

Chinese Influenza Weekly Report

(All data are preliminary and may change as more reports are received)

Summary

- During week 33, influenza activity peaked in most provinces in southern China, A(H3N2) was the dominant strain, but the level of influenza activity in northern China was very low.
- Among influenza viruses antigenically characterized by CNIC since September, 2016, 1508(99.6%) influenza A(H1N1)pdm09 viruses were characterized as A/California/7/2009-like; 1393(92.8%) influenza A(H1N1)pdm09 viruses were characterized as A/Michigan/45/2015-like; 365(41.0%) influenza A(H3N2) viruses were characterized as A/Hong Kong/4801/2014 (H3N2)(EGG)-like; 868(97.5%) influenza A(H3N2) viruses were characterized as A/Hong Kong/4801/2014 (H3N2)(CELL)-like; 723(91.3%) influenza B/Victoria viruses were characterized as B/Brisbane/60/2008-like; 238(91.9%) influenza B/Yamagata viruses were characterized as B/Phuket/3073/2013-like.
- Among the influenza viruses tested by CNIC for antiviral resistance analysis since September, 2016, all influenza A(H1N1)pdm09 and all influenza A(H3N2) viruses were resistant to adamantane; All influenza H3N2 and B viruses were sensitive to neuraminidase inhibitors. All but 4 influenza A(H1N1)pdm09 viruses were sensitive to neuraminidase inhibitors.

Outbreak Surveillance

During week 33(Aug 14- Aug 20 2017), there were ten outbreaks reported nationwide, eight of them were A(H3N2), two of them were untyped.

Surveillance of outpatient or emergency visits for Influenza-like Illness (ILI)

During week 33, the percentage of outpatient or emergency visits for ILI (ILI %) at national sentinel hospitals in southern China was 3.6%, same as the last week (3.6%), higher than the same week of 2014-2016(2.9%, 3.1%, 2.8%).(Figure 1)

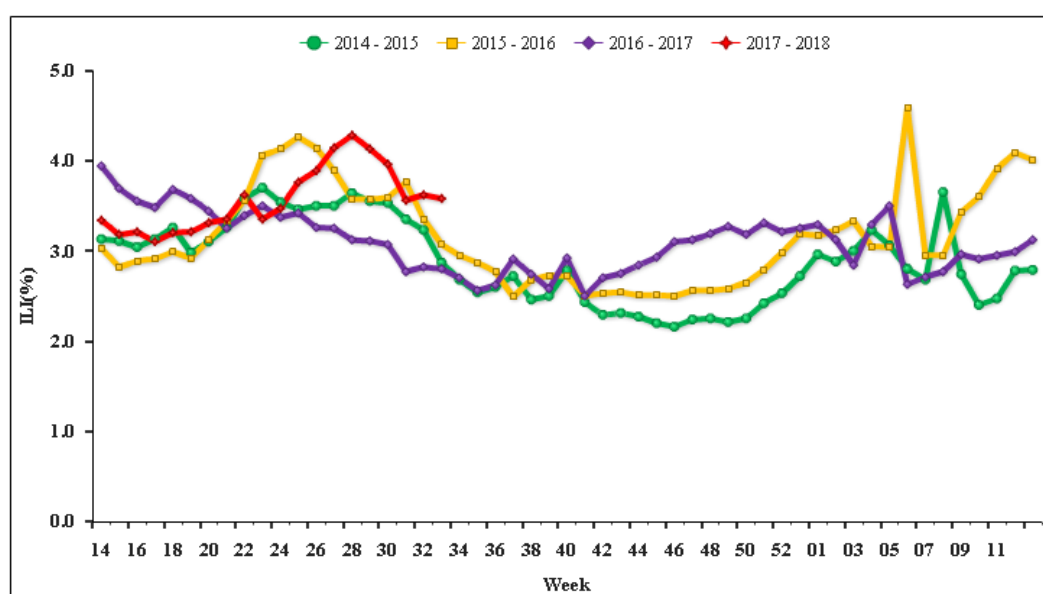


Figure 1. Percentage of Visits for ILI at Sentinel Hospitals in South China (2014-2018)

During week 33, ILI% at national sentinel hospitals in northern China was 2.5%, same as the same week of 2015 (2.5%), lower than the last week (2.6%), higher than the same week of 2014 and 2016 (2.3%, 2.2%). (Figure 2)

