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

Chinese Center for Disease Control and Prevention

1. COVID-19 Infection Surveillance Data

1.1 Nucleic Acid Test Data

From December 9, 2022 to March 9, 2023, the number of positive nucleic acid tests and the positive rate reported from provincial-level administrative divisions (PLADs) gradually increased, peaking on December 22, 2022 with 6.94 million positive tests and a 29.2% positive testing rate on December 25, 2022. After this peak, the number of positive nucleic acid tests steadily decreased, reaching a low of 7,786 on March 9, 2023, with a rate of 1.0% (Figure 1-1).

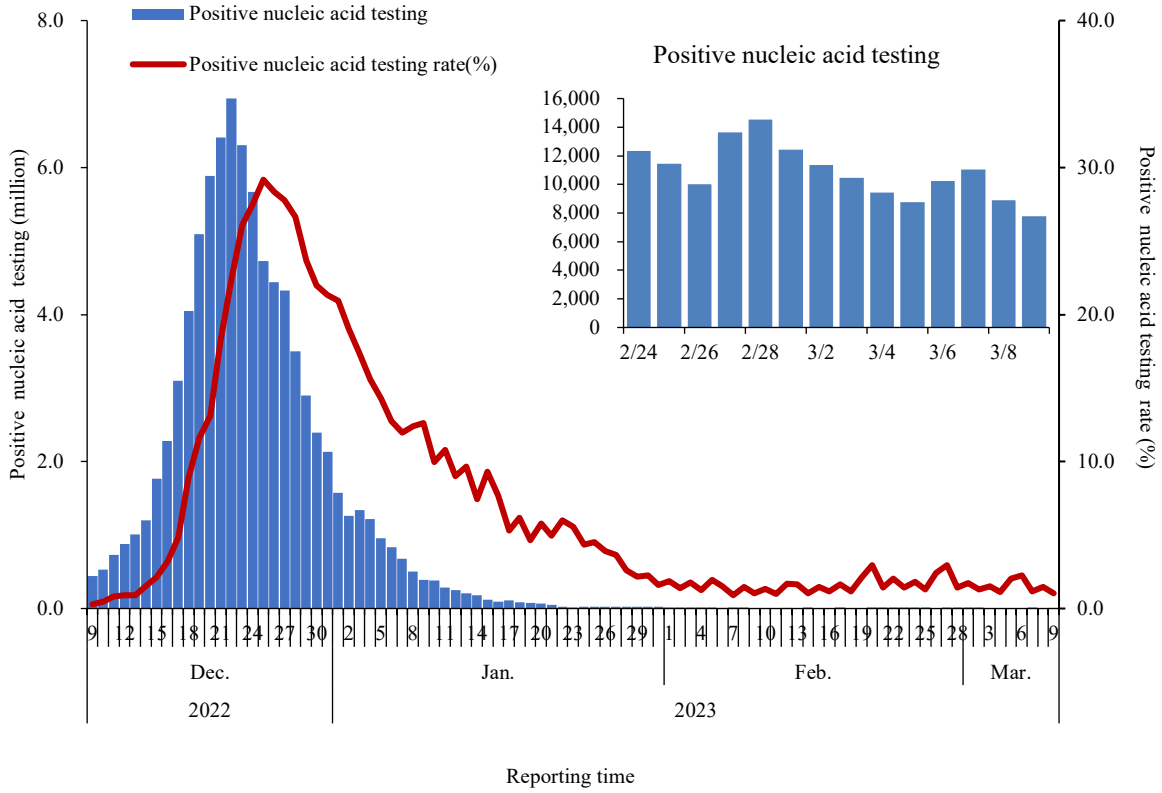

Figure 1-1 Daily number of positive nucleic acid testing and rate.
(Data were reported by PLADs in Chinese mainland)

1.2 COVID-19 Antigen Test Data

The number of antigen tests reported by PLADs was generally low and gradually decreased. For example, the number of antigen tests reported reached a high of 1.89 million on December 19, 2022 and dropped to a low of 48 thousand on March 9, 2023. The number of positive antigen tests and the positive rate increased rapidly after December 9, peaking on December 22, 2022 (337,000, 21.3%) before fluctuating to 249 and 0.5%, respectively, by March 9, 2023 (Figure 1-2).

