COVID-19 Clinical and Surveillance Data — December 9, 2022 to January 30, 2023, China

Chinese Center for Disease Control and Prevention

1. COVID-19 Infection Surveillance Data

1.1 COVID-19 Nucleic Acid Test Data

Since December 8, 2022, the screening strategy for SARS-CoV-2 infection in Chinese mainland has been changed from population-wide to those who request testing and those at risk. The results of nucleic acid testing are still available from the information platform developed previously. However, the number of nucleic acid tests has steadily declined due to decreased personal willingness to be tested. The number of tests decreased from a peak of 150 million on December 9, 2022, to 7.54 million on January 1, 2023, to 280,000 on January 23, 2023, and then increased again to 974,000 on January 30, 2023.

Since December 9, 2022, the number of positive nucleic acid tests and the positive rate reported from provincial-level administrative divisions (PLADs) had gradually increased, peaking on December 22, 2022 with 6.94 million positive tests and 29.2% positive testing rate on December 25, 2022. After this peak, the number and rate of positive nucleic acid tests decreased steadily, reaching a low of 15,000 on January 23, 2023, before rebounding to 24,000 on January 30, 2023, with a rate of 2.5% (Figure 1-1).
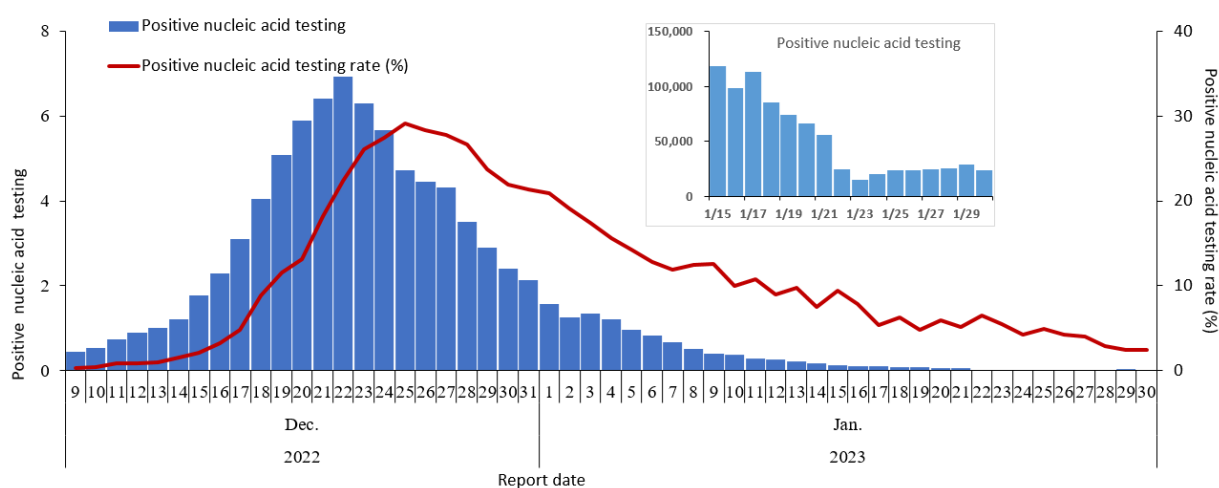

Figure 1-1 Daily number of positive nucleic acid testing and rate. (All data were reported by PLADs in Chinese mainland)

1.2 COVID-19 Antigen Test Data

Since early December 2020, an app for COVID-19 antigen testing registration has been developed in some PLADs, and those who conduct antigen testing by themselves can voluntarily upload their results. The number of tests reported by PLADs was generally low and gradually decreased. For example, the number of tests reported reached a high of 1.89 million on December 19, 2020 and dropped to 105,000 on January 23, 2021, and later it rebounded to 132,000 on January 30, 2021. The number of positive antigen tests and the positive rate increased rapidly after December 9 to the peak on December 22, 2020 (337,000, 21.3%) and then fluctuated to 2,848 and 2.2%, respectively, by January 30, 2021 (Figure 1-2).
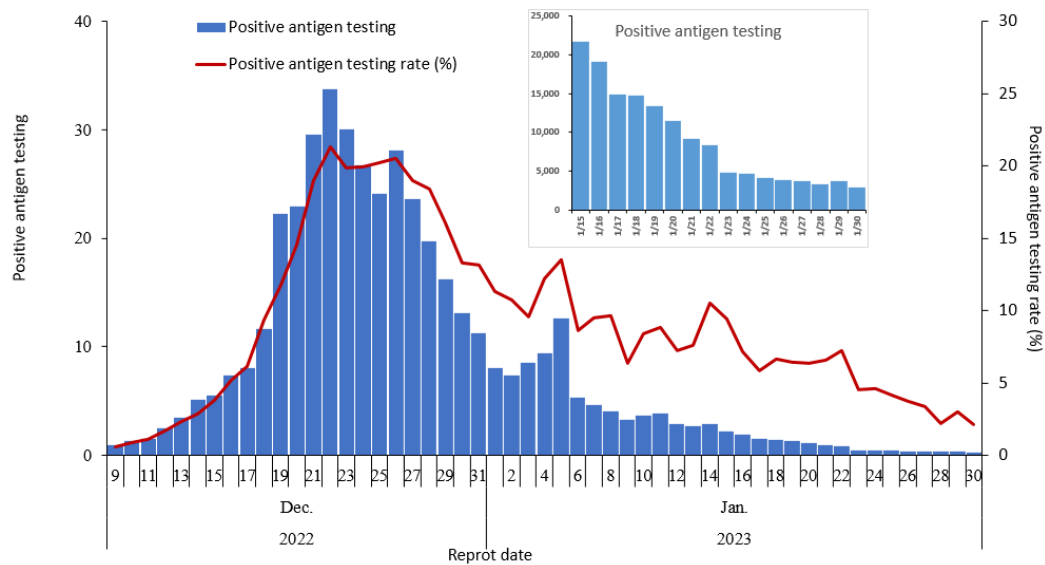

