

## Chinese Influenza Weekly Report

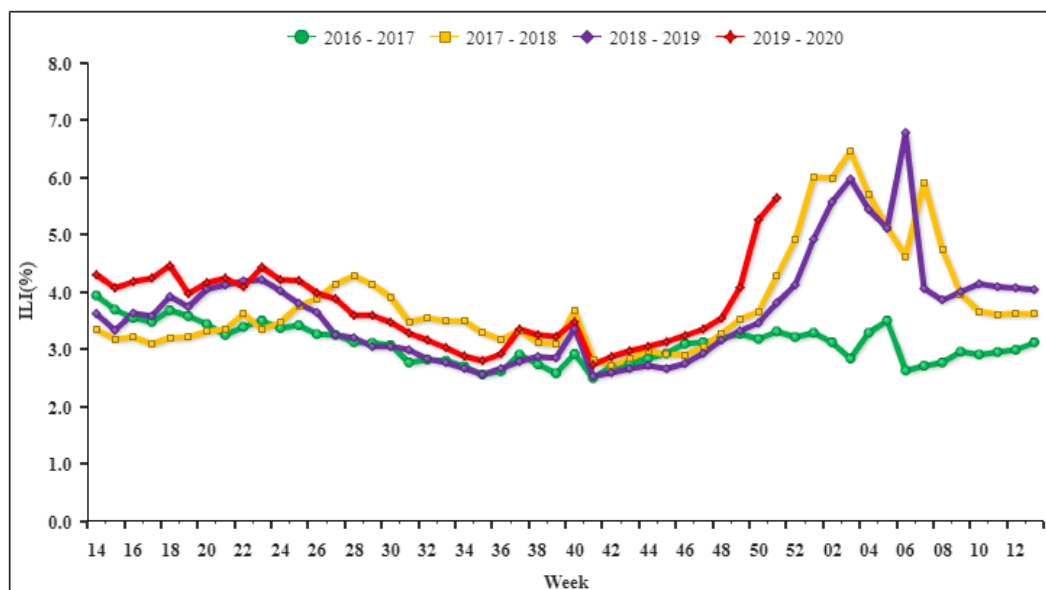
(All data are preliminary and may change as more reports are received)

### Summary

- During week 51, influenza activity continued to increase, most provinces had entered the epidemic season, with influenza A(H3N2) viruses predominant in mainland China, and B-Victoria viruses in several provinces of southern China.
- Among influenza viruses antigenically characterized by CNIC since April 1<sup>st</sup>, 2019, 1611(97.9%) influenza A(H1N1)pdm09 viruses were characterized as A/Brisbane/02/2018-like; 192(21.9%) influenza A(H3N2) viruses were characterized as A/Kansas/14/2017 (EGG)-like, 294(34.9%) influenza A(H3N2) viruses were characterized as A/Kansas/14/2017 (CELL)-like; 646(39.0%) influenza B/Victoria viruses were characterized as B/Colorado/06/2017-like; 16(94.1%) influenza B/Yamagata viruses were characterized as B/Phuket/3073/2013-like.
- Among the influenza viruses tested by CNIC for antiviral resistance analysis since April 1<sup>st</sup>, 2019, all influenza A(H1N1)pdm09 and A(H3N2) viruses were resistant to adamantane; All influenza A(H3N2) and B viruses were sensitive to neuraminidase inhibitors. All but 1 influenza A(H1N1)pdm09 were sensitive to neuraminidase inhibitors.

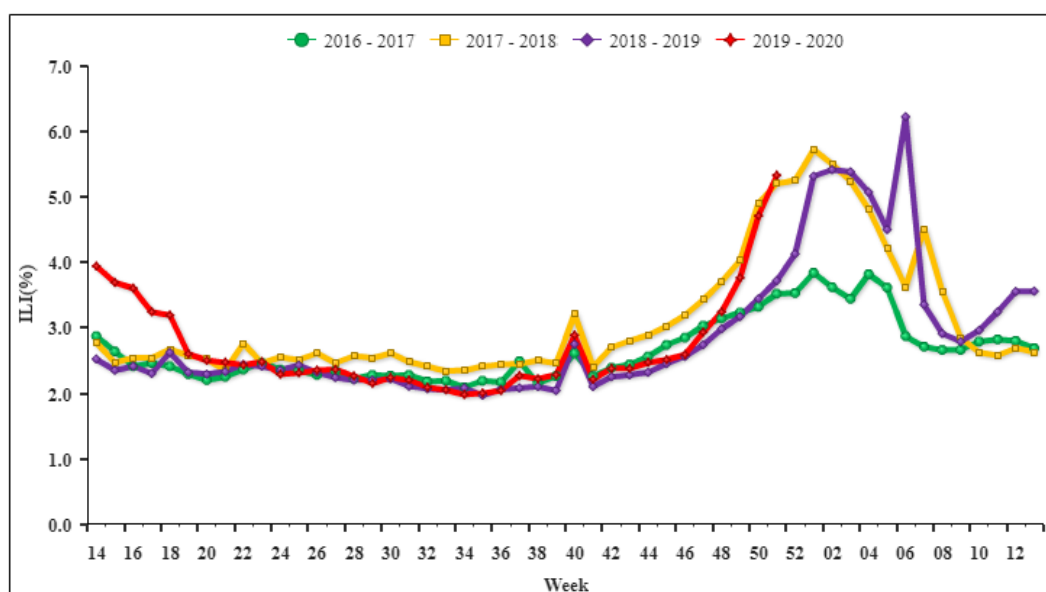
## Surveillance of outpatient or emergency visits for Influenza-like Illness (ILI)

