



## Summary

During week 33 (August 9–15, 2009), influenza activity slightly increased in Taiwan.

- Of the 718 specimens tested during week 31–33, 214 (30%) were positive for influenza viruses; 86% (95% confidence interval 80%–90%) of all subtyped influenza A viruses were pandemic (H1N1) 2009 viruses.
- The number of suspected complicated influenza cases is decreasing. There were 10 newly reported laboratory-confirmed complicated influenza cases (5 were due to pandemic [H1N1] 2009 virus infections). Cumulative number of laboratory-confirmed complicated influenza cases since July 1, 2009 was 38. Of these, 25 (66%) were due to pandemic (H1N1) 2009 virus infections (16 recovery and discharged, 4 hospitalized to ward, 3 in intensive care, and 2 death).
- The number of deaths mentioning pneumonia and influenza was 225 and slightly above the baseline level (217 deaths).
- The rate of outpatient visits for influenza-like illness is 1.03% and decreasing.
- The rate of emergency room visits for influenza-like illness is 11.07%, decreasing and above the warning level, but still below the epidemic threshold.
- Taiwan CDC estimates that nationwide there were 9,810 (95% confidence interval 8,465–11,160) new cases of pandemic (H1N1) 2009 influenza during week 33.
- During week 33, 13 pandemic (H1N1) 2009 clusters were reported; 9 (69%) occurred at schools. Cumulative number of pandemic (H1N1) 2009 clusters since July 1, 2009 was 43; 26 (60%) occurred at schools.

## Virologic surveillance

During week 31–33, seasonal influenza A (H1, H3) and B viruses have co-circulated at low levels with pandemic (H1N1) 2009 viruses. 86 percent (95% confidence interval 80%–90%) of all subtyped influenza A viruses being reported to Taiwan CDC through contracted laboratories during this period were pandemic (H1N1) 2009 viruses. The results of tests performed during the past 3 weeks are summarized in the table below.

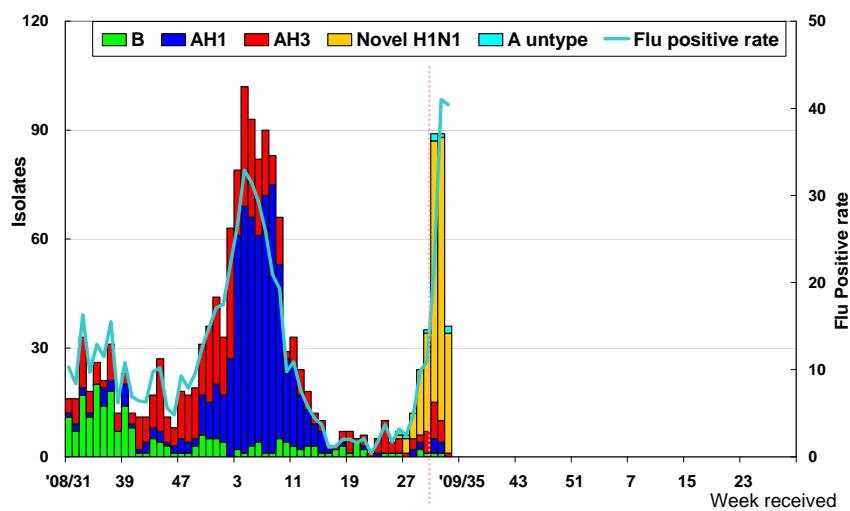
	Data for weeks 31–33	Cumulative data since 6/1/2009
<b>Number of specimens tested</b>	718	2787
<b>Number of positive specimens (%)</b>	214 (30)	317 (11)
<b>Positive specimens by type/subtype (%)</b>		
<b>Influenza A</b>	212 (99)	309(97)
<b>A (novel H1N1)</b>	183 (86)	240 (78)
<b>A (H3)</b>	17 (8)	49 (16)
<b>A (H1)</b>	7 (3)	12 (4)
<b>A (unable to subtype)</b>	5 (2)	8 (3)
<b>A (subtyping not performed)</b>	0 (0)	0 (0)
<b>Influenza B</b>	2 (1)	8(3)



**Antigenic characterization:** Taiwan CDC has antigenically characterized 13 seasonal human influenza viruses [1 influenza A (H1), 12 influenza A (H3)] since June 1, 2009. (Starting from this week, the antigenic characterization data will use virus isolation time for analysis.)

