A(H1N1)v and how to prepare for the more severe cases as the epidemic is expected to expand in the winter season. We need to decide when the case-based surveillance for influenza A(H1N1)v should be ceased and integrated into the sentinel surveillance of seasonal influenza. To evaluate the pathogenicity, planned surveillance systems, such as severe pneumonia surveillance and ILI cluster surveillance, should be launched before the coming winter season. The Pandemic Influenza Preparedness Action Plan of the Japanese Government also needs to be amended so that medical resources would not be wasted by the patients with mild symptoms merely for the purpose of isolation.

Acknowledgement

We thank Dr Yamashita, Dr Morikane, Dr Shigematsu, Dr Taya, Dr Yahata, Ms Otake and Ms Maeda for their review and support.

References

1. World Health Organization (WHO). Swine Influenza - Statement by WHO Director-General, Dr Margaret Chan. 27 April 2009. Available from: http://www.who.int/mediacentre/news/statements/2009/h1n1_20090427/en/index.html
2. Ministry of Health, Labour, and Welfare (MHLW) of Japan. Official notification [in Japanese]. 29 April 2009. Available from: <http://www.mhlw.go.jp/kinkyu/kenkou/infuenza/090429-02.html>
3. Ministry of Health, Labour, and Welfare (MHLW) of Japan. Official notification about amendment of the Quarantine Law [in Japanese]. 12 May 2008. Available from: <http://www.mhlw.go.jp/bunya/kenkou/kekkaku-kansenshou04/pdf/16-04.pdf>
4. Ministry of Health, Labour, and Welfare (MHLW) of Japan. Pandemic Influenza Preparedness Action Plan of the Japanese Government. October 2007. Available from: <http://www.mhlw.go.jp/english/topics/infuenza/d/pandemic02.pdf>
5. Ministry of Education, Culture, Sports, Science and Technology (MEXT) of Japan. School Health Law [in Japanese]. 13 June 1958 (amended on 31 March 2008). Available from: <http://law.e-gov.go.jp/html/data/S33/S33F03501000018.html>
6. Infectious Disease Surveillance Center (IDSC)/National Institute of Infectious Diseases (NIID), Kobe Institute of Health. Interim report on clinical presentation of the novel influenza A (H1N1) cases reported from Kobe City, 21 May 2009. Available from: http://idsc.nih.gov.jp/disease/swine_influenza_e/idsc_e2009/clinical_epi_osaka2.html

7. Infectious Disease Surveillance Center (IDSC)/National Institute of Infectious Diseases (NIID), Osaka Prefecture and Public Health Center of Osaka Prefecture. Interim report on two clusters of the novel influenza A (H1N1) infection in Osaka Prefecture, 19 May 2009. Available from: http://idsc.nih.gov.jp/disease/swine_influenza_e/idsc_e2009/clinical_epi_kobe.html

