



## Summary

During week 50 (December 12–18, 2010), influenza activity slightly increased in Taiwan and pandemic (H1N1) 2009 virus has become the major type in community. However, seasonal influenza virus type B has increased swiftly in the past few weeks. Most of the influenza viruses match the 2010–11 vaccine component.

- Of the 338 specimens tested during week 48–50, 37 (11%) were positive for influenza viruses, 15 (4.4%) were positive for pandemic (H1N1) 2009 viruses, 12 (3.6%) were positive for influenza B viruses, and 10 (3%) were positive for influenza A (H3N2) viruses.
- There were 7 new seasonal H3N2 cases and 2 complicated pandemic (H1N1) 2009 influenza cases during week 50. Since July 1, 2010, there have been 644 reports of complicated influenza infections, including 539 reports of seasonal influenza virus type H3N2 infections and 79 reports of complicated pandemic (H1N1) 2009 virus infections (one patient is co-infected with pandemic [H1N1] 2009 virus and seasonal influenza virus type H3N2). Since July 1, 2010, there have been 34 reports of death from complicated influenza infection; 8 from the pandemic H1N1 2009 and 26 from the seasonal H3N2 strain, respectively.
- The number of deaths related to pneumonia and influenza during week 49 was 261, which was above to the average number during the past 3 weeks (234 deaths).
- The rate of outpatient visits for influenza-like illness is 1.2%, a 3% increase compared with the previous week (1.16%).
- The rate of emergency room visits for influenza-like illness is 10.48%, an 1% increase compared with the previous week (10.39%).

## Virologic surveillance

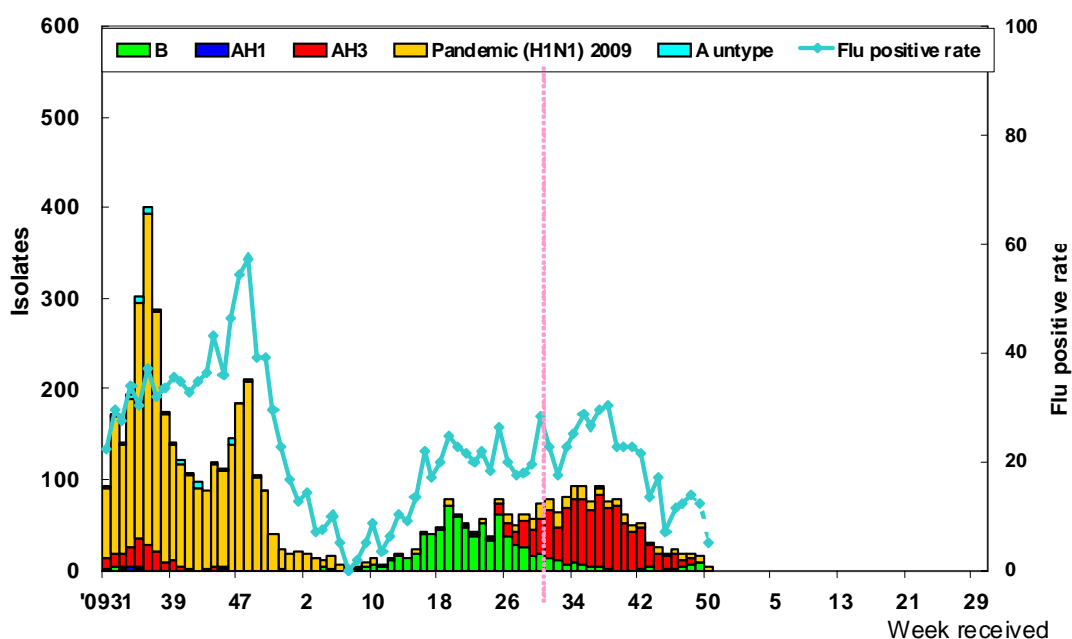
The results of tests performed during the past 3 weeks are summarized in the table below.

