Chinese Influenza Weekly Report

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

Summary

- During week 19, influenza activity in mainland China was still declining, influenza B virus were detected predominantly. The level of influenza activity in north China was low with very few positive samples detected.
- Among influenza viruses antigenically characterized by CNIC since October, 2015, 575(96.8%) influenza A(H1N1)pdm09 viruses were characterized as A/California/7/2009-like; 47(29.2%) influenza A(H3N2) viruses were characterized as A/Switzerland/9715293/2013 (H3N2)(EGG)-like,125(77.6%) influenza A(H3N2) viruses were characterized as A/Switzerland/9715293/2013 (H3N2)(CELL)-like; 448(99.1%) influenza B/Yamagata viruses were characterized as B/Phuket/3073/2013-like. 258(69.5%) influenza B/Victoria viruses were characterized as B/Brisbane/60/2008-like.
- Among the influenza viruses tested by CNIC for antiviral resistance analysis since March, 2015, all influenza A(H1N1)pdm09 and all influenza A(H3N2) viruses were resistant to adamantine; all influenza H3N2 and B viruses were sensitive to neuraminidase inhibitors. All but 2 influenza A(H1N1)pdm09 viruses were sensitive to neuraminidase inhibitors.

Outbreak Surveillance

During week 19 (May 9-15, 2016), there was 4 outbreaks reported nationwide, 3 of them were B, 1 of them was A(H1N1)pdm09.

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

During week 19, the percentage of outpatient or emergency visits for ILI (ILI %) at national sentinel hospitals in south China was 3.6% , lower than last week 3.7% ,higher than the same week of 2014 and 2015(3.0% and 2.9%). (Figure 1)

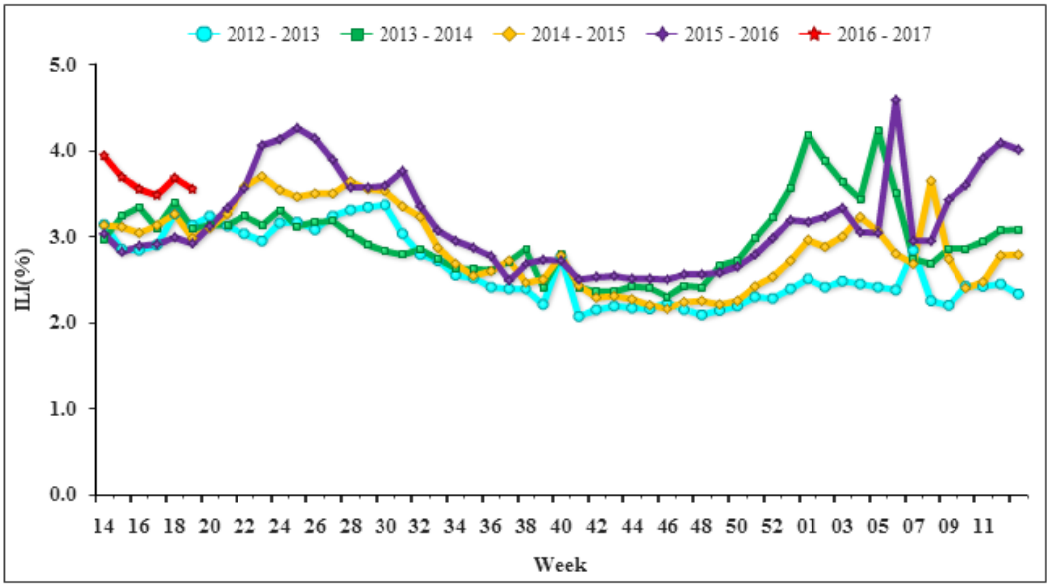

Figure 1. Percentage of Visits for ILI at Sentinel Hospitals in South China (2012-2016)

During week 19, ILI% at national sentinel hospitals in north China was 2.4%, lower than last week and the same week of 2014(2.6%and 2.5%),higher than the same week of 2015(2.3%). (Figure 2)

