



## Summary

During week 37 (September 6–12, 2009), influenza activity increased in Taiwan.

- Of the 1,202 specimens tested during week 35–37, 388 (32%) were positive for influenza viruses, and 317 (26%) were positive for pandemic (H1N1) 2009 viruses; 94% (95% confidence interval 90%–96%) of all subtyped influenza A viruses were pandemic (H1N1) 2009 viruses.
- Since July 1, 2009, there has been 222 reports of complicated pandemic (H1N1) 2009 virus infections (147 recovery and discharged, 63 hospitalized, and 12 deaths) and 113 reports of complicated seasonal influenza AH3 virus infections (87 recovery and discharged, 26 hospitalized, and 0 death). There were 77 new complicated pandemic (H1N1) 2009 influenza cases and 27 new complicated seasonal influenza AH3 cases during week 37.
- The number of deaths mentioning pneumonia and influenza during week 36 was 195 and below the baseline level (217 deaths).
- The rate of outpatient visits for influenza-like illness is 1.66% and has increased by 9% compared with the previous week (1.52%).
- The rate of emergency room visits for influenza-like illness is 20.82% and has increased by 3% compared with the previous week (20.16%).
- Taiwan CDC estimates that nationwide there were 19,480 (95% confidence interval 17,700–21,400) new cases of pandemic (H1N1) 2009 influenza during week 37.

## Virologic surveillance

During week 35–37, seasonal influenza A (H1, H3) viruses have co-circulated at low levels with pandemic (H1N1) 2009 viruses. Ninety-four percent (95% confidence interval 90%–96%) 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.

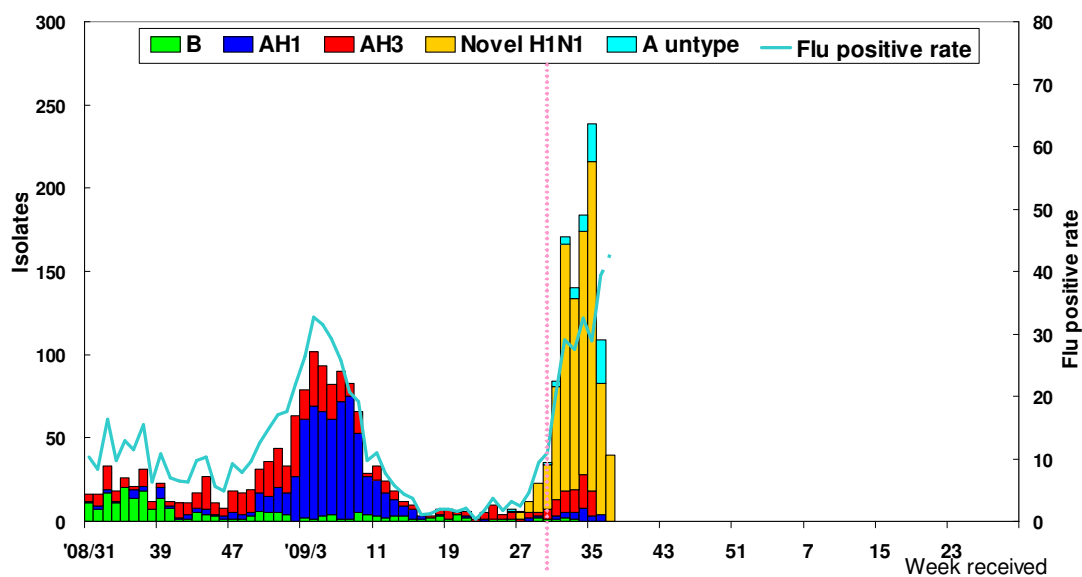
	Data for weeks 35–37	Cumulative data since 6/1/2009
<b>Number of specimens tested</b>	1,202	5,363
<b>Number of positive specimens (%)</b>	388 (32)	1,094 (20)
<b>Positive specimens by type/subtype (%)</b>		
<b>Influenza A</b>	388 (100)	1,084 (99)
<b>A (novel H1N1)</b>	317 (82)	851 (78)
<b>A (H3)</b>	15 (4)	104 (10)
<b>A (H1)</b>	7 (2)	53 (5)
<b>A (unable to subtype)</b>	49 (12)	76 (7)
<b>A (subtyping not performed)</b>	0 (0)	0 (0)
<b>Influenza B</b>	0 (0)	10 (1)

**Antigenic characterization:** Taiwan CDC has antigenically characterized 24 seasonal human influenza viruses [1 influenza A (H1), 19 influenza A (H3), 4 influenza B] 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 (16%) of the influenza A (H3N2) viruses tested were related to the A (H3N2) vaccine component (A/Brisbane/10/2007). Two (50%) 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).