	Data for weeks 48–50	Cumulative data since 7/1/2010
Number of specimens tested	338	6,543
Number of positive specimens (%)	37(11)	1353(21)
Positive specimens by type/subtype (%)		
Influenza A (% of all positive specimens)	25(68)	1161(86)
A (pandemic [H1N1] 2009) (% of all Influenza A)	15(60)	223(19)
A (H3)	10(40)	937(81)
A (H1)	0(0)	0(0)
A (unable to subtype)	0(0)	1(<1)
A (subtyping not performed)	0(0)	0(0)
Influenza B	12(32)	192(14)



**Antigenic characterization:** Taiwan CDC has antigenically characterized 184 human influenza viruses [115 influenza A (H3), 38 pandemic (H1N1) 2009, 31 influenza B] since July 1, 2010. One hundred and fourteen (99%) of the influenza A (H3N2) viruses tested were related to the A (H3N2) vaccine component (A/Perth/16/2009). Thirty-six (95%) of the pandemic (H1N1) 2009 viruses tested were related to the A/California/07/2009 vaccine component. Twenty-seven (87%) of the influenza B viruses tested belonged to the B/Victoria lineage and were related to the B component of the 2010–11 influenza vaccine (B/Brisbane/60/2008) .

### Influenza positive tests reported to Taiwan CDC by contracted laboratories, 2009–2011



**Antiviral resistance:** Since July 1, 2010, 230 influenza A (H3N2), 51 pandemic (H1N1) 2009 and 6 influenza B viruses have been tested for resistance to the neuraminidase inhibitors (oseltamivir). The results of antiviral resistance testing performed on these viruses are summarized in the table below.

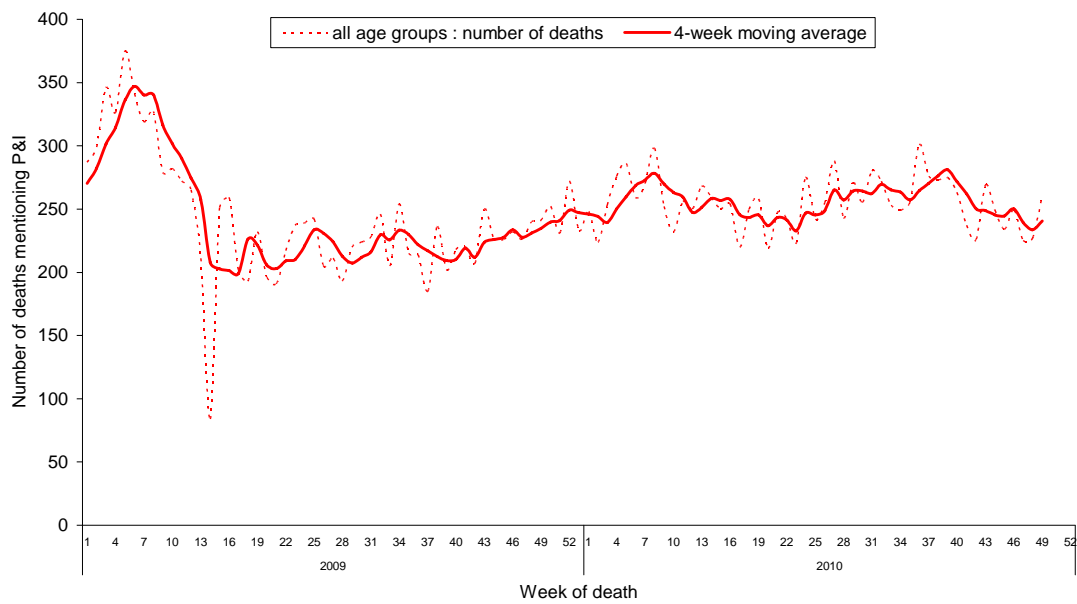
	Isolates tested (n)	Resistance Viruses, n (%)
		Oseltamivir
A (H3)	230	0 (0)
A (pandemic [H1N1] 2009)	51	0 (0)
B	6	0 (0)



