



## Summary

During week 47 (November 15–21, 2009), influenza activity increased in Taiwan.

- Of the 466 specimens tested during week 45–47, 209 (45%) were positive for influenza viruses, and 191 (41%) were positive for pandemic (H1N1) 2009 viruses; 100% (95% confidence interval 98%–100%) of all subtyped influenza A viruses were pandemic (H1N1) 2009 viruses.
- Since July 1, 2009, there has been 642 reports of complicated pandemic (H1N1) 2009 virus infections (29 deaths). There were 50 new complicated pandemic (H1N1) 2009 influenza cases during week 47.
- The number of deaths mentioning pneumonia and influenza during week 46 was 211 and below the baseline level (225 deaths).
- The rate of outpatient visits for influenza-like illness is 2.39% and has increased by 13% compared with the previous week (2.11%).
- The rate of emergency room visits for influenza-like illness is 18.38% and has increased by 4% compared with the previous week (17.64%).

## Virologic surveillance

During week 45–47, seasonal influenza AH3 viruses have co-circulated at low levels with pandemic (H1N1) 2009 viruses. All (95% confidence interval 96%–100%) 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 45–47	Cumulative data since 6/1/2009
Number of specimens tested	466	10,004
Number of positive specimens (%)	209 (45)	2,741 (27)
Positive specimens by type/subtype (%)		
Influenza A	208 (100)	2,729 (100)
A (pandemic [H1N1] 2009)	191 (92)	2,416 (89)
A (H3)	0 (0)	196 (7)
A (H1)	0 (0)	21 (<1)
A (unable to subtype)	17 (8)	96 (4)
A (subtyping not performed)	0 (0)	0 (0)
Influenza B	1 (0)	12 (<1)

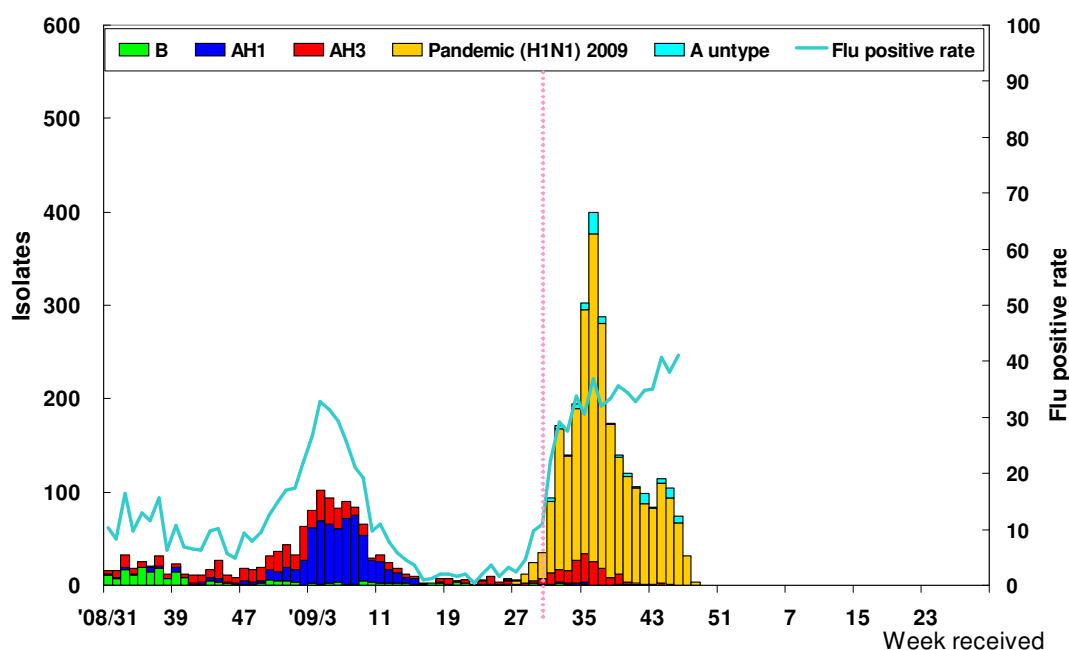
**Antigenic characterization:** Taiwan CDC has antigenically characterized 77 human influenza viruses [1 influenza A (H1), 23 influenza A (H3), 7 influenza B, 46 pandemic (H1N1) 2009] since June 1, 2009.

None of the influenza seasonal A (H1) viruses tested was related to the influenza A (H1N1) component of the 2009–10 influenza vaccine (A/Brisbane/59/2007). Three (13%) of the influenza A (H3N2) viruses tested were related to the A (H3N2) vaccine component (A/Brisbane/10/2007). Four (57%) of the influenza B viruses tested belonged to the B/Victoria lineage and were related to the B component



of the 2009–10 influenza vaccine ( B/Brisbane/60/2008 ) . All ( 100% ) of the pandemic (H1N1) 2009 viruses tested were related to the A/California/07/2009 vaccine component.