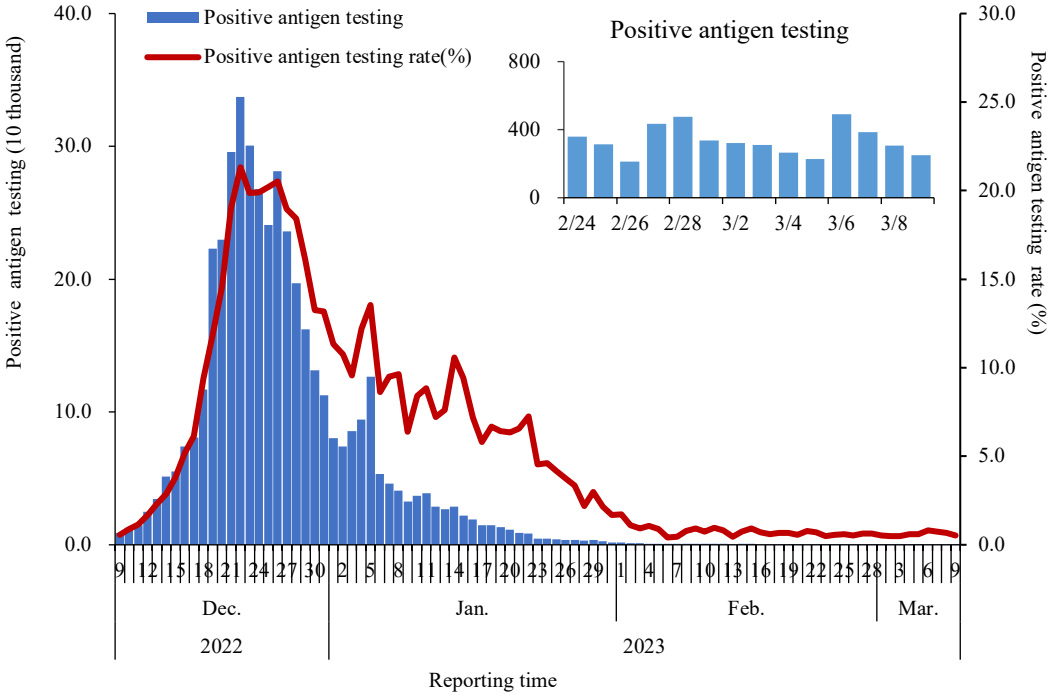

Figure 1-2 COVID-19 antigen test and positive rate.
(Data were reported by PLADs in Chinese mainland)

2. Diagnosis and Treatment Data from Fever Clinics

2.1 Data from Fever Clinic Visits.

The number of fever clinic visits in the Chinese mainland peaked at 2.867 million on December 23, 2022, and then continuously decreased until January 23, 2023, fluctuating at a low level. Then the number of visits fluctuated up in the last two weeks (February 24 to March 9, 2023) to 481,000 on March 9, 2023, representing a decrease of 83.2% from the peak (Figure 2-1).