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



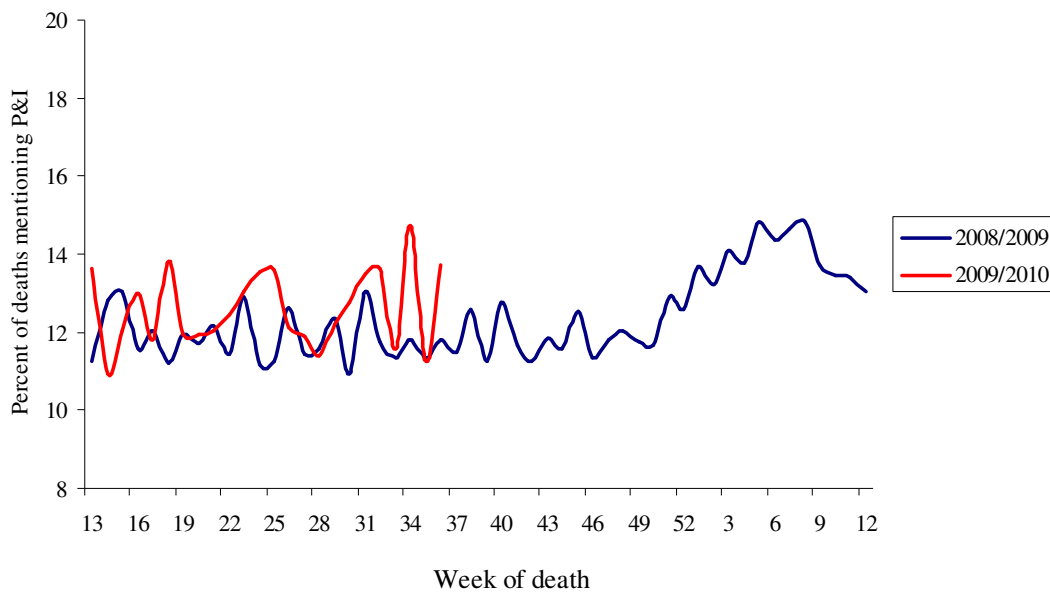
**Antiviral resistance:** Since June 1, 2009, 16 influenza A (H3N2) and 165 pandemic (H1N1) 2009 viruses have been tested for resistance to the neuraminidase inhibitors (oseltamivir and zanamivir) and adamantanes (amantadine and rimantadine). The results of antiviral resistance testing performed on these 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)	165	0 (0)	0 (0)	95	95 (100)
A (H3)	16	0 (0)	0 (0)	16	16 (100)

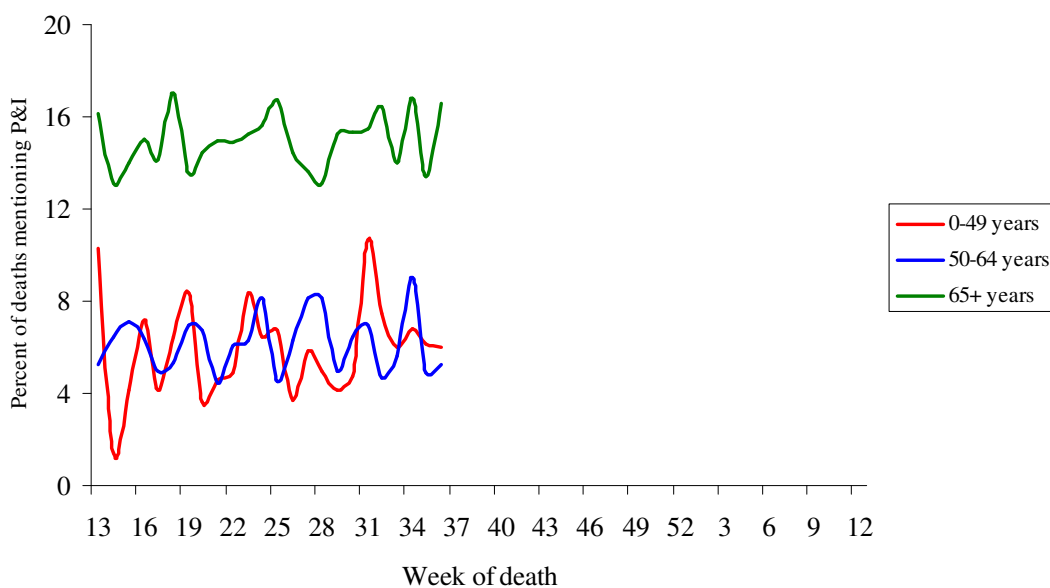
## Pneumonia and influenza (P&I) mortality surveillance