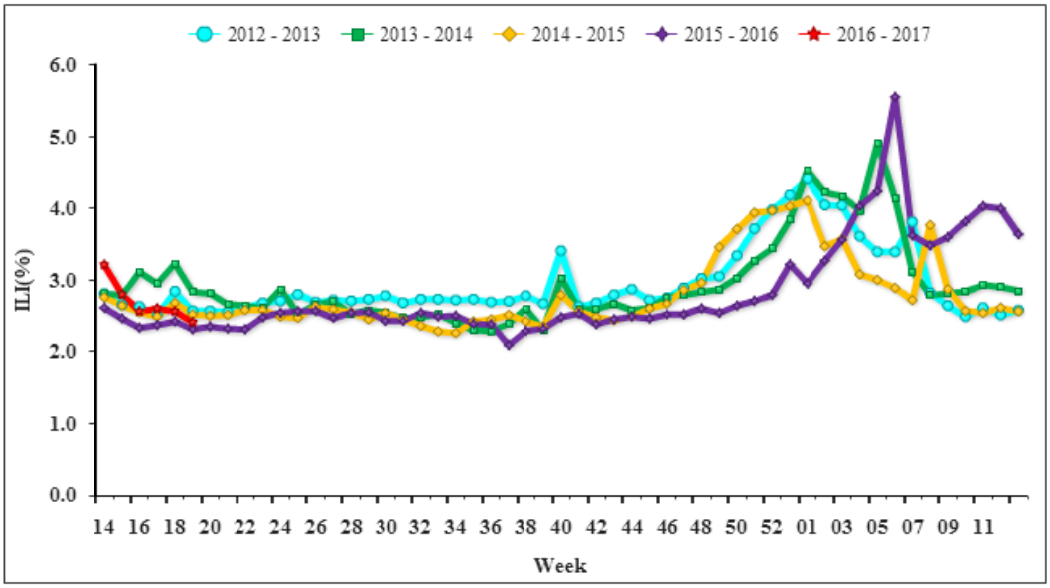

Figure 2. Percentage of Visits for ILI at Sentinel Hospitals in North China (2012-2016)

Virologic Surveillance

During week 19, influenza network laboratories tested 3710 specimens, of which 323(8.7%) were positive for influenza, influenza A and influenza B virus were 56(17.3%) and 267 (82.7%), respectively (Table 1). During week 19, the percentage of specimens that were tested positive for influenza in south China was 10.5%, which was lower than the previous week (13.6%) (Figure 3).During week 19, the percentage of specimens that were tested positive for influenza in north China was 1.5%, which was lower than the previous week (3.7%)(Figure 4).

Table 1Laboratory Detections of ILI Specimens (Week 19, 2016)

	Week 19		
	South China	**North China**	**Total**
No. of specimens tested	**2964**	**746**	**3710**
No. of positive specimens (%)	**312(10.5%)**	**11(1.5%)**	**323(8.7%)**
Influenza A	**53(17.0%)**	**3(27.3%)**	**56(17.3%)**
A(H3N2)	1(1.9%)	3(100%)	4(7.1%)
A(H1N1)pdm09	49(92.5%)	0(0)	49(87.5%)
A (subtype not determined)	3(5.7%)	0(0)	3(5.4%)
Influenza B	**259(83.0%)**	**8(72.7%)**	**267(82.7%)**
B (lineage not determined)	70(27.0%)	3(37.5%)	73(27.3%)
Victoria	176(68.0%)	4(50.0%)	180(67.4%)
Yamagata	13(5.0%)	1(12.5%)	14(5.2%)