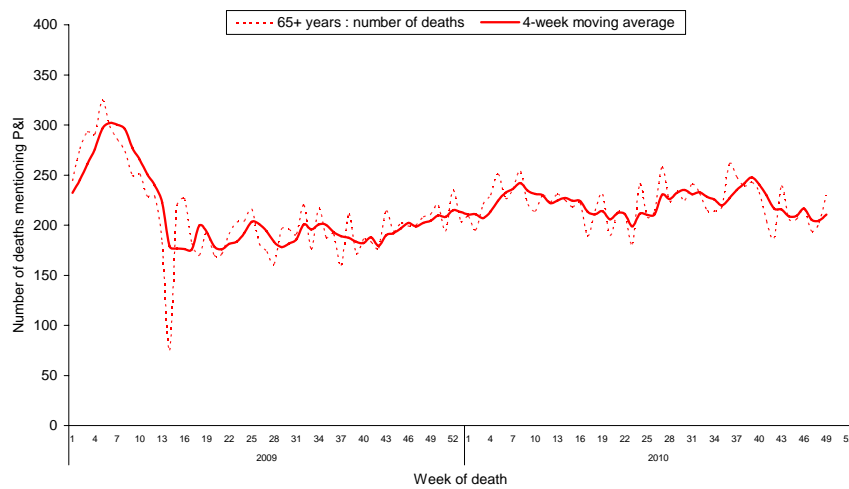
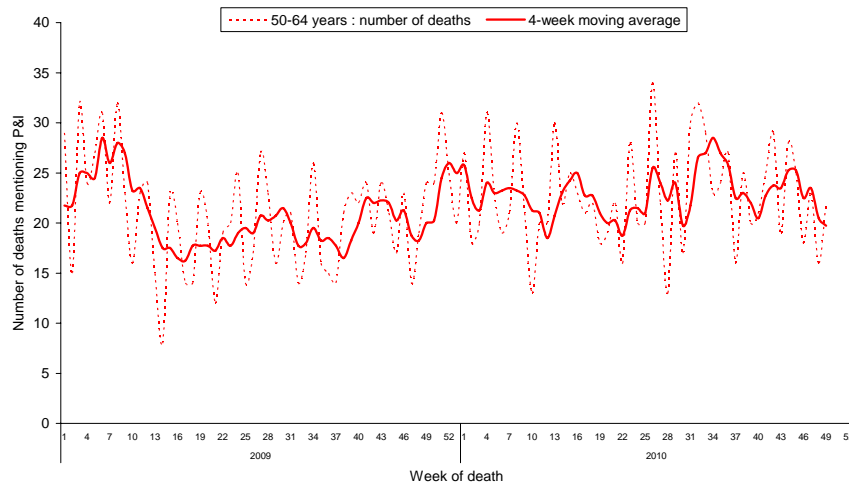
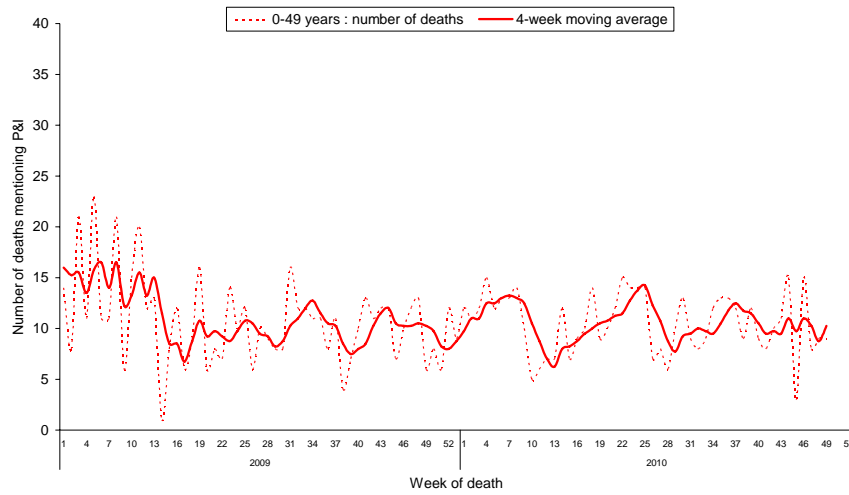
## Pneumonia and influenza (P&I) mortality surveillance

During week 49, 261 deaths reported through the National Death Certificate System mentioned P&I as the cause of death. This number was above to the average number during the past 3 weeks (234 deaths). The number of deaths related to P&I for age groups 0–49, 50–64, and greater than 65 years was the highest for adult greater than 65 years of age.