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医薬品
医薬部外品 研究報告 調査報告書
化粧品

識別番号・報告回数	回	報告日 年 月 日	第一報入手日 2009年7月6日	新医薬品等の区分 該当なし	総合構構処理欄
一般的名稱			Tamiflu resistance, Denmark http://www.promedmail.org/pls/otn/f?p=2400:1001:52145918594326::n/f?p=2400:1001:52145918594326::NO::F2400_P1001_PUB_MAIL_ID:1004,78150	公表国 英国	使用上の注意記載状況・ その他参考事項等 BYL-2009-0390 http://www.promedmail.org/pls/otn/f?p=2400:1001:73705059594959725::NO::F2400_P1001_BACK_PAGE,F2400_P1001_PUB_MAIL_ID:1010,78237 http://www.promedmail.org/pls/otn/f?p=2400:1001:73705059594959725::NO::F2400_P1001_BACK_PAGE,F2400_P1001_PUB_MAIL_ID:1010,78236
販売名(企業名)		研究報告の公表状況			
研究報告の概要		<p>豚インフルエンザに対する主要薬剤である Tamiflu [oseltamivir] に耐性を示す初めての症例が報告された。Roche Holding AG 社は、デンマークで Tamiflu に耐性を示す新型インフルエンザ (H1N1) 患者例を確認した。同社役員の David Reddy 氏によると、季節性インフルエンザでも同様の事例は生じ得るため予想外の事ではないと述べている。今回の症例は Tamiflu を服用していた豚インフルエンザ患者であった。同氏は、市中に Tamiflu 耐性の H1N1 株が蔓延している兆候ではないことを強調した。</p>			
報告企業の意見		<p>今回、初めて Osetamivir 耐性の新型インフルエンザ (H1N1) の症例が発表された。この後、日本および中国においても同様の Osetamivir 耐性インフルエンザが確認された。しかしながら、これらの耐性インフルエンザウイルスは散发性の発生にとどまると考えられる。新型インフルエンザ治療においては Osetamivir が非常に重要な位置を占めているが、今後同様の耐性ウイルスのことを考慮し、Zanamivir の重要性も増し、同薬剤の備蓄に関しての効果も必要となると考えられる。</p>			
今後の対応		<p>現時点で新たな安全対策上の措置を講じる必要はないと考える。今後、ヒト感染症の急激な伝播拡大やそのような感染症に関する薬剤耐性の情報収集に努める。</p>			



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Archive Number 20090630.2359
Published Date 30-JUN-2009
Subject PRG/AH/EDR> Influenza A (H1N1) - worldwide (78): Tamiflu resistance, DK

INFLUENZA A (H1N1) - WORLDWIDE (78): TAMIFLU RESISTANCE, DENMARK

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Date: Mon 29 Jun 2009
 Source: BBC News [edited]
 <<http://news.bbc.co.uk/1/hi/health/8124387.stm>>

Experts have reported the 1st case of swine flu that is resistant to Tamiflu (oseltamivir), the main drug being used to fight the pandemic. Roche Holding AG confirmed a patient with H1N1 influenza in Denmark showed resistance to the antiviral drug. David Reddy, company executive, said it was not unexpected given that common seasonal flu could do the same.

The news comes as a 9 year old girl has become the 1rd to die in the UK with swine flu. It is understood from her doctors at Birmingham Children's Hospital that she had underlying health conditions. It is not yet known whether swine flu contributed to her death.

Meanwhile, the Department of Health has announced a big jump in the number of patients in England confirmed with swine flu, up 1604 since Friday (26 Jun 2009), taking the UK total so far to 5937. A Health Protection Agency spokeswoman stated that: "Routine sampling in the UK has shown that there is currently no resistance to oseltamivir or zanamivir." Experts have been using Tamiflu, also known as oseltamivir, in a bid to stop the H1N1 spreading in communities. If taken early, it ensures that symptoms are mild and reduces the chance of a victim giving the illness to someone else.

This 1st reported case of resistance developed in a swine flu patient taking Tamiflu. Mr Reddy stressed that there were no signs of a Tamiflu-resistant strain of H1N1 circulating in the community. This is in contrast to seasonal H1N1 flu, where a Tamiflu resistant strain emerged last year (2009) and is now widely circulating. Experts fear if this were to happen, it could render Tamiflu ineffective (in treatment of the swine flu H1N1 virus infection).

Another antiviral drug, called zanamivir or Relenza, made by GlaxoSmithKline, is also effective against swine flu. The UK government has been stockpiling these antiviral drugs and currently has enough to treat half of the population, with a contract to bring that up to 80 per cent as soon as possible. Suppliers of flu vaccine have also been ordered, and the 1st doses could be administered in the autumn (2009).

A spokeswoman for the Health Protection Agency said: "The Health Protection Agency continues to watch for antiviral resistance and will be carrying out regular sample testing throughout this outbreak. We have been monitoring antiviral drug resistance since the beginning of this outbreak. Routine sampling in the UK has shown that there is currently no resistance to oseltamivir or zanamivir." Virologist Professor John Oxford said: "I'm not

surprised about this finding. The question is whether it is going to spread. We will soon know the answer."