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



**Antiviral resistance:** Since June 1, 2009, 16 influenza A (H3N2) and 562 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.

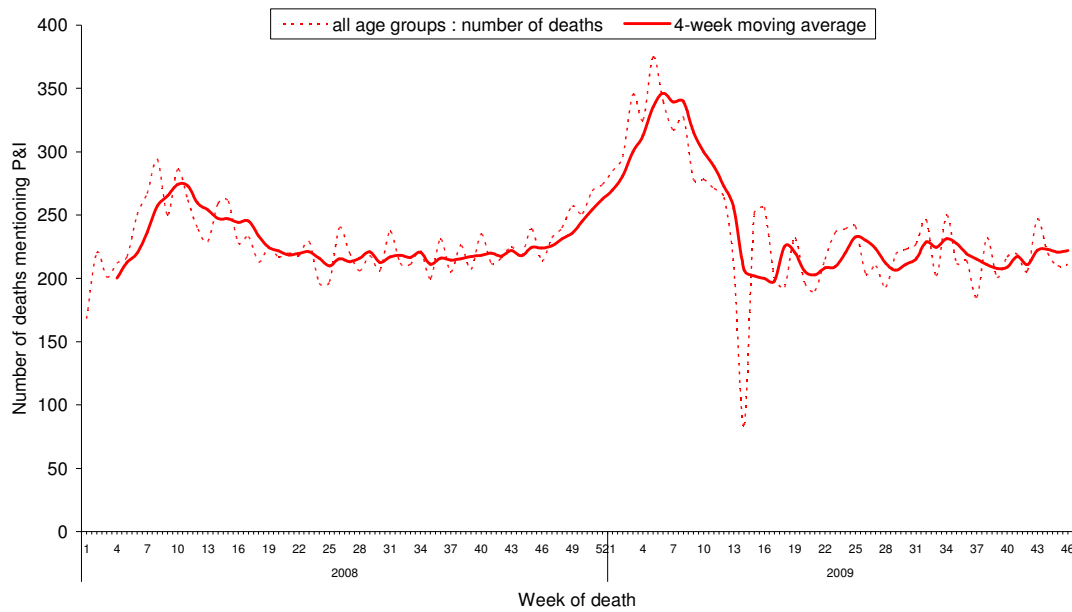
	Isolates tested (n)	Resistance Viruses, n (%)		Isolates tested (n)	Resistant Viruses, n (%)
		Oseltamivir	Zanamivir		Adamantanes
<b>A (pandemic [H1N1] 2009)</b>	562	5 (0.9) <sup>*</sup>	0 (0)	168	168 (100)
<b>A (H3)</b>	16	0 (0)	0 (0)	16	16 (100)

<sup>\*</sup>Both patients had documented exposure to oseltamivir through treatment