Figure 1-2 COVID-19 antigen test and positive rate. (All data were reported by PLADs in Chinese mainland)

2. Fever Clinic Diagnosis and Treatment Data
2.1 Fever Clinic Visit Data
The number of fever clinic visits in Chinese mainland peaked at 2,867,000 on December 23, 2022, then decreased continuously until January 23, 2023 and fluctuated to 164,000 visits on January 30, 2023, representing a decrease of 94.3% from the peak (Figure 2-1).
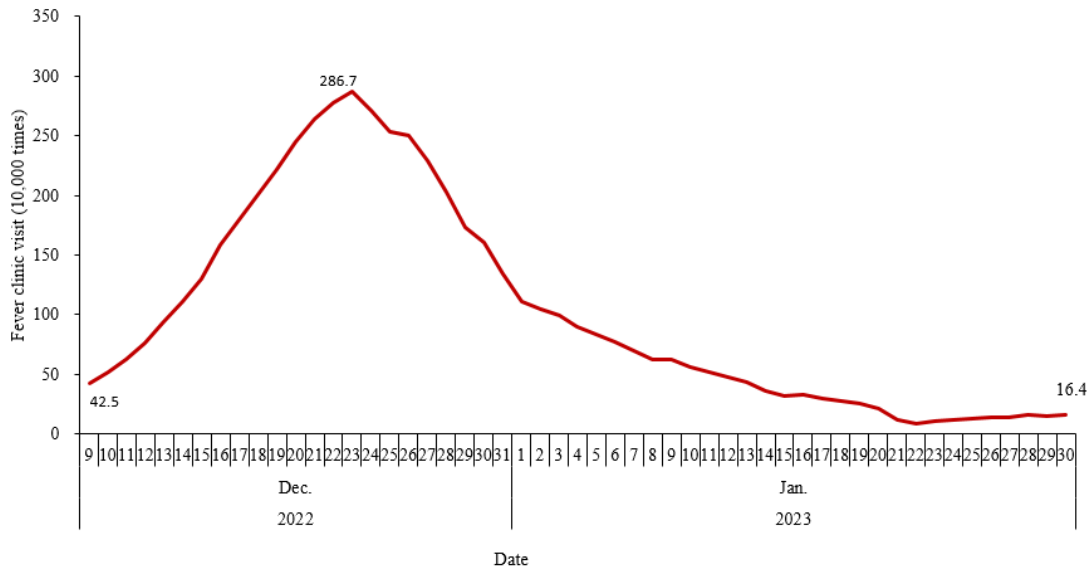
Figure 2-1 Fever Clinic Visit Data. (All data were reported by PLADs in Chinese

mainland)

2.2 Rural Areas

The number of fever clinic visits at township health centers in rural areas peaked at 0.922 million on December 23, 2022, then decreased continuously until January 22, 2022, and fluctuated to 69,000 visits on January 30, 2023, representing a decrease of 92.5% from the peak (Figure 2-2).
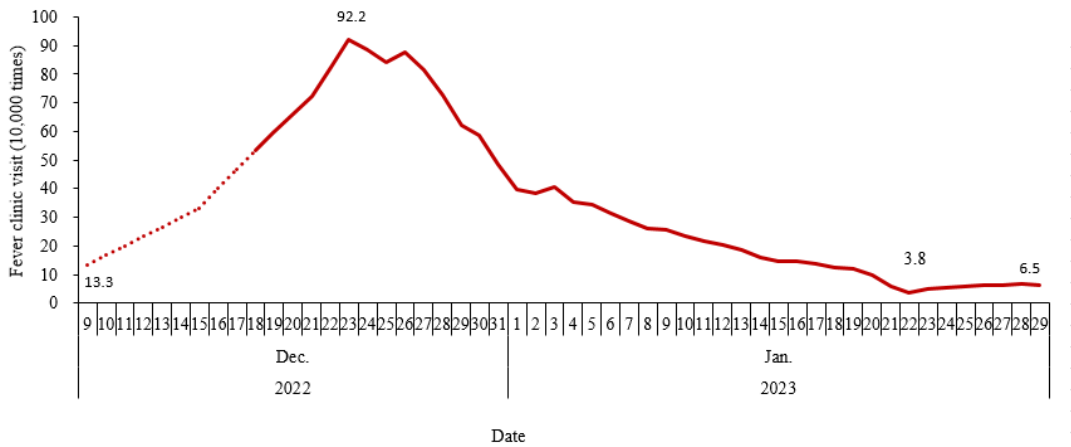

Figure 2-2 Rural fever clinic visit data. (All data were reported by PLADs in Chinese

mainland)

