Summary

During week 37 (September 12–18, 2010), influenza activity remained unchanged in Taiwan, and seasonal influenza virus type AH3 is predominant in the community.

- Of the 507 specimens tested during week 35–37, 118 (23%) were positive for influenza viruses, 21 (4%) were positive for pandemic (H1N1) 2009 viruses, 89 (18%) were positive for influenza A (H3N2) virus, 7 (1%) were positive for seasonal influenza B viruses and 1 (<1%) was positive for influenza virus untyped A; 19% (95% confidence interval 12%–28%) of all subtyped influenza A viruses were pandemic (H1N1) 2009 viruses.
- Since July 1, 2010, there have been 459 reports of complicated influenza virus infections, including 375 reports of seasonal influenza virus type AH3 infections and 52 reports of complicated pandemic (H1N1) 2009 virus infections. There were 3 new complicated pandemic (H1N1) 2009 influenza cases, 38 new seasonal influenza virus type AH3 cases, and 2 new seasonal influenza virus untyped A cases during week 37. Since July 1, 2009, there have been 991 reports of complicated pandemic (H1N1) 2009 virus infections (50 deaths). Since July 1, 2010, there have been 19 reports of death from complicated influenza infection; 6 from the pandemic H1N1 2009, 12 from the seasonal H3N2 strain and 1 from the seasonal influenza virus untyped A, respectively.
- The number of deaths related to pneumonia and influenza during week 36 was 284, which was above the number for the average of the previous 3 weeks (247 deaths).
- The rate of outpatient visits for influenza-like illness is 1.17%, with no obvious change compared with the previous week (1.18%).
- The rate of emergency room visits for influenza-like illness is 11.48%, a 2% decrease compared with the previous week (11.72%).

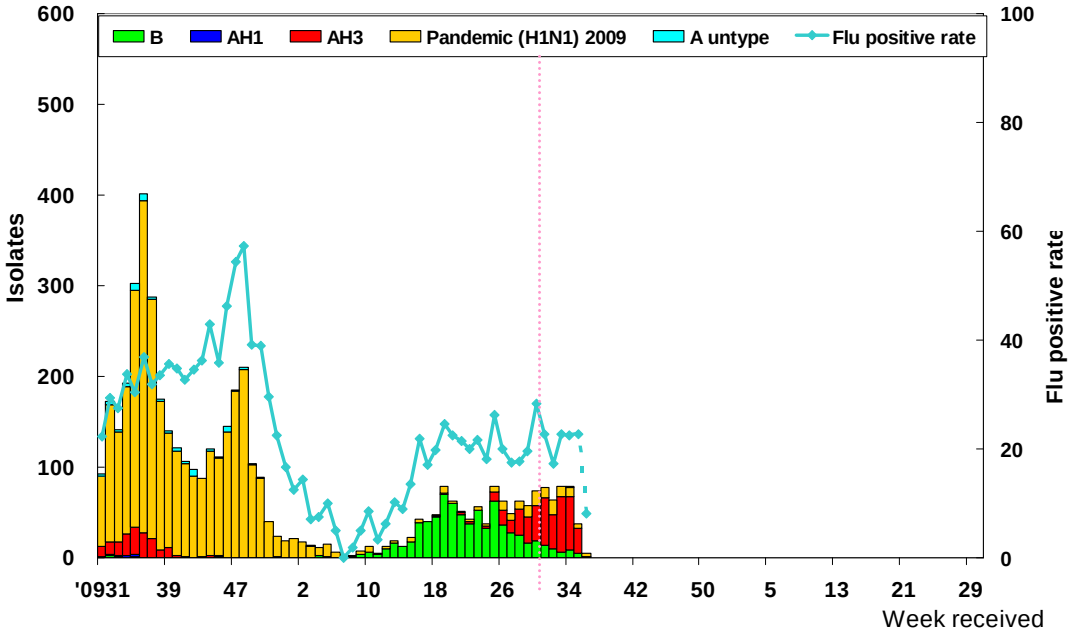
Virologic surveillance

During week 35–37, 19% (95% confidence interval 12%–28%) 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 7/1/2010
Number of specimens tested	507	3,418
Number of positive specimens (%)	118(23)	727(21)
Positive specimens by type/subtype (%)		
Influenza A (% of all positive specimens)	111(94)	558(77)
A (pandemic [H1N1] 2009) (% of all Influenza A)	21(19)	125(22)
A (H3)	89(80)	431(77)
A (H1)	0(0)	0(0)
A (unable to subtype)	1(1)	2(<1)
A (subtyping not performed)	0(0)	0(0)
Influenza B	7(6)	169(23)