None of the influenza seasonal A (H1) viruses tested was related to the influenza A (H1N1) component of the 2008–09 influenza vaccine (A/Brisbane/59/2007). Two (17%) of the influenza A (H3N2) viruses tested are related to the A (H3N2) vaccine component (A/Brisbane/10/2007).

### Influenza positive tests reported to Taiwan CDC by contracted laboratories, 2008–2009



**Antiviral resistance:** Since June 1, 2009, 18 influenza A (H3N2) and 16 pandemic (H1N1) 2009 viruses have been tested for resistance to the neuraminidase inhibitors (oseltamivir and zanamivir) and adamantanes (amantadine and rimantadine). The results of antiviral resistance testing performed on these viruses are summarized in the table below.

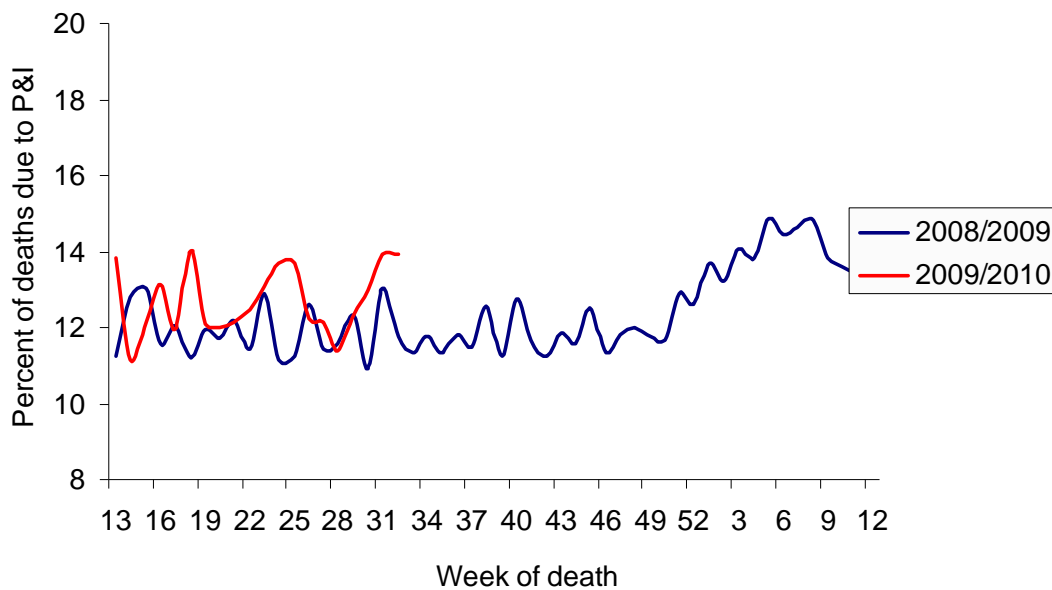
	Isolates tested (n)	Resistance Viruses, n (%)		Isolates tested (n)	Resistant Viruses, n (%)
		Oseltamivir	Zanamivir		Adamantanes
A (pandemic [H1N1] 2009)	18	0 (0)	0 (0)	6	6 (100)
A (H3)	16	0 (0)	0 (0)	16	16 (100)