2.3 Urban Areas

The number of fever clinic visits to the second level and above hospitals and urban community health service centers in urban areas peaked at 1,954,000 on December 22, 2020 and then decreased continuously until January 22, 2021, fluctuating to 95,000 visits on January 30, 2021, a decrease of 95.1% from the peak (Figure 2-3).
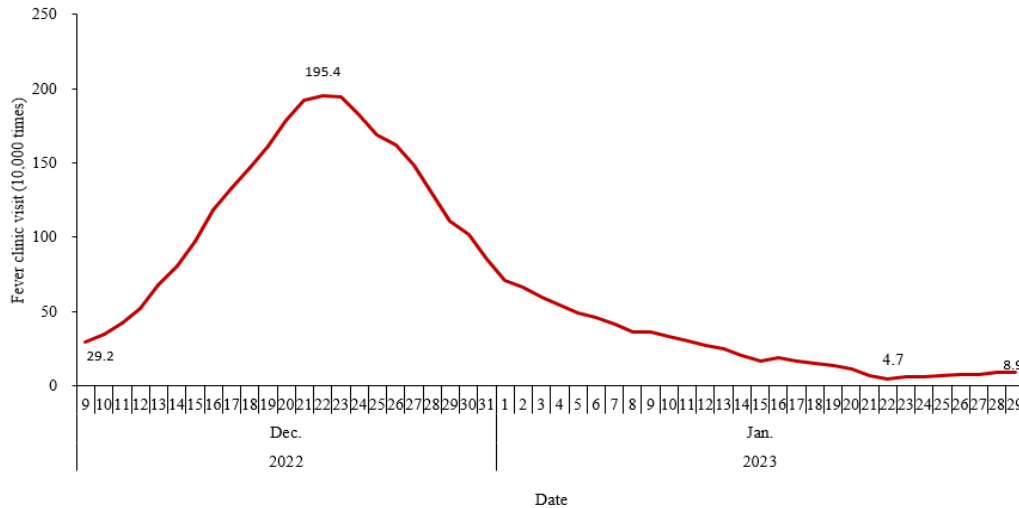
Figure 2-3 Urban fever clinic visit data. (All data were reported by PLADs in Chinese mainland)

2.4 Surveillance Data of Influenza Sentinel Hospitals and Laboratories

Since December 9, 2022, surveillance of SARS-CoV-2 has been conducted by influenza surveillance sentinel hospitals (824 sentinel hospitals reported data, including 546 national-level sentinel hospitals and 278 non-national-level sentinel hospitals) and national influenza surveillance network laboratories (402 laboratories reported data). From September to early December 2022, the weekly number of Influenza-like Illness (ILI, fever with temperature $\geq 38℃$, accompanied by cough or sore throat) in sentinel hospitals remained around 100,000, and ILI% was between 2.7% and 3.6%. The ILI% had risen rapidly since Week 50 (8.5%) and reached the epidemic peak in Week 51 (12.1%). It started to decline dramatically since Week 52. In Week 4 (January 23–29, 2023), it reduced to 2.0% (Figure 2-4).
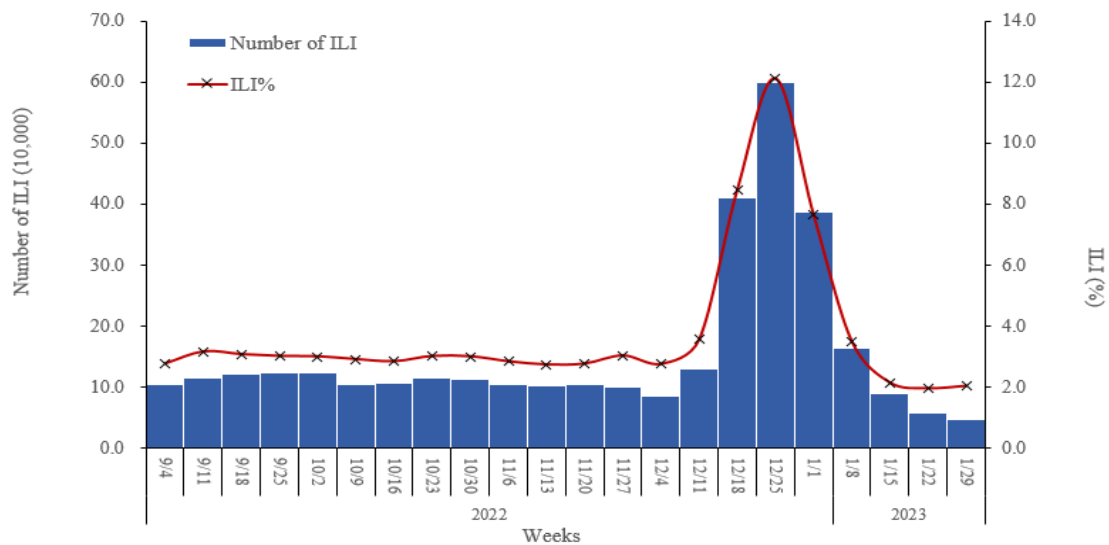

Figure 2-4 ILI and ILI% reported by sentinel hospitals in Chinese mainland.
(Reported data were from 824 sentinel hospitals)