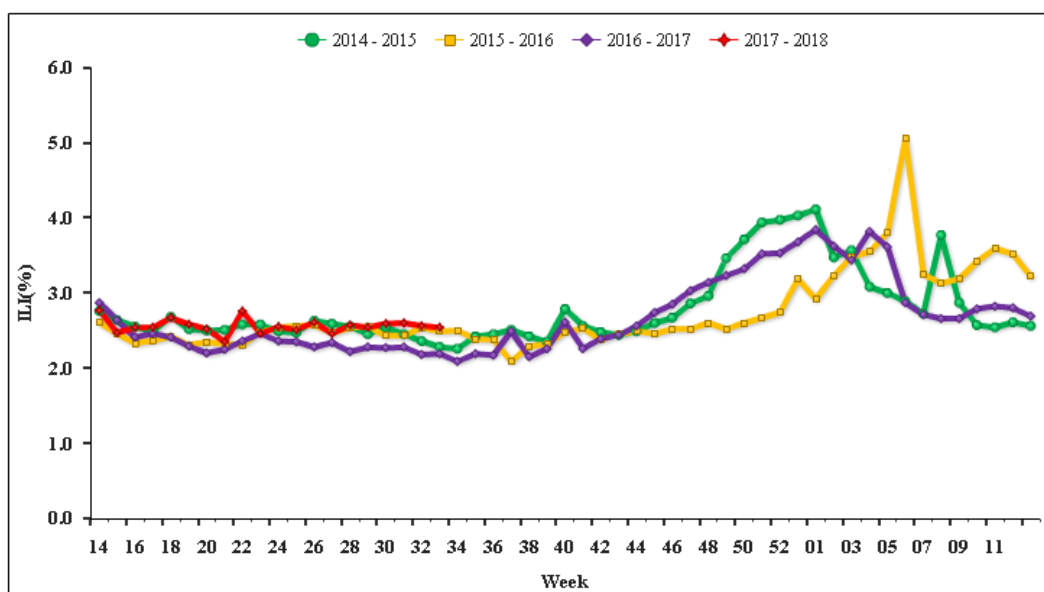


Figure 2. Percentage of Visits for ILI at Sentinel Hospitals in North China (2014-2018)

Virologic Surveillance

During week 33, influenza network laboratories tested 4042 specimens, of which 837(20.7%) were positive for influenza, influenza A and influenza B viruses were 814(97.3%) and 23 (2.7%), respectively (Table 1). During week 33, the percentage of specimens that were tested positive for influenza in south China was 25.5%, which was higher than the previous week (24.9%) (Figure 3). During week 33, the percentage of specimens that were tested positive for influenza in north China was 3.9%, which was similar to the previous week (3.9%). (Figure 4).

Table 1 Laboratory Detections of ILI Specimens (Week 33, 2017)

	Week 33		
	South China	North China	Total
No. of specimens tested	3143	899	4042
No. of positive specimens (%)	802(25.5%)	35(3.9%)	837(20.7%)
Influenza A	779(97.1%)	35(100%)	814(97.3%)
A(H3N2)	757(97.2%)	34(97.1%)	791(97.2%)
A(H1N1)pdm09	10(1.3%)	1(2.9%)	11(1.4%)

A (subtype not determined)	12(1.5%)	0(0)	12(1.5%)
Influenza B	23(2.9%)	0(0)	23(2.7%)
B (lineage not determined)	0(0)	0(0)	0(0)
Victoria	9(39.1%)	0(0)	9(39.1%)
Yamagata	14(60.9%)	0(0)	14(60.9%)

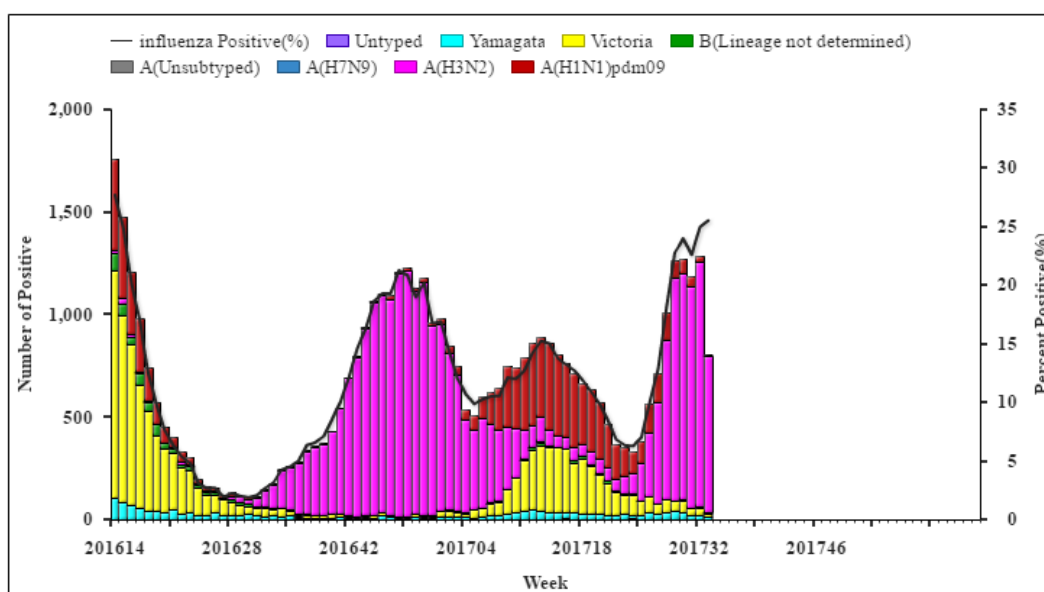


Figure 3. Influenza Positive Tests Reported by Southern Network Laboratories (Week 14, 2016–Week 33, 2017)

Note: Analysis in this part was based on the test results of network laboratories. If it were not consistent with the results of CNIC confirmation, the results of CNIC confirmation were used.