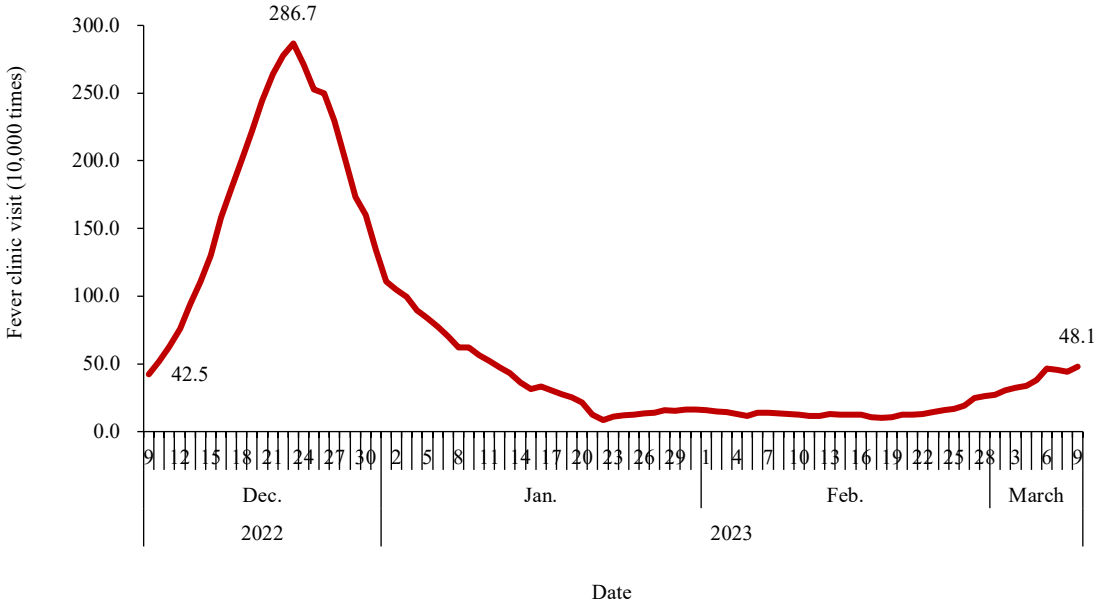

Figure 2-1 Trends of fever clinic visit data.

(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 922,000 on December 23, 2022, then decreased continuously until January 22, 2022, and fluctuated at a low level. Then the number of visits fluctuated up in the last two weeks (February 24 to March 9, 2023) to 81,000 on March 9, 2023, representing a decrease of 91.2% from the peak (Figure 2-2).

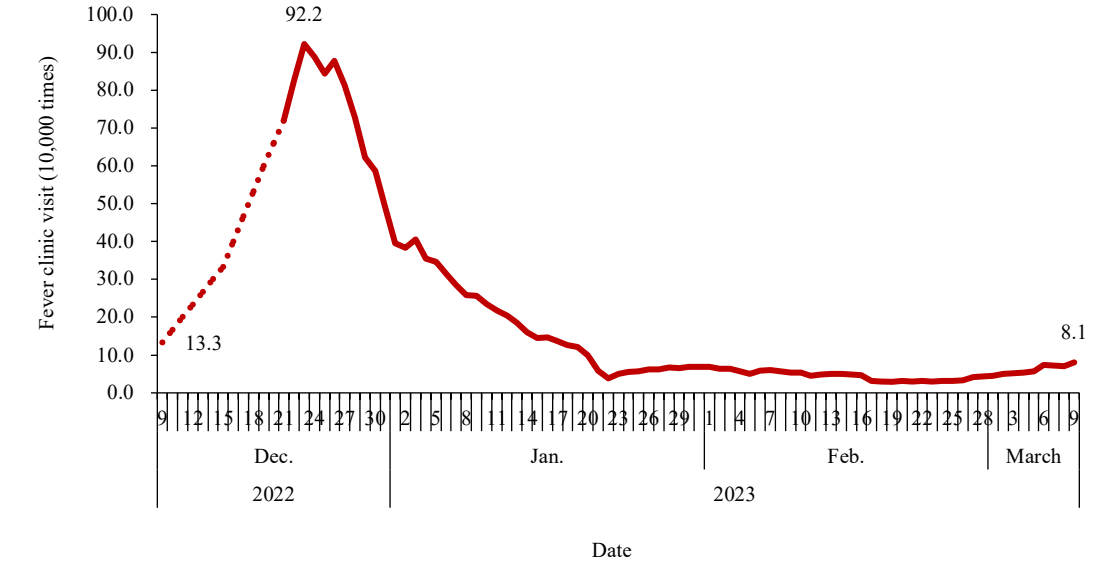

Figure 2-2 Trends of rural fever clinic visit data.