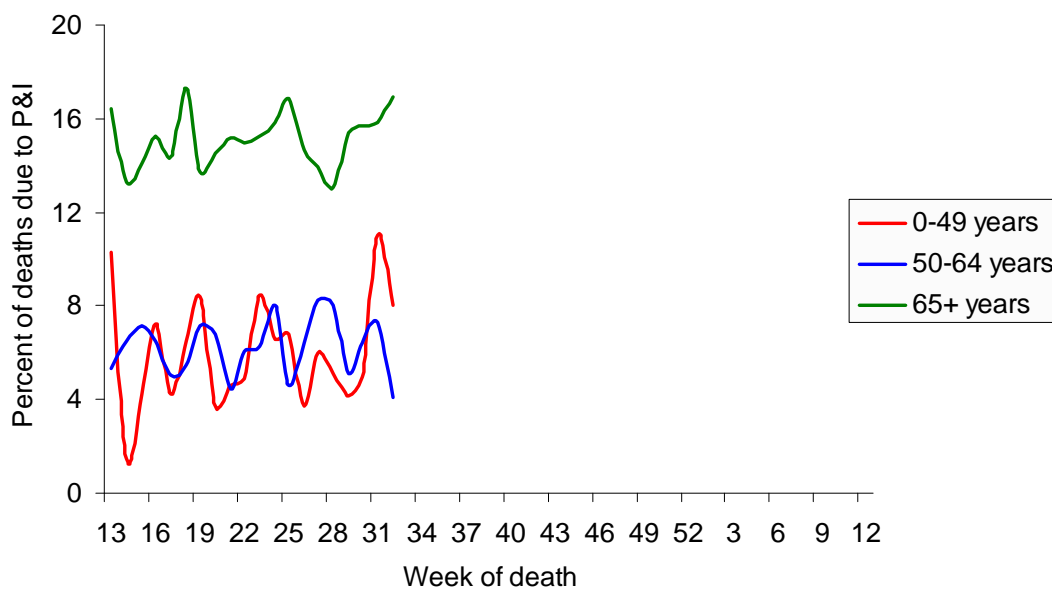
## Pneumonia and influenza (P&I) mortality surveillance

During week 32, 225 (14%) of all deaths reported through the National Death Certificate System mentioned P&I as the cause of death. P&I proportional death was the highest for adult greater than 65 years of age. The number of deaths mentioning P&I during week 32 was above the baseline number (217 deaths).

### National pneumonia and influenza mortality Week ending 8/8/2009



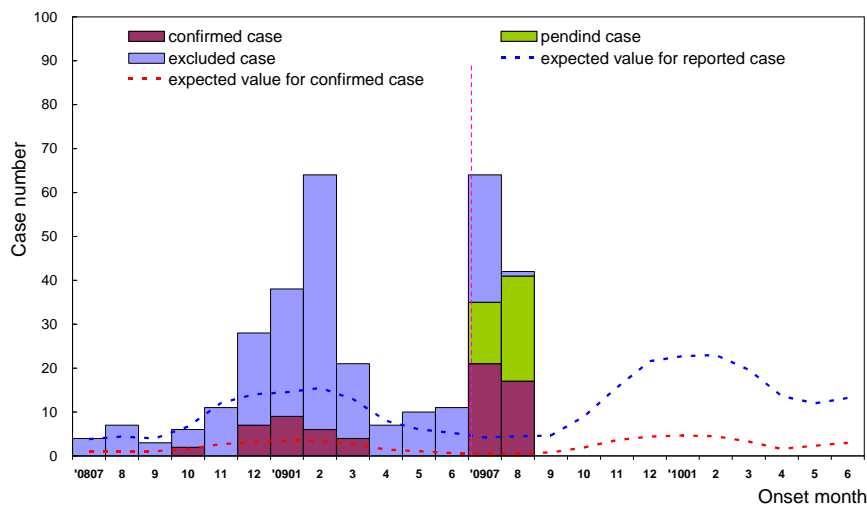
### National pneumonia and influenza mortality by age group\* Week ending 8/8/2009



## Reports of complicated influenza\*

During week 33, 10 laboratory-confirmed complicated influenza cases were reported to Taiwan CDC; 5 (50%) were due to pandemic (H1N1) 2009 virus infections, 1 (10%) were AH3, 1 (10%) was B, and 3 (30%) were unsubtypeable. Since July 1, 2009, Taiwan CDC has received 38 reports of laboratory-confirmed complicated influenza. Of these, 25 (66%) were due to pandemic (H1N1) 2009 virus infections (16 recovery and discharged, 4 hospitalized to ward, 3 intensive care, and 2 death). The number of laboratory-confirmed complicated influenza cases is decreasing.

### Number of complicated influenza reports by month of onset 7/1/2008 to present



\*Defined as influenza infection with pulmonary complication, neurologic complication, myocarditis, pericarditis, invasive bacterial infection, or those requiring intensive care or resulting deaths.