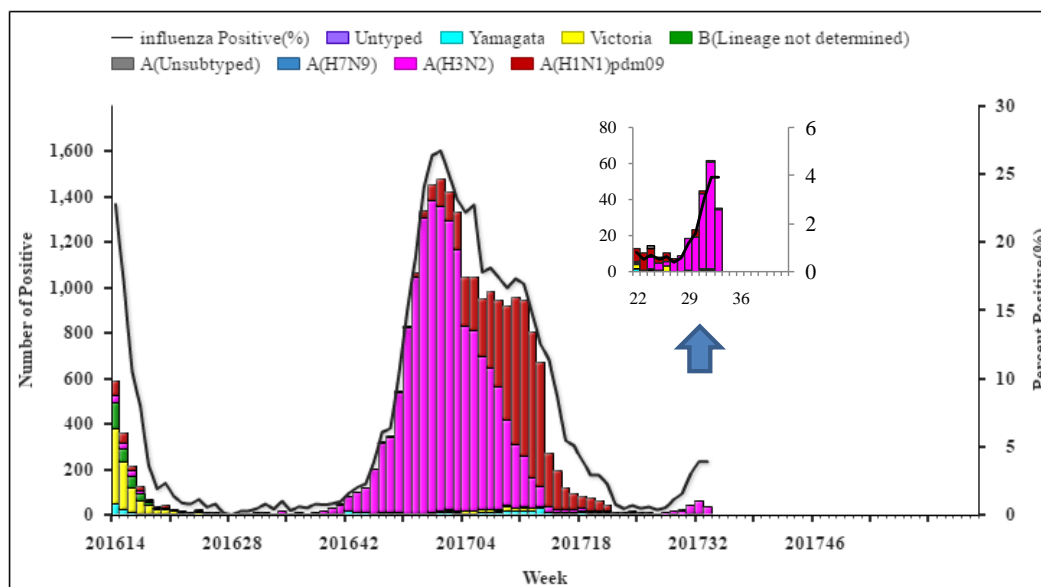


Figure 4. Influenza Positive Tests Reported by Northern Network Laboratories (Week 14, 2016–Week 33, 2017)

Note: Analysis in this part was based on the result of network laboratories. If it were not consistent with the results of CNIC confirmation, the results of CNIC confirmation were used.

Antigenic Characterization

Since September 1st, 2016, 1508(99.6%) of the 1514A(H1N1)pdm09 viruses tested were characterized as A/California/7/2009-like; 193(92.8%) of the 1501 A(H1N1)pdm09 viruses tested were characterized as A/Michigan/45/2015-like; 365(41.0%) of the 890A(H3N2) influenza viruses tested were characterized as A/Hong Kong/4801/2014 (H3N2)(EGG)-like, 868(97.5%) of the 890A(H3N2) influenza viruses tested were characterized as A/Hong Kong/4801/2014 (H3N2)(CELL)-like; 723(91.3%) of the 792 influenza B/Victoria lineage viruses tested were characterized as B/Brisbane/60/2008-like; 238(91.9%) of the 259 influenza B/Yamagata lineage viruses tested were characterized as B/Phuket/3073/2013-like.

Antiviral Resistance

Since September 1st, 2016, among the influenza viruses tested by CNIC for antiviral resistance, all influenza A(H1N1)pdm09 and all influenza A(H3N2) viruses were resistant to adamantine ; All influenza A(H3N2) and B viruses were sensitive to

neuraminidase inhibitors. All but 4 influenza A(H1N1)pdm09 viruses were sensitive to neuraminidase inhibitors.

H7N9 case report

Since the notification of human infection with novel reassortant influenza A(H7N9) virus on 31 March 2013, in total 1559 laboratory-confirmed cases have been reported to WHO.

Among 756 cases reported in fifth wave (Since Oct 2016), 27 cases were infected with HPAI A(H7N9) virus, which have mutations in the hemagglutinin gene indicating a change to high pathogenicity in poultry. These 27 cases are from Taiwan (the case had travel history to Guangdong), Guangxi, Guangdong, Hunan, Shaanxi and Hebei provinces, with illness onset date before July 2017. No increased transmissibility or virulence to human case was detected in the HPAI A(H7N9) virus.