(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 million on December 22, 2022. Visits then continuously decreased until January 22, 2022, fluctuating at a low level. In the last two weeks (February 24 to March 9, 2023), visits fluctuated up to 400,000 on March 9, 2023, representing a decrease of 79.6% from the peak (Figure 2-3).

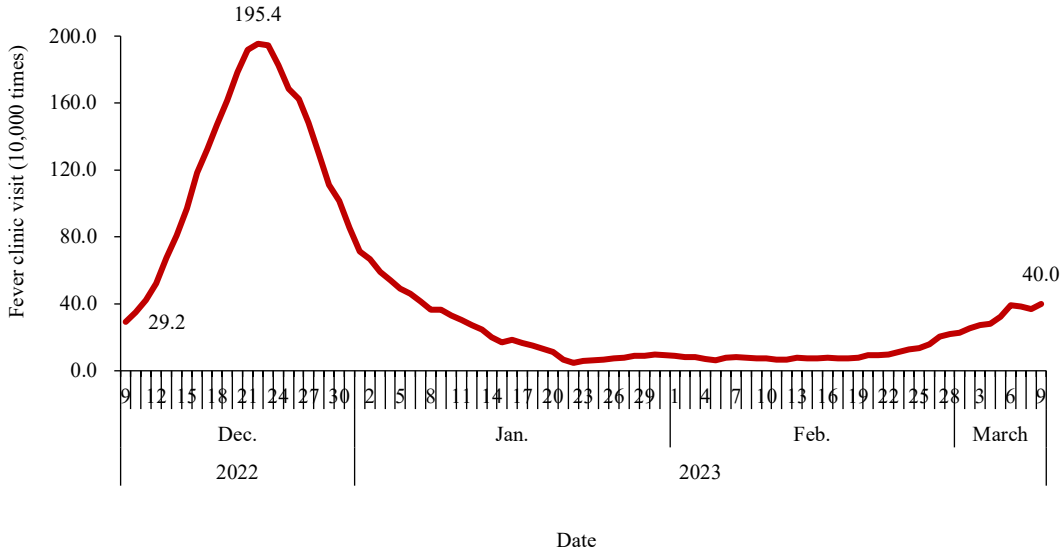

Figure 2-3 Trends of urban fever clinic visit data.

(Data were reported by PLADs in Chinese mainland)

2.4 Surveillance Data from 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 ≥38℃, accompanied by cough or sore throat) in sentinel hospitals remained around 100,000, and the ILI% ranged from 2.7% to 3.6%. The ILI% began to increase rapidly from Week 50 (8.5%) and reached its peak in Week 51 (12.1%). It then started to decline dramatically from Week 52. ILI% began to show an increasing trend in Week 7 of 2023 (February 13–19). In Week 9 of 2023 (February 27–March 5), ILI% was 7.1% (Figure 2-4).