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[According to the European Influenza Surveillance Scheme Weekly Electronic Bulletin of 26 Jun 2009 (<<http://www.euroflu.org/>>), all but one pandemic A(H1N1) viruses tested have been sensitive to oseltamivir and zanamivir but resistant to M2 inhibitors, although widespread (98 per cent) Tamiflu resistance has been observed in seasonal A(H1N1) viruses. (see posting Influenza A (H1N1) - worldwide (83): antiviral resistance 20090705.2411) The emergence of Tamiflu-resistant 209 swine-origin A H1N1 influenza virus is not unexpected in view of the widespread and somewhat indiscriminate use of the drug in the treatment of what is still a relatively mild disease. It remains to be seen whether the Tamiflu-resistant virus will spread in Europe and beyond and appear independently elsewhere. It is presumed that the Tamiflu-resistant virus isolated in Denmark remains sensitive to the alternate neuraminidase inhibitor Relenza. - Mod.CP]

- { see also:
- Influenza A (H1N1) - worldwide (77): case count 20090627.2338
- Influenza A (H1N1) - worldwide (76): comments on 1918 virus (03) 20090625.2309
- Influenza A (H1N1) - worldwide (74): susp. origin 20090624.2303
- Influenza A (H1N1) - worldwide (73): case count, epidemiology 20090622.2288
- Influenza A (H1N1) - worldwide (72): case count, epidemiology 20090619.2261
- Influenza A (H1N1) - worldwide (70): risk factors 20090619.2260
- Influenza A (H1N1) - worldwide (69): other viral infections 20090618.2254
- Influenza A (H1N1) - worldwide (68): southern hemisphere 20090618.2253
- Influenza A (H1N1) - worldwide (65): antivirals in pregnancy 20090616.2224
- Influenza A (H1N1) - worldwide (64): case count, pandemic 20090616.2221
- Influenza A (H1N1) - worldwide (62): Egypt, Lebanon 20090611.2150
- Influenza A (H1N1) - worldwide (62): Egypt, Lebanon 20090611.2150
- Influenza A (H1N1) - worldwide (60): Egypt (Cairo) 20090608.2117
- Influenza A (H1N1) - worldwide (59): Worldwide 20090608.2117
- Influenza A (H1N1) - worldwide (58): USA, Africa 20090607.2109
- Influenza A (H1N1) - worldwide (57): Brazil, USA 20090605.2090
- Influenza A (H1N1) - worldwide (55): 20090602.2056
- Influenza A (H1N1) - worldwide (47): China, epidemiology 20090526.1962
- Influenza A (H1N1) - worldwide (45): 20090525.1951
- Influenza A (H1N1) - worldwide (42): 20090523.1929
- Influenza A (H1N1) - worldwide (39): 20090511.1903
- Influenza A (H1N1) - worldwide (37): 20090520.1893
- Influenza A (H1N1) - worldwide (34): 20090518.1863
- Influenza A (H1N1) - worldwide (31): 20090516.1835
- Influenza A (H1N1) - worldwide (29): 20090515.1824
- Influenza A (H1N1) - worldwide (26): 20090514.1798
- Influenza A (H1N1) - worldwide (23): 20090511.1754
- Influenza A (H1N1) - worldwide (21): 20090510.1743
- Influenza A (H1N1) - worldwide (19): 20090509.1733
- Influenza A (H1N1) - worldwide (17): 20090509.1722
- Influenza A (H1N1) - worldwide (15): 20090507.1709
- Influenza A (H1N1) - worldwide (13): 20090506.1692
- Influenza A (H1N1) - worldwide (11): coincident H3N2 variation 20090505.1679
- Influenza A (H1N1) - worldwide (09): 20090504.1673
- Influenza A (H1N1) - worldwide (07): 20090503.1658
- Influenza A (H1N1) - worldwide (05): 20090503.1657
- Influenza A (H1N1) - worldwide (03): 20090501.1646
- Influenza A (H1N1) - worldwide (02): case counts 20090430.1638
- Influenza A (H1N1) - worldwide 20090430.1636
- Influenza A (H1N1) "swine flu": worldwide (07), updated, pandemic 5 20090429.1622
- Influenza A (H1N1) "swine flu": worldwide (06), 20090429.1614