## Outpatient and emergency room influenza-like illness surveillance

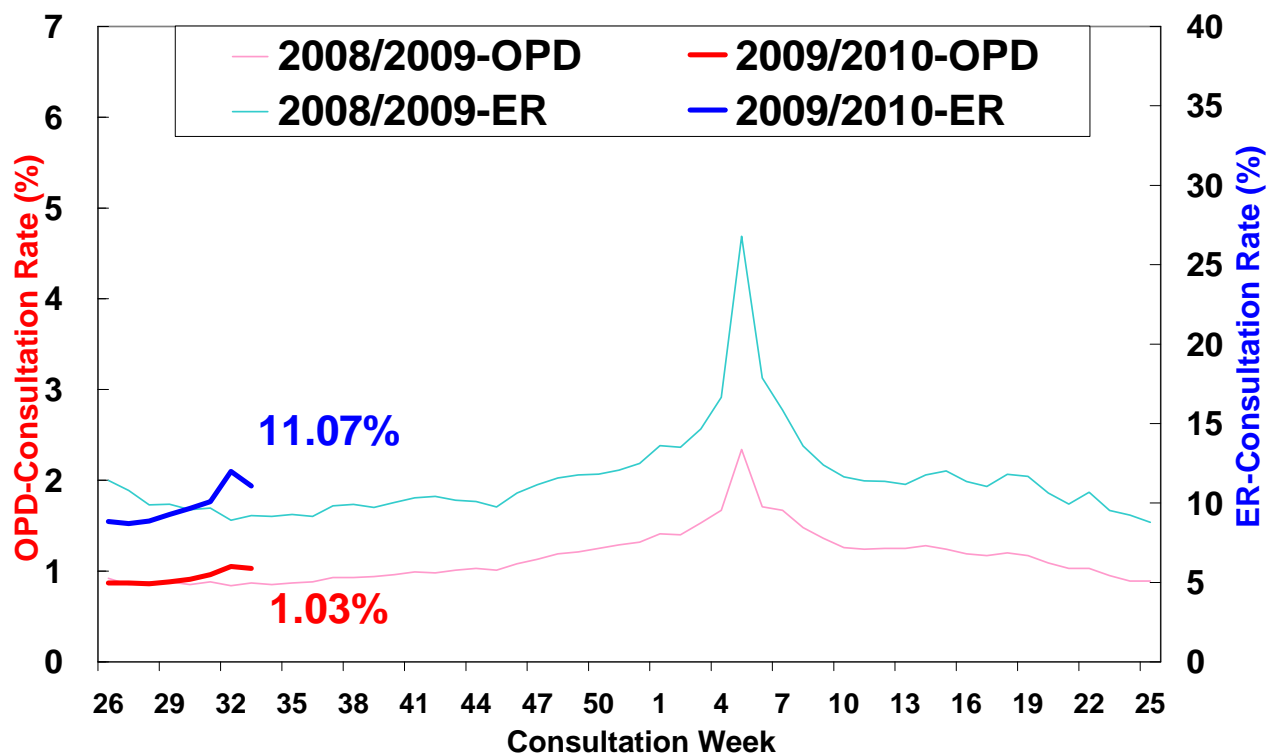
Nationwide during week 33, 1.03% of outpatient visits reported through the National Health Insurance Database were due to influenza-like illness (ILI). This rate has been slightly decreasing for the previous 1 week (1.05%).

Nationwide during week 33, 11.28% of emergency room patient visits reported through the Real-time Outbreak and Disease Surveillance System (RODS) were due to influenza-like illness (ILI). This rate has been slightly decreasing for the past 1 weeks and is above the warning level (10.74%), but still below the epidemic threshold (12.30%).

Taiwan CDC estimates that nationwide there were 9,810 (95% confidence interval 8,465–11,160) new cases of pandemic (H1N1) 2009 influenza during week 33. This estimate is based on the average weekly outpatient ILI consultation visits, and taking into consideration positivity rates for pandemic (H1N1) 2009 from virological surveillance.

### Rate of outpatient and emergency room (ER) visits for influenza-like illness

7/1/2008 to present



## Pandemic (H1N1) 2009 clusters

During week 33, 13 pandemic (H1N1) 2009 clusters were reported. Of these, 9 (69%) occurred at schools, 2 (15%) at military camps, and 2 (15%) at long-term care facilities. Cumulative number of pandemic (H1N1) 2009 clusters since July 1, 2009 was 43. Of these, 26 (60%) occurred at schools, 5 (12%) at workshops, 5 (12%) at military camps, 1 (2%) at workplaces, 1 (2%) at hospitals, 4 (9%) at long-term care facilities, and 1 (2%) was imported.

### Number of confirmed pandemic (H1N1) 2009 clusters

7/1/2009 to present