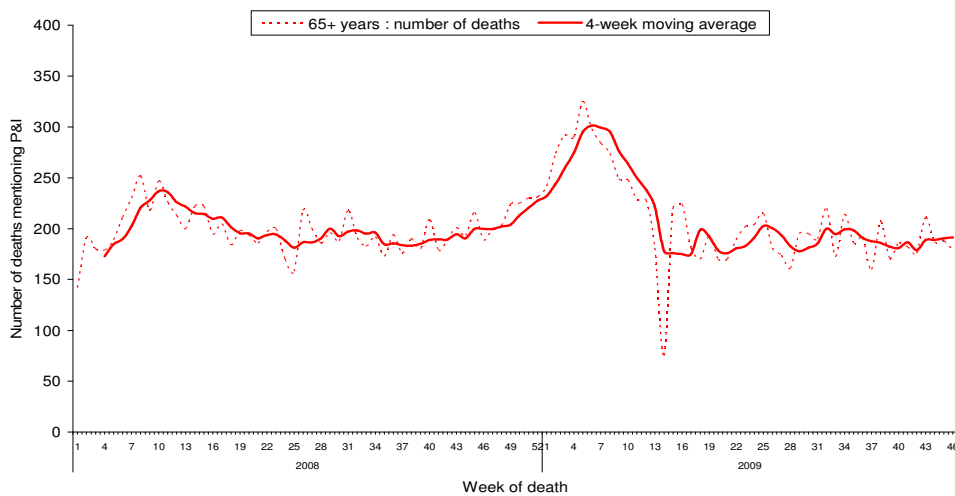
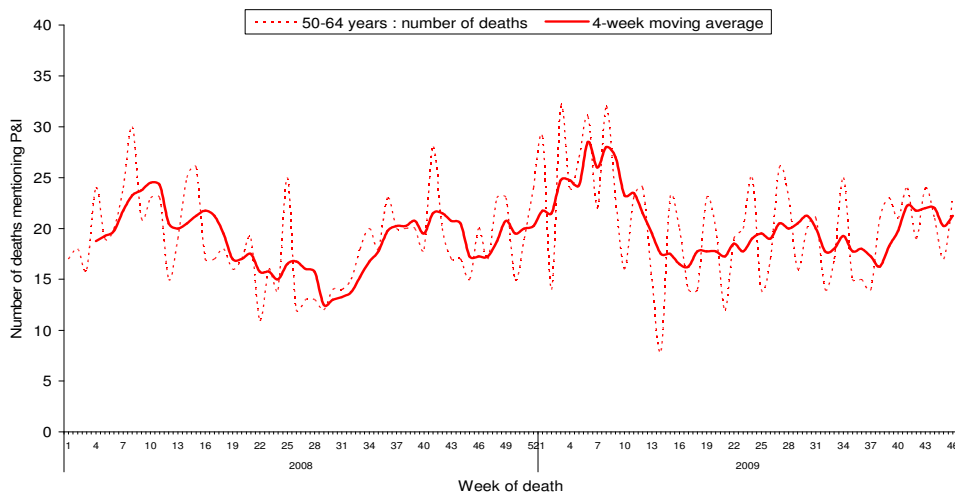
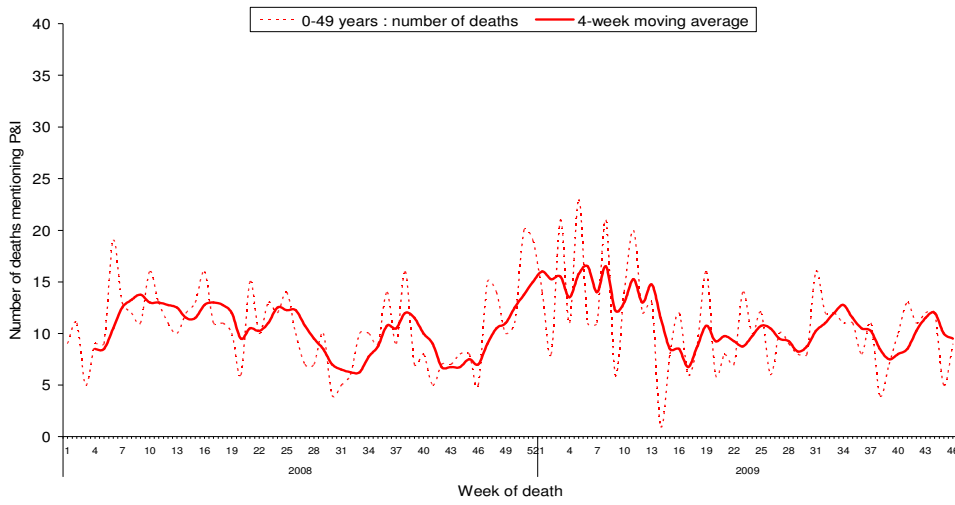
## Pneumonia and influenza (P&I) mortality surveillance

During week 46, 211 deaths reported through the National Death Certificate System mentioned P&I as the cause of death, which was below the baseline number (225 deaths). The number of deaths mentioning 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 11/14/2009



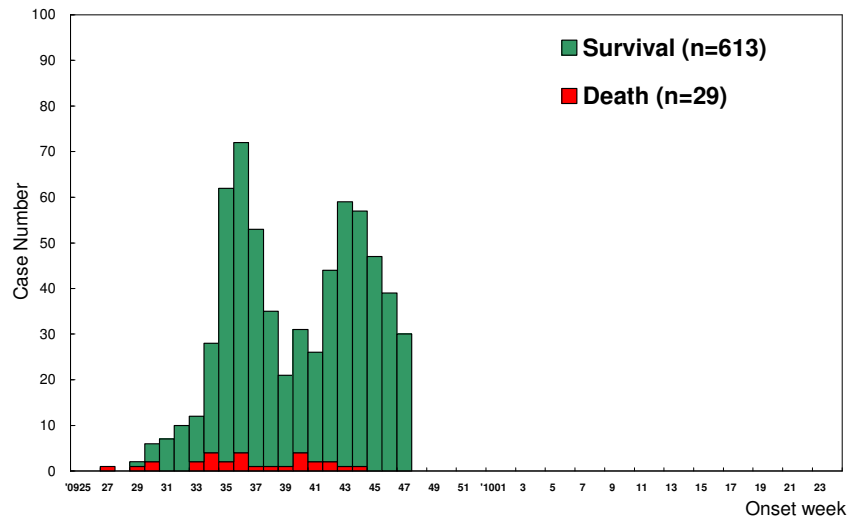
## National pneumonia and influenza mortality by age group Week ending 11/14/2009