Influenza A (H1N1) "swine flu": worldwide / 20090428.1601
Influenza A (H1N1) "swine flu": worldwide (03) 20090428.1600
Influenza A (H1N1) "swine flu": Worldwide (02) 20090427.1586
Influenza A (H1N1) "swine flu": Worldwide 20090427.1583
Influenza A (H1N1) virus, human: worldwide 20090426.1577
Influenza A (H1N1) virus, human - New Zealand, susp 20090426.1574
Influenza A (H1N1) virus, human - N America (04) 20090426.1562
Influenza A (H1N1) virus, human - N America (03) 20090426.1566
Influenza A (H1N1) virus, human - N America (02) 20090425.1557
Influenza A (H1N1) virus, human - N America 20090425.1552
Acute respiratory disease - Mexico, swine virus susp 20090424.1546
Influenza A (H1N1) virus, swine, human - USA (02): (CA, TX) 20090424.1541
Influenza A (H1N1) virus, swine, human - USA: (CA) 20090422.1519
Influenza A (H1N1) virus, swine, human - Spain 20090220.0715

.....cp/asp/sh

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医薬品
医薬部外品 研究報告 調査報告書
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識別番号・報告回数	回	報告日 年 月 日	第一報入手日 2009年7月6日	新医薬品等の区分 該当なし	総合機構処理欄
一般的名称	研究報告の公表状況		World now at the start of 2009 influenza pandemic http://www.who.int/mediacentre/news/statements/2009/h1n1_pandemic_phase6_20090611/en/index.html	公表国 スイス	使用上の注意記載状況・ その他参考事項等 BYL-2009-0391
販売名(企業名)	<p>WHO事務局長Chan氏は、今回のこのインフルエンザの感染の拡大は、現在までの知見や専門家等が評価した結果から、科学的な観点で、インフルエンザパンデミックの基準を満たしたことが判明し、この事実に基づいて感染のフェーズを5から6に引き上げる事としたと表明した。一方で、感染の広がりはフェーズ6ではあるが、重症度としては、中等度と位置づけている。各国に対しては、感染の第二波に備えるよう強く要望を出すとともに、このインフルエンザ感染への対応として、感染症例がまだ確認されていない或は少数確認されているにとどまっている国では監視の継続を求め、既に感染が拡大している国においては感染症患者への適切な管理に力を注ぐべきであることを求めている。また、ヒトや物の移動制限や国境閉鎖は推奨しないと表明している。</p> <p>さらに、WHOはインフルエンザワクチン製造業者に対し、季節性インフルエンザワクチンの製造が間もなく完了する事から、その後はこの新型インフルエンザに対するワクチンを、全力を挙げて製造するよう要望している。</p>				
研究報告の概要	<p>報告企業の意見</p> <p>現在、伝播が拡大した新型インフルエンザ(H1N1)の流行に対し、最大の流行を示すフェーズ6と判定、宣言された。本インフルエンザは多くは重症化しない傾向があるが、感染に備えたワクチンの確保が要求される。また、インフルエンザ治療薬であるOseltamivirやZanamivirの確保にも努める必要がある。</p>		<p>今後の対応</p> <p>引き続き、新型インフルエンザ感染について、さらに健康を脅かす情報に注視し、情報の収集に努める。</p>		

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Ladies and gentlemen,

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In late April, WHO announced the emergence of a novel influenza A virus.

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This particular H1N1 strain has not circulated previously in humans. The virus is entirely new.

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The virus is contagious, spreading easily from one person to another, and from one country to another. As of today, nearly 30,000 confirmed cases have been reported in 74 countries.

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This is only part of the picture. With few exceptions, countries with large numbers of cases are those with good surveillance and testing procedures in place.

Spread in several countries can no longer be traced to clearly-defined chains of human-to-human transmission. Further spread is considered inevitable.

I have conferred with leading influenza experts, virologists, and public health officials. In line with procedures set out in the International Health Regulations, I have sought guidance and advice from Emergency Committee established for this purpose.

On the basis of available evidence, and these expert assessments of the evidence, the scientific criteria for an influenza pandemic have been met.