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Influenza surveillance network laboratories tested both SARS-CoV-2 and influenza viruses in ILI samples simultaneously. In Week 49 (December 9–15, 2022), the positive rate of SARS-CoV-2 began to increase and reached its peak between Weeks 51 and 52, then started to decline with fluctuation. In Week 4 (January 23–29, 2023), the positive rate of SARS-CoV-2 had reduced to 8.3%. During the same period, the positive rate of influenza virus gradually decreased to a very low level in late December 2022, and it was less than 1% (Figure 2-5).
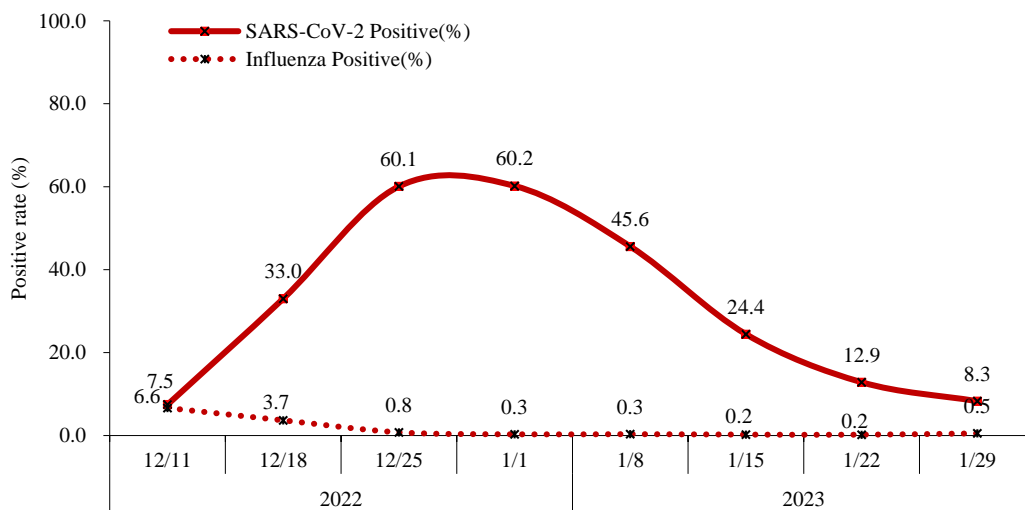

Figure 2-5 The positive rate of SARS-CoV-2 and influenza virus in ILI samples from sentinel hospitals in Chinese mainland. (Reported data were from 402 laboratories)

3. Hospitalization Data

3.1 No. of COVID-19

The number of COVID-19 cases in hospitals nationwide peaked at 1,625,000 on January 5, 2023, and then decreased continually to 144,000 on January 30, 2023, with a 91.1% reduction from the peak (Figure 3-1).
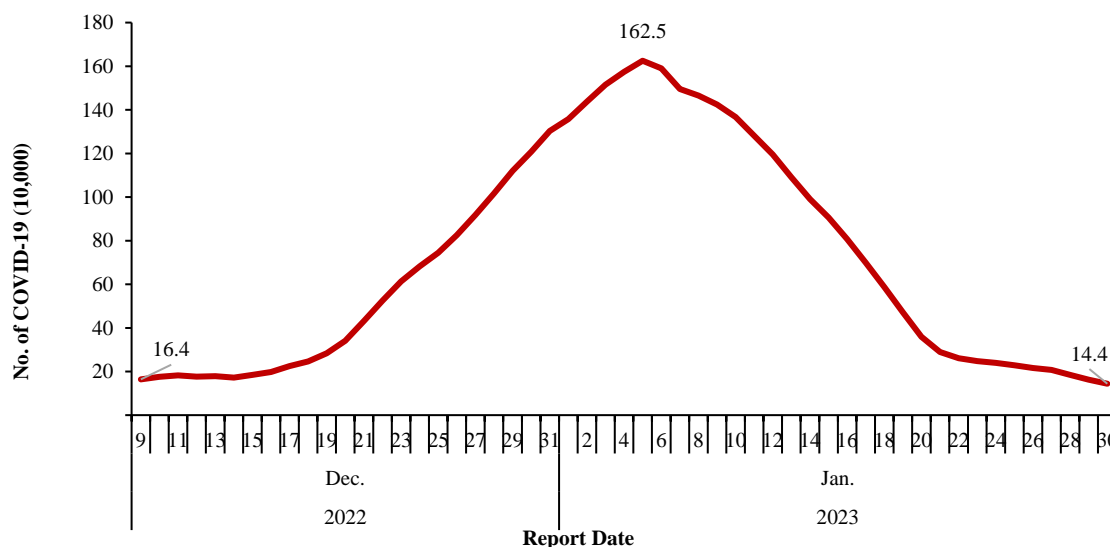

Figure 3-1 The number of COVID-19 in hospitals. (All data were reported by PLADs in Chinese mainland)