During week 36, 195 (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 36 was below the baseline number (217 deaths).

### National pneumonia and influenza mortality Week ending 9/5/2009



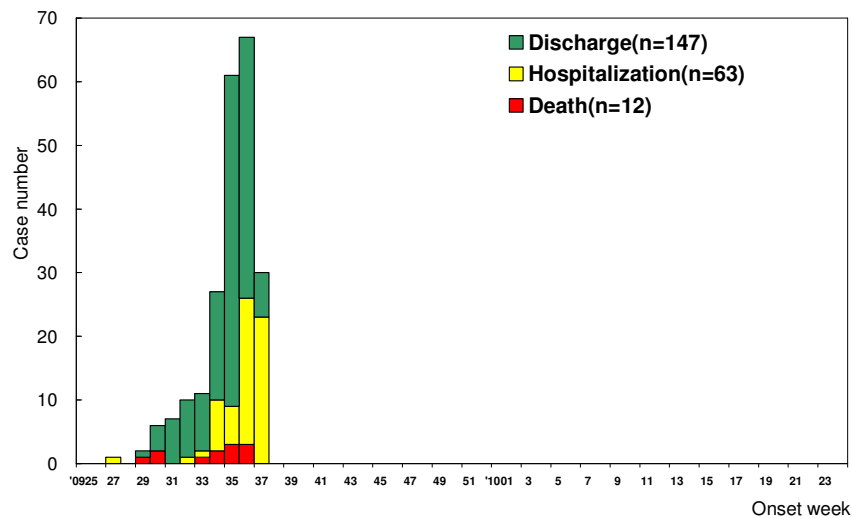
### National pneumonia and influenza mortality by age group\* Week ending 9/5/2009



## Reports of complicated influenza\*

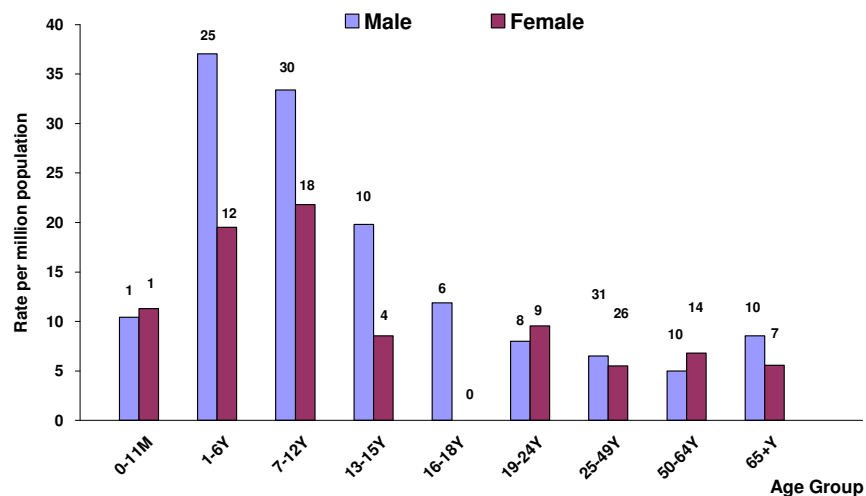
Since July 1, 2009, Taiwan CDC has received 222 reports of complicated pandemic (H1N1) 2009 virus infections (147 recovery and discharged, 63 hospitalized, and 12 deaths) and 113 reports of complicated seasonal influenza AH3 virus infections (87 recovery and discharged, 26 hospitalized, and 0 death). There were 77 new pandemic (H1N1) 2009 influenza cases and 27 new complicated seasonal influenza AH3 cases during week 37.