I have therefore decided to raise the level of influenza pandemic alert from phase 5 to phase 6.

The world is now at the start of the 2009 influenza pandemic.

We are in the earliest days of the pandemic. The virus is spreading under a close and careful watch.

No previous pandemic has been detected so early or watched so closely, in real-time, right at the very beginning. The world can now reap the benefits of investments, over the last five years, in pandemic preparedness.

We have a head start. This places us in a strong position. But it also creates a demand for advice and reassurance in the midst of limited data and considerable scientific uncertainty.

Thanks to close monitoring, thorough investigations, and frank reporting from countries, we have some early snapshots depicting spread of the virus and the range of illness it can cause.

We know, too, that this early, patchy picture can change very quickly. The virus writes the rules and one, like all influenza viruses, can change the rules, without rhyme or reason, at any time.

Globally, we have good reason to believe that this pandemic, at least in its early days, will be of moderate severity. As we know from experience, severity can vary, depending on many factors, from one country to another.

On present evidence, the overwhelming majority of patients experience mild symptoms and make a rapid and full recovery, often in the absence of any form of medical treatment.

Worldwide, the number of deaths is small. Each and every one of these deaths is tragic, and we have to brace ourselves to see more. However, we do not expect to see a sudden and dramatic jump in the number of severe or fatal infections.

We know that the novel H1N1 virus preferentially infects younger people. In nearly all areas with large and sustained outbreaks, the majority of cases have occurred in people under the age of 25 years.

In some of these countries, around 2% of cases have developed severe illness, often with very rapid progression to life-threatening pneumonia.

Most cases of severe and fatal infections have been in adults between the ages of 30 and 50 years.

This pattern is significantly different from that seen during epidemics of seasonal influenza, when most deaths occur in frail elderly people.

Many, though not all, severe cases have occurred in people with underlying chronic conditions. Based on limited, preliminary data, conditions most frequently seen include respiratory diseases, notably asthma, cardiovascular disease, diabetes, autoimmune disorders, and obesity.

At the same time, it is important to note that around one third to half of the severe and fatal infections are occurring in previously healthy young and middle-aged people.

Without question, pregnant women are at increased risk of complications. This heightened risk takes on added importance for a virus, like this one, that preferentially infects younger age groups.

Finally, and perhaps of greatest concern, we do not know how this virus will behave under conditions typically found in the developing world. To date, the vast majority of cases have been detected and investigated in comparatively well-off countries.

Let me underscore two of many reasons for this concern. First, more than 99% of maternal deaths, which are a marker of poor quality care during pregnancy and childbirth, occurs in the developing world.

Second, around 85% of the burden of chronic diseases is concentrated in low- and middle-income countries.

Although the pandemic appears to have moderate severity in comparatively well-off countries, it is prudent to anticipate a bleaker picture as the virus spreads to areas with limited resources, poor health care, and a high prevalence of underlying medical problems.

Ladies and gentlemen,

A characteristic feature of pandemics is their rapid spread to all parts of the world. In the previous century, this spread has typically taken around 6 to 9 months, even during times when most international travel was by ship or rail.

Countries should prepare to see cases, or the further spread of cases, in the near future. Countries where outbreaks appear to have peaked should prepare for a second wave of infection.

Guidance on specific protective and precautionary measures has been sent to ministries of health in all countries. Countries with no or only a few cases should remain vigilant.

Countries with widespread transmission should focus on the appropriate management of patients. The testing and investigation of patients should be limited, as such measures are resource intensive and can very quickly strain capacities.

WHO has been in close dialogue with influenza vaccine manufacturers. I understand that production of vaccines for seasonal influenza will be completed soon, and that full capacity will be available to ensure the largest possible supply of pandemic vaccine in the months to come.

Pending the availability of vaccines, several non-pharmaceutical interventions can confer some protection.

WHO continues to recommend no restrictions on travel and no border closures.

Influenza pandemics, whether moderate or severe, are remarkable events because of the almost universal susceptibility of the world's population to infection.

— We are all in this together, and we will all get through this, together.

Thank you.

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