## Reports of complicated influenza\*

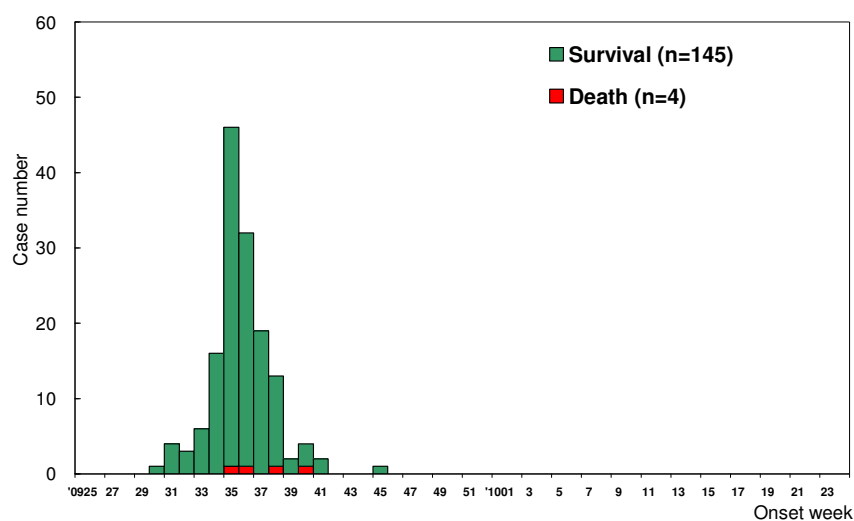
Since July 1, 2009, Taiwan CDC has received 642 reports of complicated pandemic (H1N1) 2009 virus infections (29 deaths) and 149 reports of complicated seasonal influenza virus infections (4 deaths). There were 50 new pandemic (H1N1) 2009 influenza cases during week 47.

### Number of complicated pandemic H1N1 influenza reports by week of onset 7/1/2009 to present



\*Defined as pandemic (H1N1) 2009 influenza infection with pulmonary complication, neurologic complication, myocarditis, pericarditis, invasive bacterial infection, or those requiring intensive care or resulting deaths.

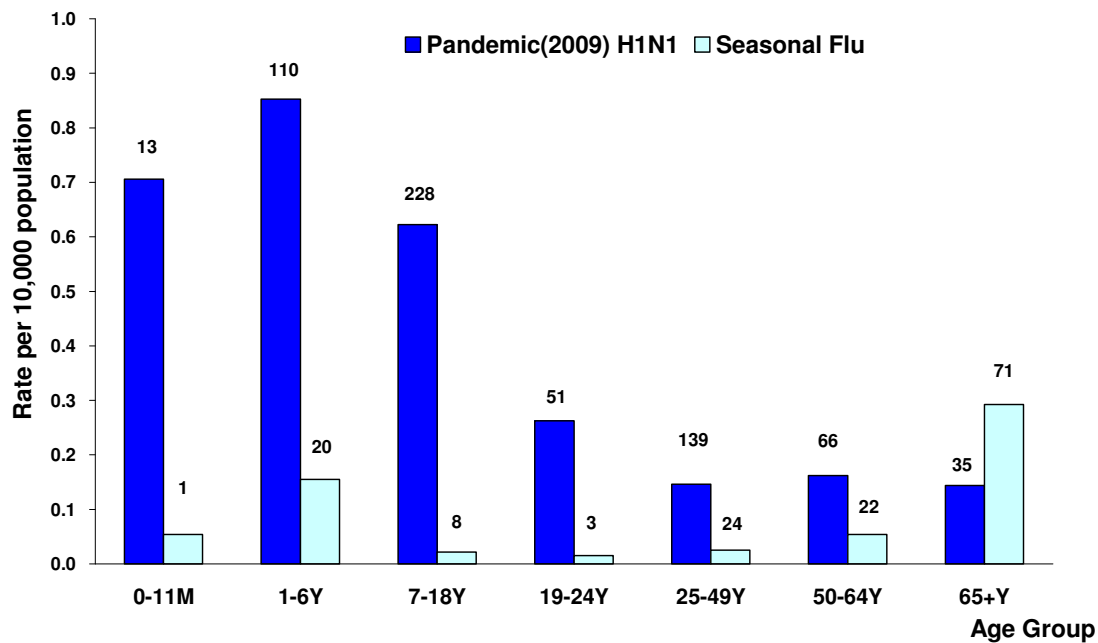
### Number of complicated seasonal influenza reports by week of onset 7/1/2009 to present



\*Defined as seasonal influenza AH1, AH3, or B 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  
7/1/2009 to present**



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



## Outpatient and emergency room influenza-like illness surveillance

Nationwide during week 47, 2.39% of outpatient visits reported through the National Health Insurance Database were due to influenza-like illness (ILI). This rate has increased by 13% compared with the previous week (2.11%).

Nationwide during week 47, 18.38% 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 4% compared with the previous week (17.64%).

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

6/15/2008 to present