During week 51 (Dec 16<sup>th</sup> 2019 –Dec 22<sup>nd</sup> 2019), the percentage of outpatient or emergency visits for ILI (ILI%) at national sentinel hospitals in southern provinces was 5.6%, higher than the last week (5.3%), higher than the same week of 2016-2018 (3.3%, 4.3% and 3.8%). (Figure 1)



**Figure 1. Percentage of Visits for ILI at Sentinel Hospitals in South China (2016-2020)**

During week 51, ILI% at national sentinel hospitals in northern provinces was 5.3%, higher than the last week (4.7%), higher than the same week of 2016-2018 (3.5%, 5.2% and 3.7%). (Figure 2)



**Figure 2. Percentage of Visits for ILI at Sentinel Hospitals in North China (2016-2020)**

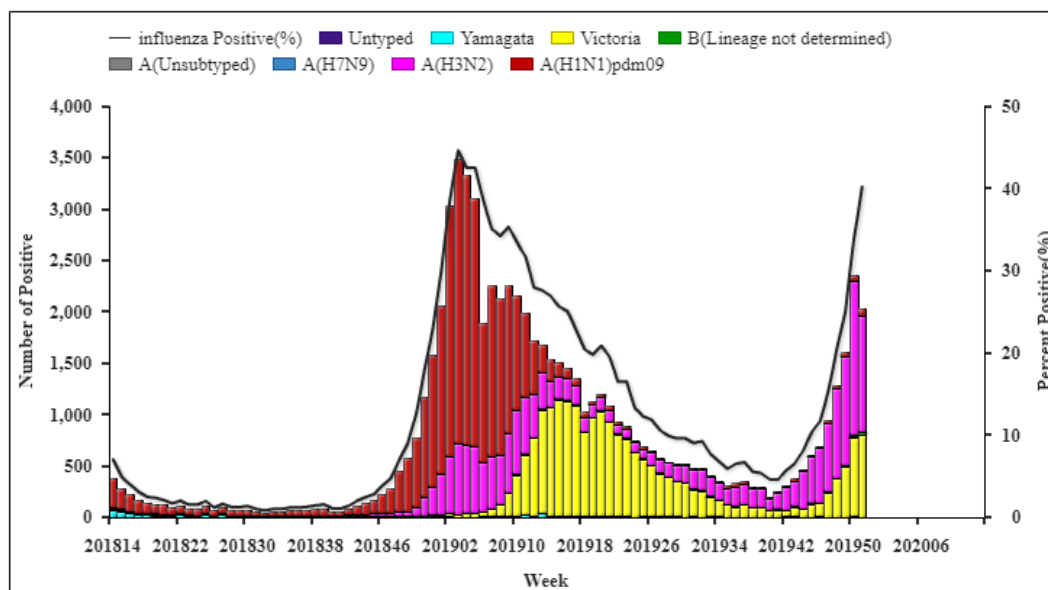
### Virologic Surveillance

During week 51, influenza network laboratories tested 10300 specimens, of which 4055 (39.4%) were positive for influenza, influenza A and influenza B viruses were 3131 (77.2%) and 924 (22.8%), respectively (Table 1). During week 51, the percentage of specimens that were tested positive for influenza in south China was 40.2%, which was higher than the previous week (33.7%) (Figure 3). During week 51, the percentage of specimens that were tested positive for influenza in north China was 38.5%, which was higher than the previous week (29.3%). (Figure 4).