### 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.

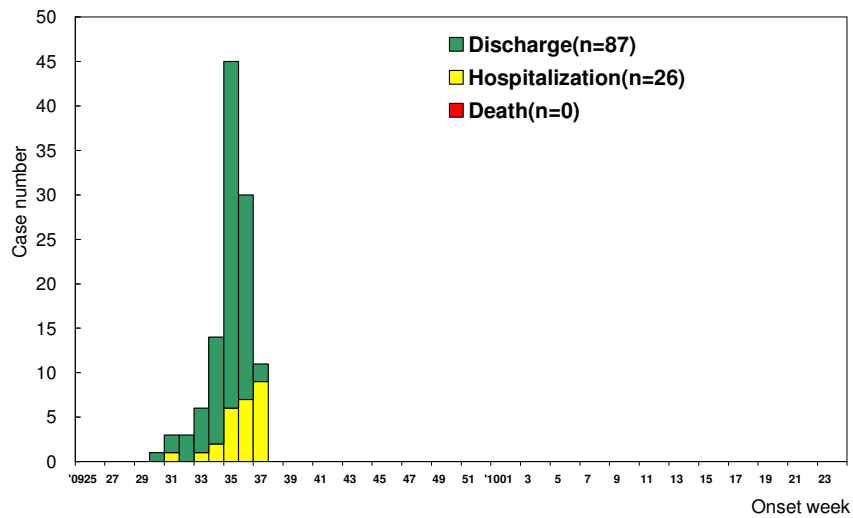
### Rate of complicated pandemic H1N1 influenza reports by sex and age groups 7/1/2009 to present



\*Numbers represent number of complicated pandemic H1N1 influenza reports for that specific age and sex stratum

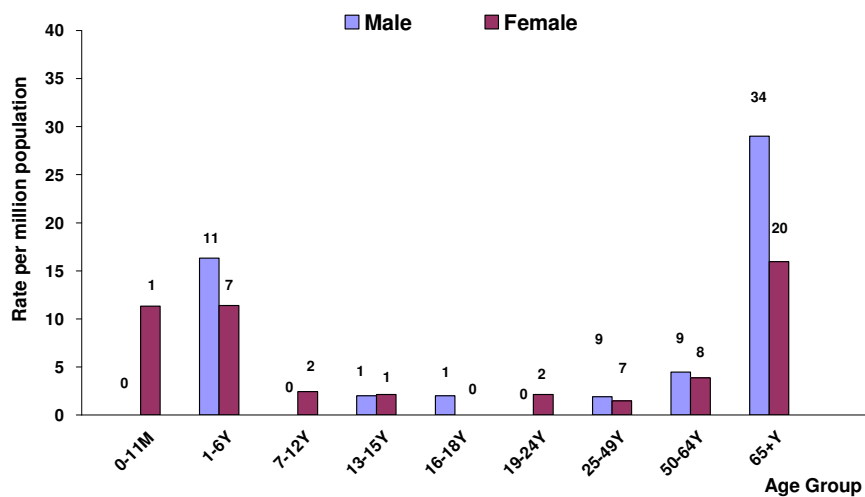


## Number of complicated seasonal influenza AH3 reports by week of onset 7/1/2009 to present



\*Defined as seasonal influenza AH3 infection with pulmonary complication, neurologic complication, myocarditis, pericarditis, invasive bacterial infection, or those requiring intensive care or resulting deaths.

## Rate of complicated seasonal influenza AH3 reports by sex and age groups 7/1/2009 to present



\*Numbers represent number of complicated seasonal influenza AH3 reports for that specific age and sex stratum.



## Outpatient and emergency room influenza-like illness surveillance

Nationwide during week 37, 1.66% of outpatient visits reported through the National Health Insurance Database were due to influenza-like illness (ILI). This rate has increased by 9% compared with the previous week (1.52%).

Nationwide during week 37, 20.82% 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 increased by 3% compared with the previous week (20.16%).

Taiwan CDC estimates that nationwide there were 19,480 (95% confidence interval 17,700–21,400) new cases of pandemic (H1N1) 2009 influenza during week 37. 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 6/15/2008 to present