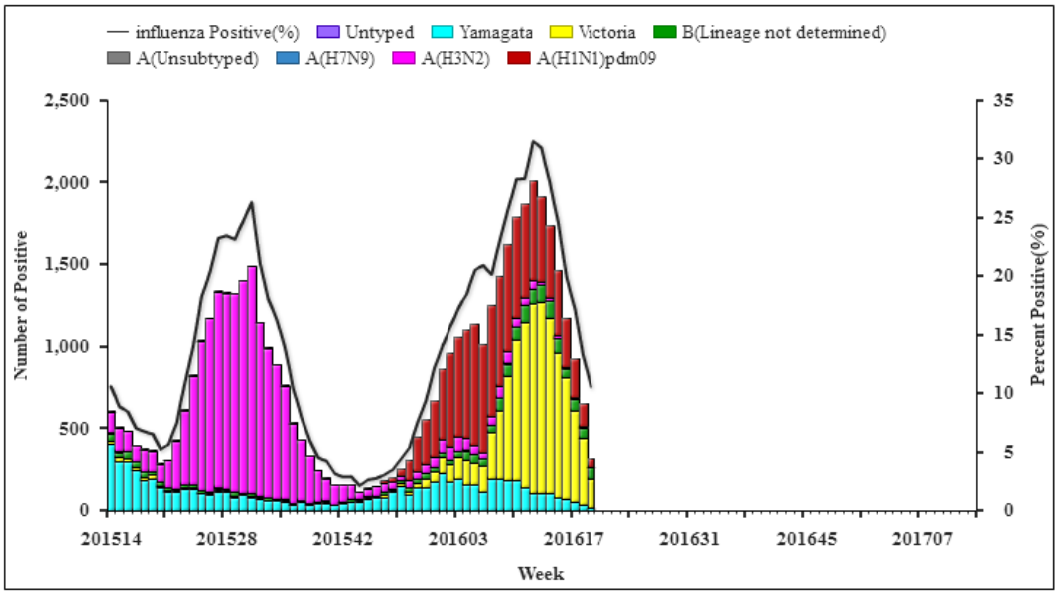

Figure 3. Influenza Positive Tests Reported by Southern Network Laboratories (Week 14, 2015–Week 19, 2016)

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.

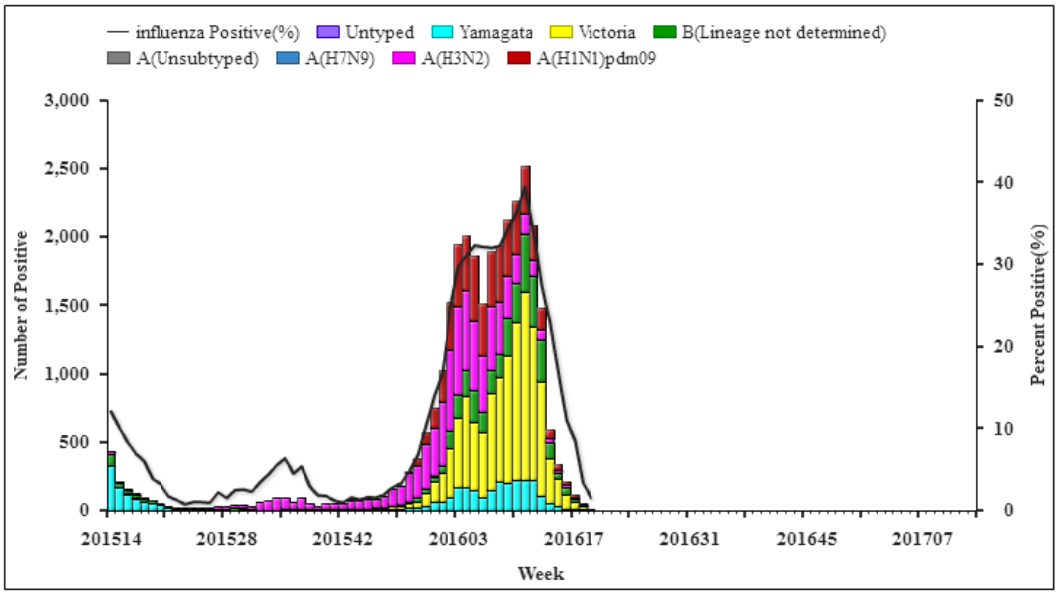

Figure 4. Influenza Positive Tests Reported by Northern Network Laboratories (Week 14, 2015–Week 19, 2016)

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 October 1st, 2015, 575(96.8%) of the 594 A(H1N1)pdm09 viruses tested were characterized as A/California/7/2009-like; 47(29.2%) of the 161 A(H3N2) influenza viruses tested were characterized as A/Switzerland/9715293/2013 (H3N2)(EGG)-like, 125(77.6%) of the 161 A(H3N2) influenza viruses tested were characterized as A/Switzerland/9715293/2013 (H3N2)(CELL)-like; 448(99.1%) of the 452 influenza B/Yamagata lineage viruses tested were characterized as B/Phuket/3073/2013-like; 258(69.5%) of the 371 influenza B/Victoria lineage viruses tested have been characterized as B/Brisbane/60/2008-like.

Antiviral Resistance

Since October 1st, 2015, 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 2 influenza A(H1N1)pdm09 viruses were sensitive to neuraminidase inhibitors.