**Table 1 Laboratory Detections of ILI Specimens (Week 51, 2019)**

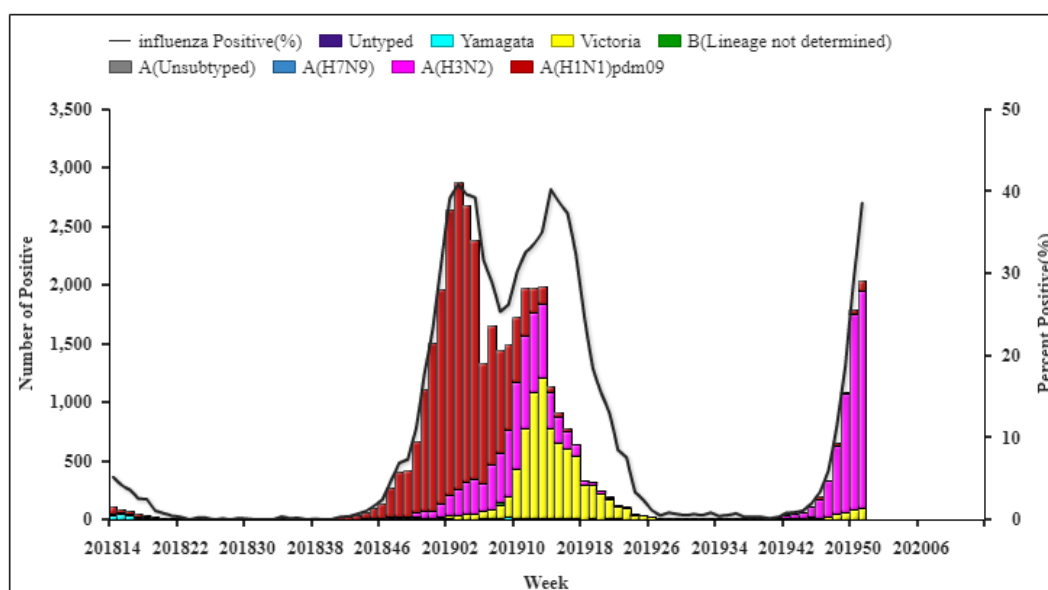
	Week 51		
	South China	North China	Total
No. of specimens tested	5034	5266	10300
No. of positive specimens (%)	2025(40.2%)	2030(38.5%)	4055(39.4%)
Influenza A	1201(59.3%)	1930(95.1%)	3131(77.2%)
A(H3N2)	1137	1850	2987
A(H1N1)pdm09	63	80	143

A (subtype not determined)	1	0	1
<b>Influenza B</b>	<b>824(40.7%)</b>	<b>100(4.9%)</b>	<b>924(22.8%)</b>
B (lineage not determined)	20	0	20
Victoria	804	99	903
Yamagata	0	1	1



**Figure 3. Influenza Positive Tests Reported by Southern Network Laboratories (Week 14, 2018–Week 51, 2019)**

**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, 2018–Week 51, 2019)**

**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 April 1<sup>st</sup>, 2019, 1611(97.9%) influenza A(H1N1)pdm09 viruses were characterized as A/Brisbane/02/2018-like; 192(21.9%) influenza A(H3N2) viruses were characterized as A/Kansas/14/2017 (EGG)-like, 294(34.9%) influenza A(H3N2) viruses were characterized as A/Kansas/14/2017 (CELL)-like; 646(39.0%) influenza B/Victoria viruses were characterized as B/Colorado/06/2017-like; 16(94.1%) influenza B/Yamagata viruses were characterized as B/Phuket/3073/2013-like.

##### **Antiviral Resistance**

Since April 1<sup>st</sup>, 2019, among the influenza viruses tested by CNIC for antiviral resistance, all influenza A(H1N1)pdm09 and A(H3N2) viruses were resistant to adamantane; All influenza A(H3N2) and B viruses were sensitive to neuraminidase inhibitors. All but 1 influenza A(H1N1)pdm09 were sensitive to neuraminidase inhibitors.

##### **Outbreak Surveillance**

During week 51 (Dec 16<sup>th</sup> 2019- Dec 22<sup>nd</sup> 2019), There were six hundred and forty-five outbreaks reported nationwide, three hundred and fifty-seven of them were A(H3N2), four of them were H1N1pdm, seven of them were A(lineage not determined), ninety-four of them were B(Victoria), thirteen of them were B(lineage not determined), seventy of them were mixed, twelve of them were flu negative, eighty-eight of them had not been obtained the testing results.

##### **H7N9 Case Report**

During week 51, no new human infection with novel reassortant influenza A(H7N9) virus was reported.