3.2 No. of Severe Cases in Hospitals

The number of severe cases in hospitals increased by nearly 10,000 per day between December 27, 2022 and January 3, 2023, peaking at 128,000 on January 5, 2023, before decreasing continually to 14,000 on January 30, 2023, representing a 89.3% reduction from the peak (Figure 3-2).
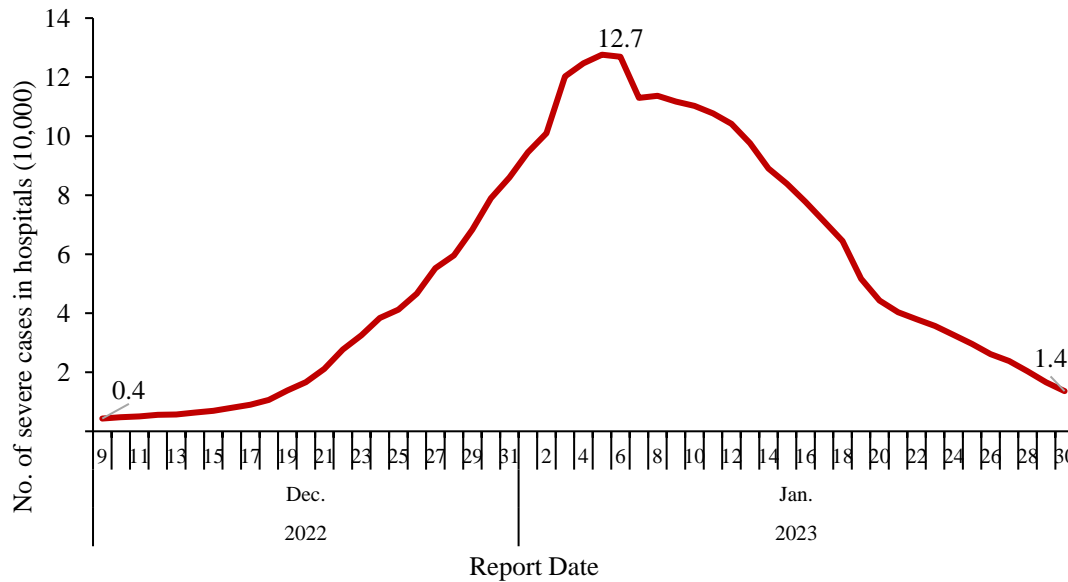
Figure 3-2 No. of severe cases in hospitals. (All data were reported by PLADs in Chinese mainland)

3.3 Number of Deaths with SARS-CoV-2 in Hospitals

The number of deaths with SARS-CoV-2 in hospitals reached a daily peak of 4,273 on January 4, 2021 and continued to decline thereafter, falling back to 434 on January 30, 2021, with an 89.8% reduction from the peak number (Figure 3-3).
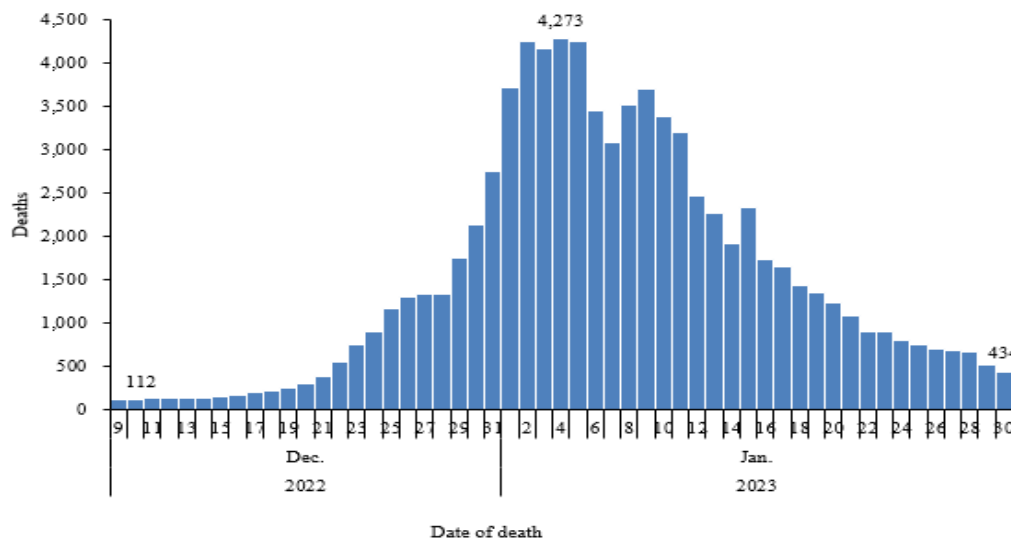
Figure 3-3 No. of deaths with SARS-CoV-2 in hospitals. (All data were reported by PLADs in Chinese mainland)

4. SARS-CoV-2 Variants Surveillance of Domestic Cases in Chinese mainland

Since early 2020, China has consistently conducted virus mutation surveillance. Data were collected from PLADs in Chinese mainland after December 12, 2020. Simultaneously, SARS-CoV-2 variants of inbound people were monitored at land, water, and airport ports. The surveillance results indicated that the epidemic strains in this wave were BA. 5.2.48, BF. 7.14, and BA. 5.2.49, and no new variant strains were identified.