Antigenic characterization: Taiwan CDC has antigenically characterized 82 human influenza viruses [42 influenza A (H3), 22 influenza B, 18 pandemic (H1N1) 2009] since July 1, 2010. Forty-one (98%) of the influenza A (H3N2) viruses tested were related to the A (H3N2) vaccine component (A/Perth/16/2009). Twenty （91%） 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）. Seventeen（94%）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, 2009–2011



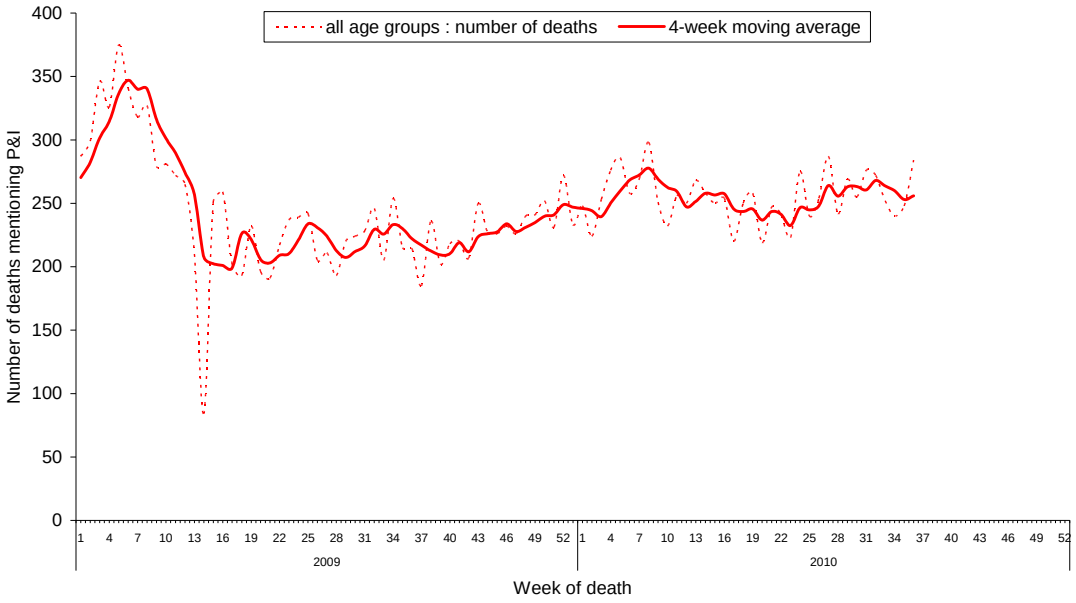
Antiviral resistance: Since July 1, 2010, 36 influenza A (H3N2), 4 influenza B and 34 pandemic (H1N1) 2009 viruses have been tested for resistance to the neuraminidase inhibitors (oseltamivir). The results of antiviral resistance testing performed on these viruses are summarized in the table below.

	Isolates tested (n)	Resistance Viruses, n (%)
		Oseltamivir
A (H3)	36	0 (0)
B	4	0 (0)
A (pandemic [H1N1] 2009)	34	0 (0)