### National pneumonia and influenza mortality Week ending 12/11/2010



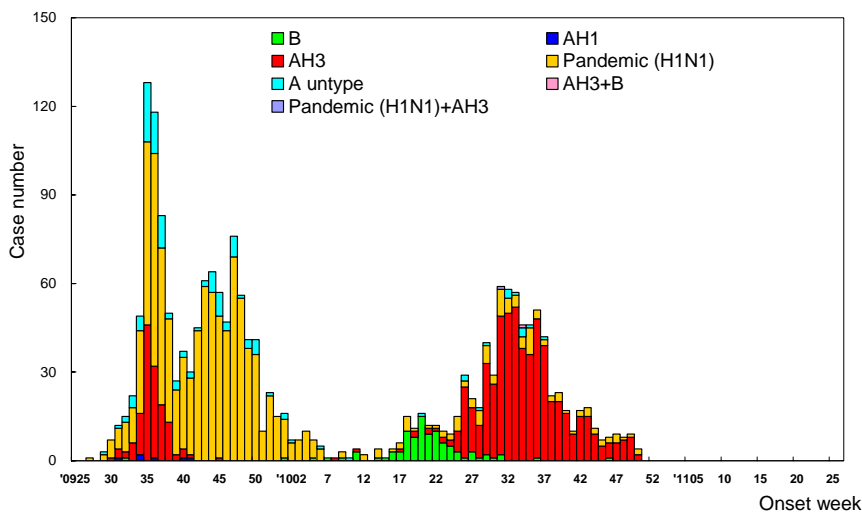
## National pneumonia and influenza mortality by age group Week ending 12/11/2010



## Reports of complicated influenza\*

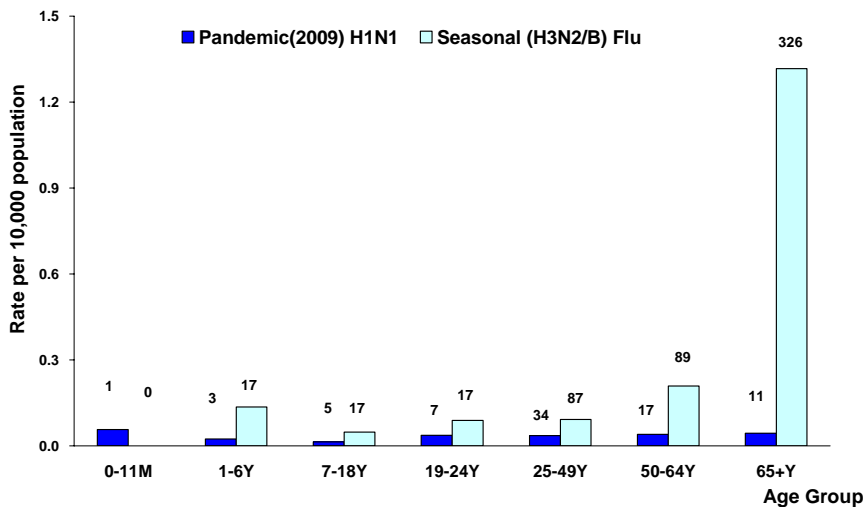
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### Number of complicated influenza reports by week of onset 7/1/2009 to present



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

### Rate of complicated influenza reports by age groups 7/1/2010 to present



\*Numbers represent number of complicated influenza reports for that specific age stratum.

\* The number of patients with pandemic (2009) H1N1 includes one coinfecting with pandemic (2009) H1N1 and seasonal H3N2 strains.



## Outpatient and emergency room influenza-like illness surveillance

Nationwide during week 50, 1.2% of outpatient visits reported through the National Health Insurance Database were due to influenza-like illness (ILI). This rate has increased by 3% compared with the previous week (1.16%).

Nationwide during week 50, 10.48% of emergency room patient visits reported through the Real-time Outbreak and Disease Surveillance System (RODS) were due to ILI. This rate has increased by 1% compared with the previous week (10.39%).

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

6/14/2009 to present