4.1. The Dynamic Trend of SARS-CoV-2 Variants from Domestic Cases in Chinese mainland

From September 26, 2022 to January 30, 2023, a total of 20,582 valid SARS-CoV-2 genome sequences from domestic cases were reported nationwide. Of these, 73 Omicron lineages were identified, with the predominant lineages being BA.5.2.48 (52.1%), BF.7.14 (23.3%), and BA.5.2.49 (16.0%). The remaining 21 lineages had a proportion of 0.1% to 2.5%, including BA.5.2, etc. The other 49 lineages were minority, with a proportion below 0.1%, accounting for 0.6% (Figure 4-1).
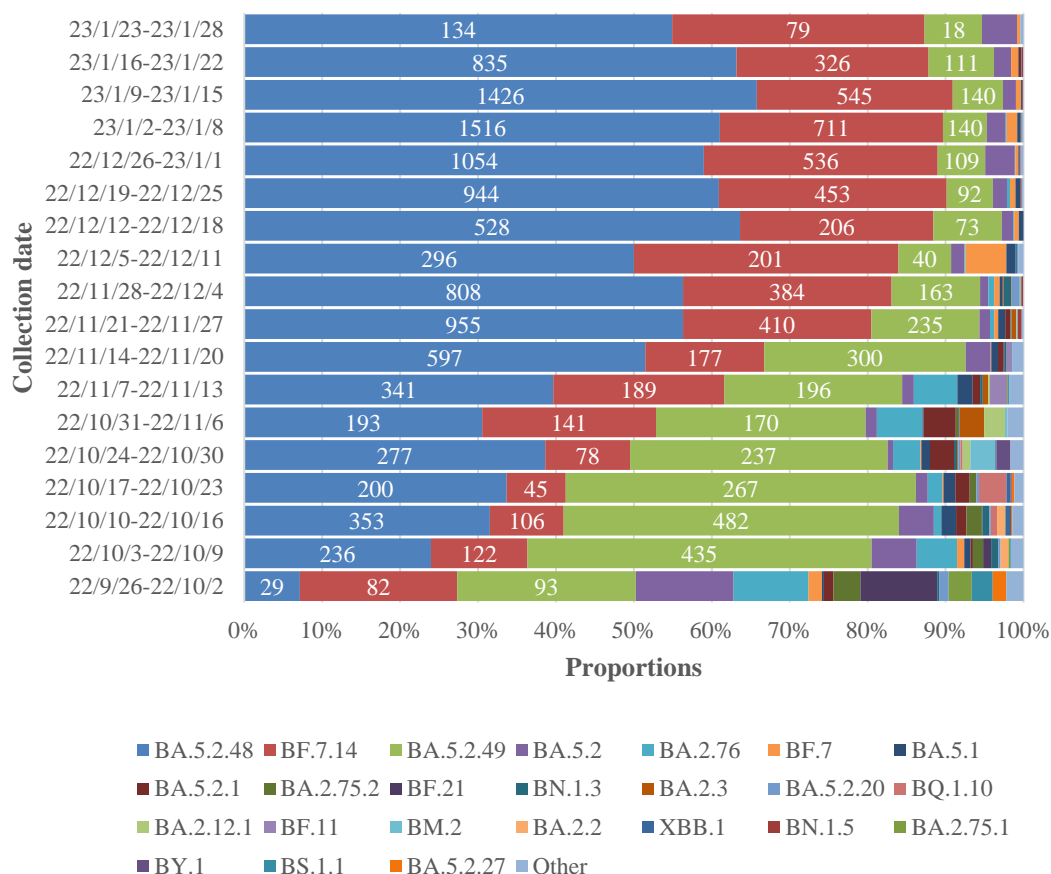

Figure 4-1 Dynamic trend of SARS-CoV-2 lineages from domestic cases in Chinese mainland by Week

Notes: 1. Collection date interval: September 26, 2022 to January 28, 2023; 2. The numbers marked in the figure were the number of valid genome sequences of BA.5.2.48,

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BF.7.14, and BA.5.2.49 lineages, respectively; 3. "Other" referred to the lineages with proportions of Omicron variants less than 0.1% nationwide. As of January 30, 2023, the proportions of 49 lineages were less than 0.1% (0.6% in total).

4.2. Genomic Surveillance of SARS-CoV-2 Variants Among Domestic Cases

From December 1, 2022 to January 30, 2023, 11,878 valid SARS-CoV-2 genome sequences from domestic cases were reported nationwide, all of which were Omicron variants with a total of 26 lineages. The predominant lineages were BA.5.2.48 (61.1%) and BF.7.14 (27.8%) (Table 4-1). A total of 12 cases of concerned lineages were found, including 1 case of XBB.1, 4 cases of BQ.1.1, 1 case of BQ.1.1.17, 4 cases of BQ.1.2, and 2 cases of BQ.1.8.

Table 4-1 National proportions of SARS-CoV-2 variants.

(December 1, 2022 to January 30, 2023)

Omicron Lineages	Proportions (%)
BA.5.2.48	61.1
BF.7.14	27.8
BA.5.2.49	6.9
BA.5.2	2.2
BF.7	1.0
BA.5.1	0.3
BA.2.76	0.2
BA.5.2.20	0.1
BA.5.2.1	0.1
BN.1.3	0.1
Other	0.2
Total	100.0