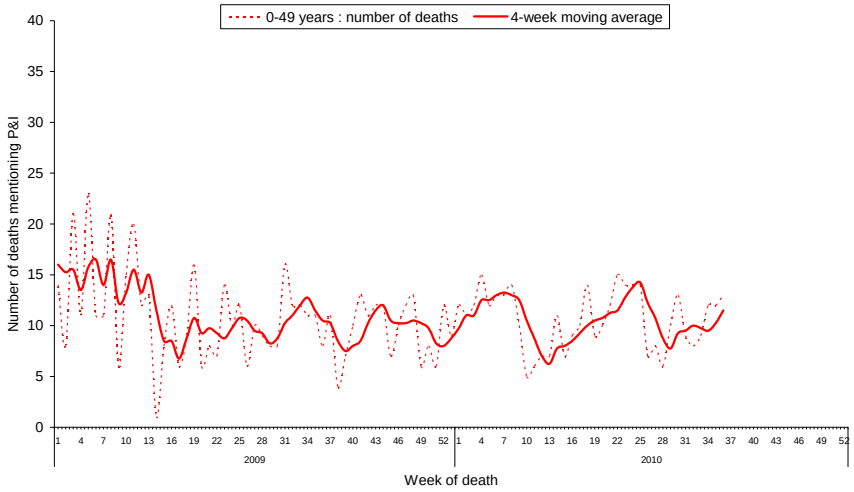
Pneumonia and influenza (P&I) mortality surveillance

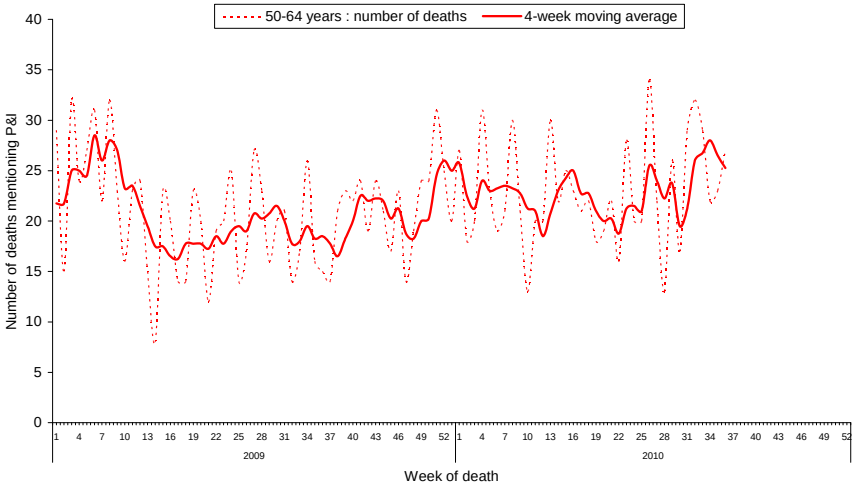
During week 36, 284 deaths reported through the National Death Certificate System mentioned P&I as the cause of death. This number was higher than that for the average of the previous 3 weeks (247 deaths). The number of deaths related to P&I for age groups 0–49, 50–64, and greater than 65 years was the highest for adult greater than 65 years of age.

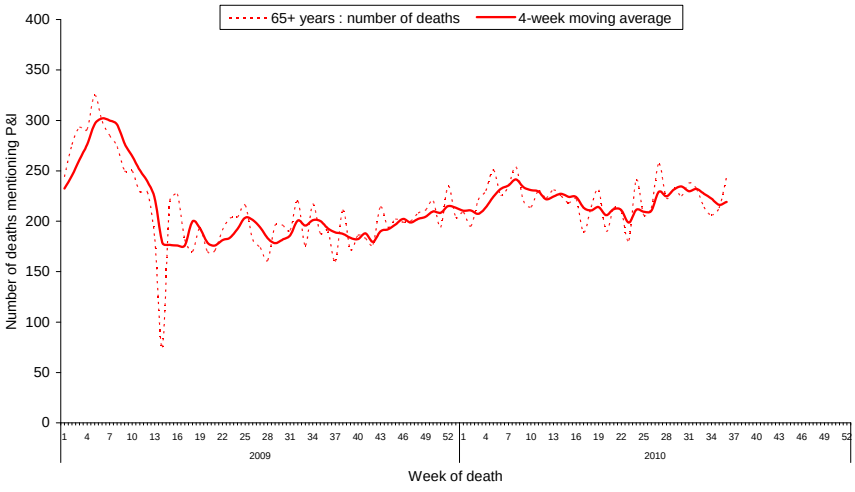
National pneumonia and influenza mortality
Week ending 9/11/2010