4.3. Genomic Surveillance of SARS-CoV-2 Variants Among Domestic Cases in Each PLAD

Overall, BF.7 and its sub-lineages were predominant in Beijing, Tianjin, and Inner Mongolia, while BA.5.2 and its sub-lineages were predominant in other PLADs. The prevalence rates of BF.7 and its sub-lineages and BA.5.2 and its sub-lineages in Jiangsu were approximately the same.
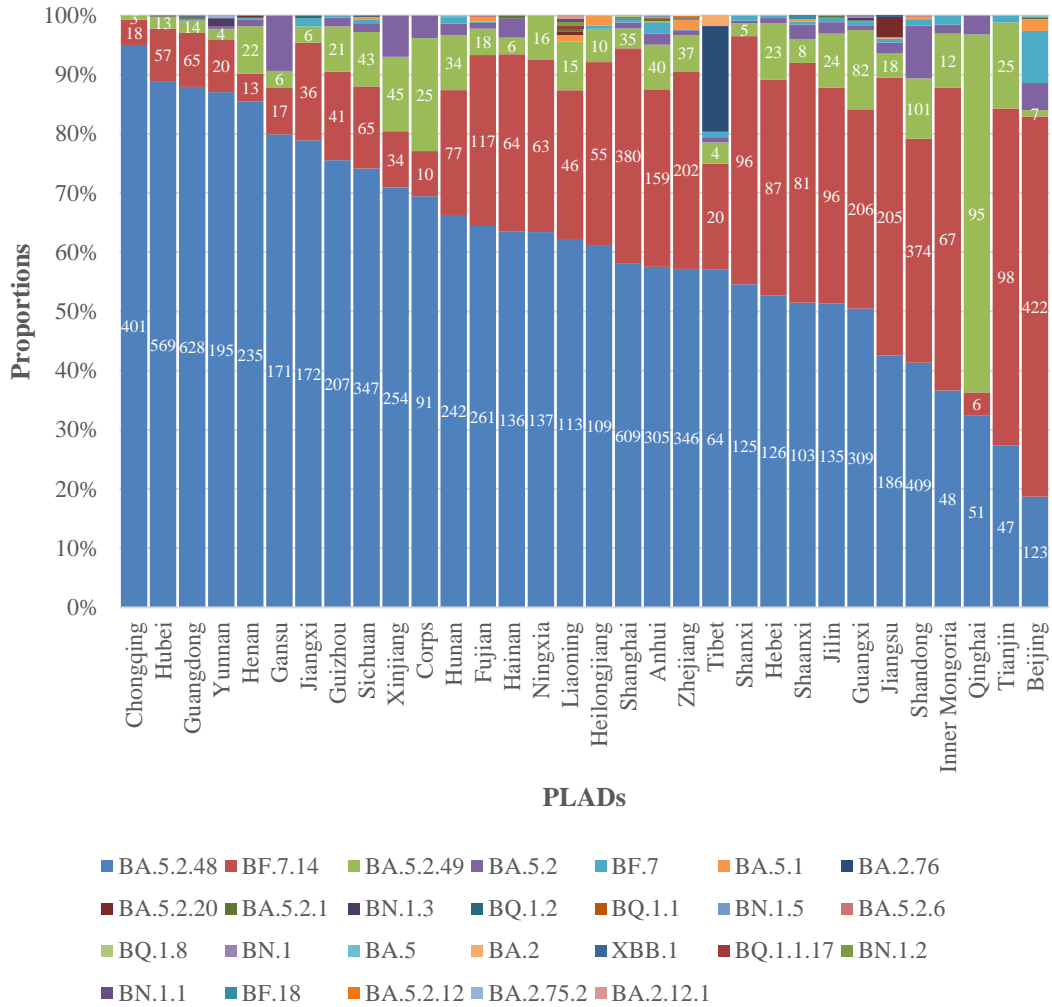
Figure 4-2 SARS-CoV-2 variants surveillance by PLADs.

Notes: Collection date interval: December 1, 2022 to January 28, 2023. The numbers in the figure represented the number of valid genome sequences of BA.5.2.48, BF.7.14, and BA.5.2.49 lineages, respectively.

5. COVID-19 Vaccination Progress

The nationwide COVID-19 vaccination campaign was launched on December 15, 2020 and accelerated at the beginning of 2021. At the campaign's peak, 100 million doses were administered in a five-day period, with a maximum of 24.74 million doses administered in one day. China continues to advance COVID-19 vaccination; up to January 30, 2023, 3.49 billion doses of COVID-19 vaccine had been administered (Figure 5-1). By January 30, 2023, 92.9% of the entire, all-ages population had initiated vaccination and 90.6% had completed their primary series based on the whole population size reported in the seventh census of Chinese mainland (Figure 5-2).
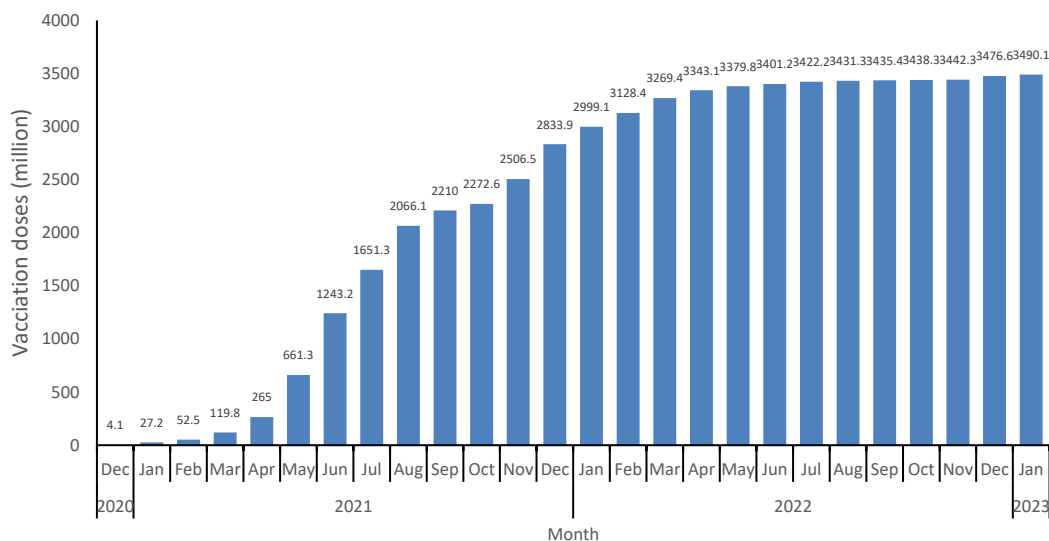
Figure 5-1 Cumulative COVID-19 vaccine doses administered in China by month. (All data were reported by PLADs in Chinese mainland)
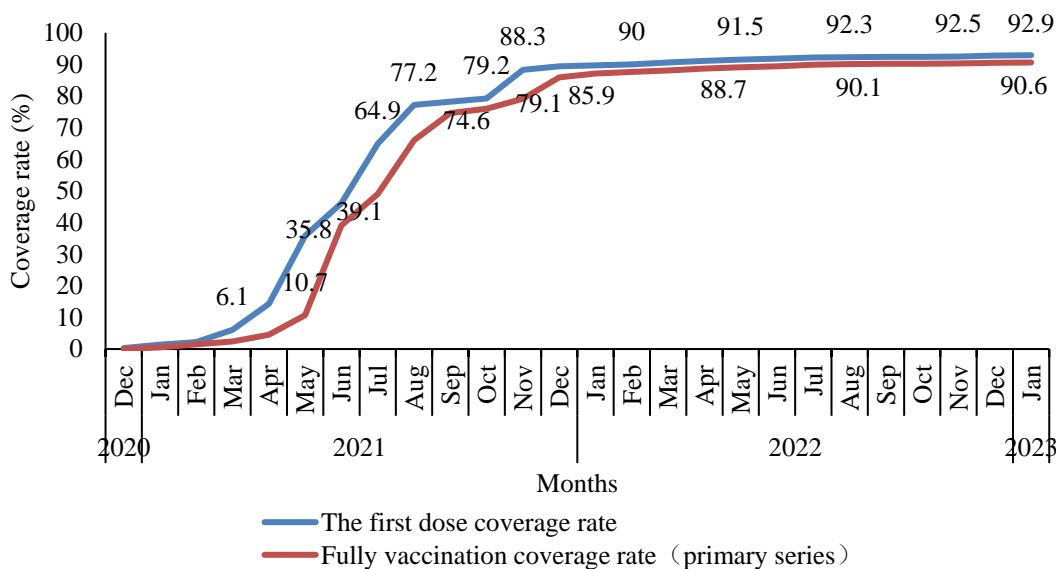