National pneumonia and influenza mortality by age group
Week ending 9/11/2010



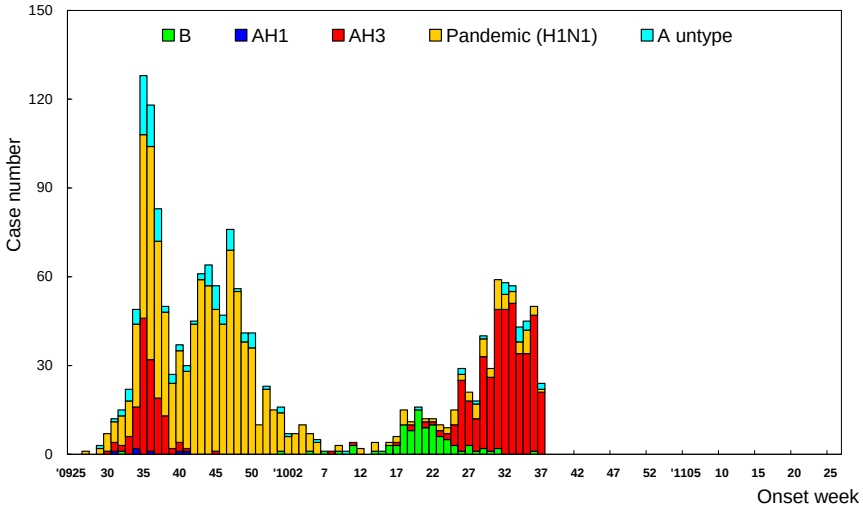




Reports of complicated influenza*

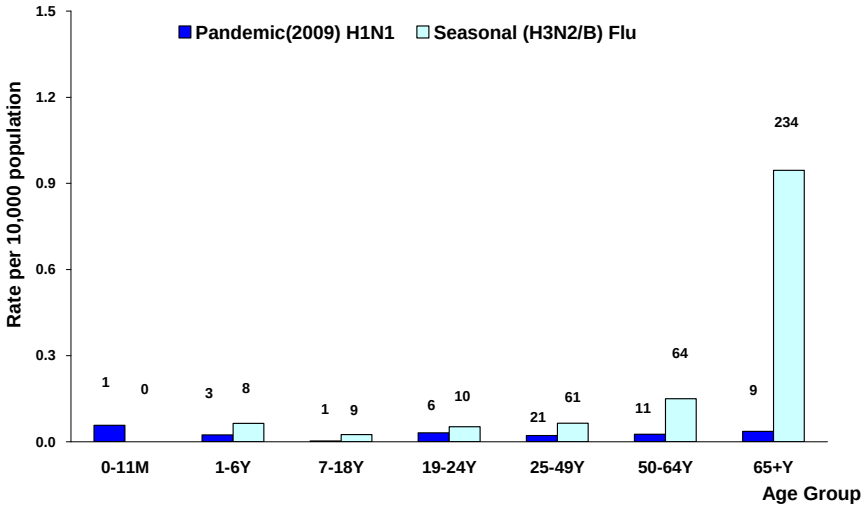
Since July 1, 2010, there have been 459 reports of complicated influenza virus infections, including 375 reports of seasonal influenza virus type AH3 infections and 52 reports of complicated pandemic (H1N1) 2009 virus infections. There were 3 new complicated pandemic (H1N1) 2009 influenza cases, 38 new seasonal influenza virus type AH3 cases, and 2 new seasonal influenza virus untyped A cases during week 37. Since July 1, 2009, there have been 991 reports of complicated pandemic (H1N1) 2009 virus infections (50 deaths). Since July 1, 2010, there have been 19 reports of death from complicated influenza infection; 6 from the pandemic H1N1 2009, 12 from the seasonal H3N2 strain and 1 from the seasonal influenza virus untyped A, respectively..

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.

Outpatient and emergency room influenza-like illness surveillance

Nationwide during week 37, 1.17% of outpatient visits reported through the National Health Insurance Database were due to influenza-like illness (ILI). This rate has no obvious change compared with the previous week (1.18%).

Nationwide during week 37, 11.48% of emergency room patient visits reported through the Real-time Outbreak and Disease Surveillance System (RODS) were due to ILI. This rate has decreased by 2% compared with the previous week (11.72%).

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

6/14/2009 to present