Figure 5-2 First-dose and primary series COVID-19 vaccine coverage of the entire (All Ages) population of Chinese mainland by month. (All data were reported by PLADs in Chinese mainland)

Based on an investigation of vaccination among the elderly population in December 2022, the vaccination rate of people over 60 years old was 96.0%. Of these elderly populations, 96.6% completed their primary series and 92.2% of those eligible for a minimum interval received their first booster dose (Figure 5-3).
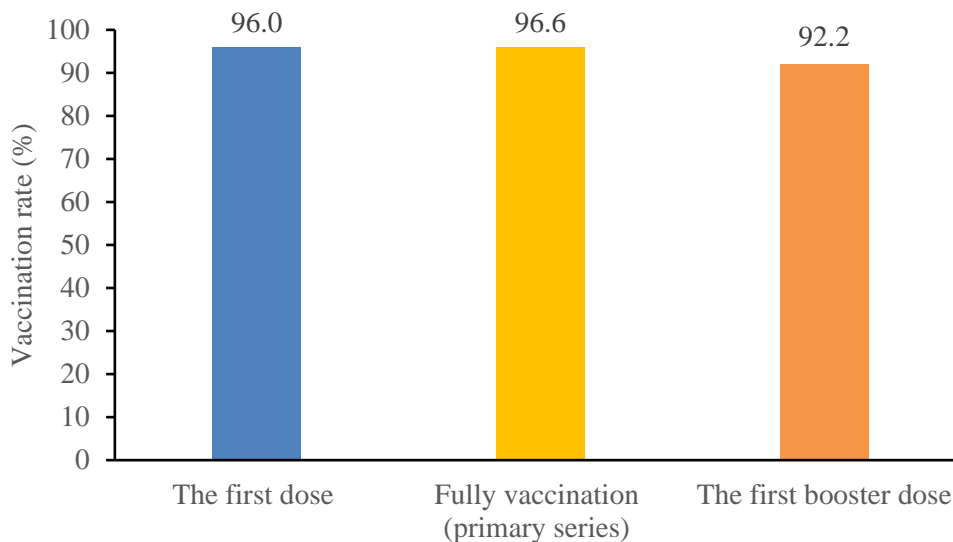
Figure 5-3 COVID-19 vaccine coverage of individuals 60 years and older: first-dose coverage, primary series coverage among interval-eligible individuals, and booster dose coverage among booster-dose-eligible individuals. (All data were reported by PLADs in Chinese mainland)

Notes: For calculating first dose coverage, the numerator was the number of people who received at least one dose of a COVID-19 vaccine approved at the time, and the denominator was the size of the registered population of elderly people (≥60 years) in a recent investigation targeting the elderly population.

For calculating full primary series coverage, the numerator was the number of elderly people who had received two doses of inactivated vaccine, one dose of adenovirus vectored vaccine, or three doses of recombinant protein vaccine. The denominator was the number of people who had received one dose of inactivated vaccine, one dose of adenovirus vectored vaccine, or two doses of recombinant protein vaccine with the recommended interval of 28 days (4 weeks).

For calculating first booster dose coverage, the numerator was the number of elderly people who had received their first booster dose, and the denominator was the number of people who had completed the full primary series with either two doses of inactivated vaccine or one dose of adenovirus vectored vaccine, with an interval of at least three months between primary series completion and booster dose administration. Individuals who had received three doses of recombinant protein vaccine were not included in the denominator due to the short time between approval of that vaccine and the booster vaccination effort.

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