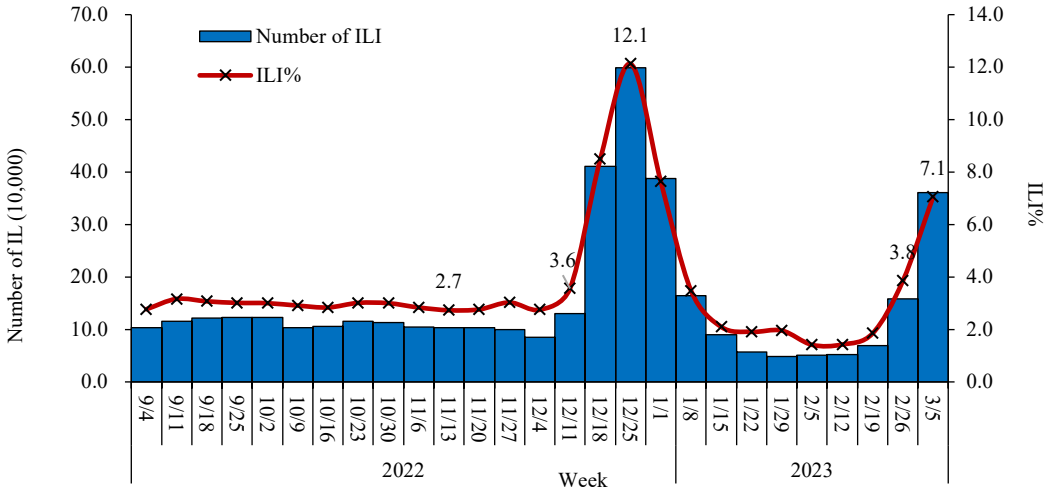

Figure 2-4 Influenza-Like Illness (ILI) and ILI percentage reported by sentinel hospitals in Chinese mainland.
(Data reported were from 824 sentinel hospitals)

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, reaching its peak between Weeks 51 and 52, then gradually decreasing. In Week 7 (February 13–19, 2023), the positive rate of SARS-CoV-2 slightly decreased to 3.4% and fluctuated at a low level. In Week 9 (February 27–March 5, 2023), the positive rate of SARS-CoV-2 further decreased to 3.8%, lower than the 5.1% rate observed in Week 8 (February 20–26, 2023). During the same period, the positive rate of influenza virus gradually decreased to a very low level in late December 2022, remaining less than 1% until early February, then beginning to rise. In Week 9 (February 27–March 5, 2023), it increased to 41.6% (Figure 2-5).

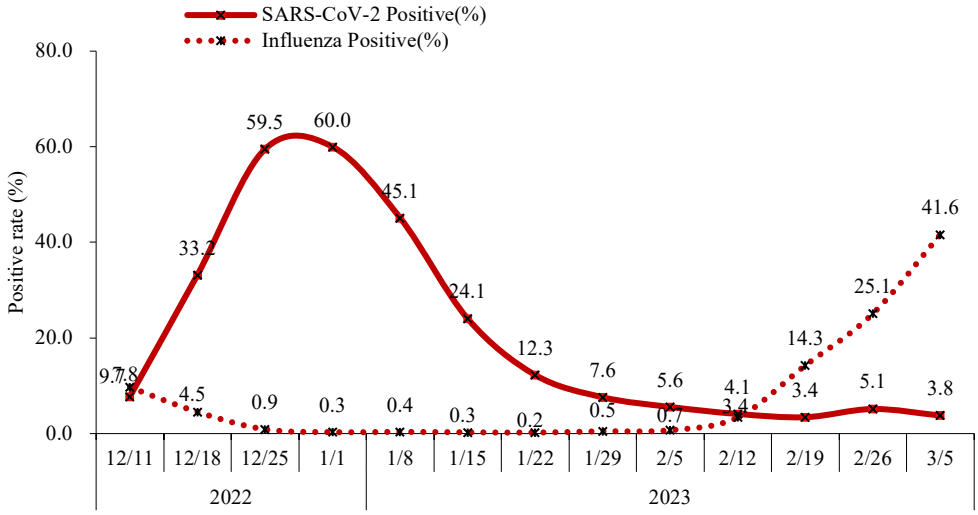

Figure 2-5 Positive rate of SARS-CoV-2 and influenza virus in ILI samples from sentinel hospitals in Chinese mainland.
(Data reported were from 402 laboratories)

3. Hospitalization Data

3.1 Number of COVID-19 Cases

The number of COVID-19 hospitalizations nationwide peaked at 1.625 million on January 5, 2023, and steadily decreased to 8,629 on March 9, 2023, representing a 99.5% decrease from the peak (Figure 3-1).

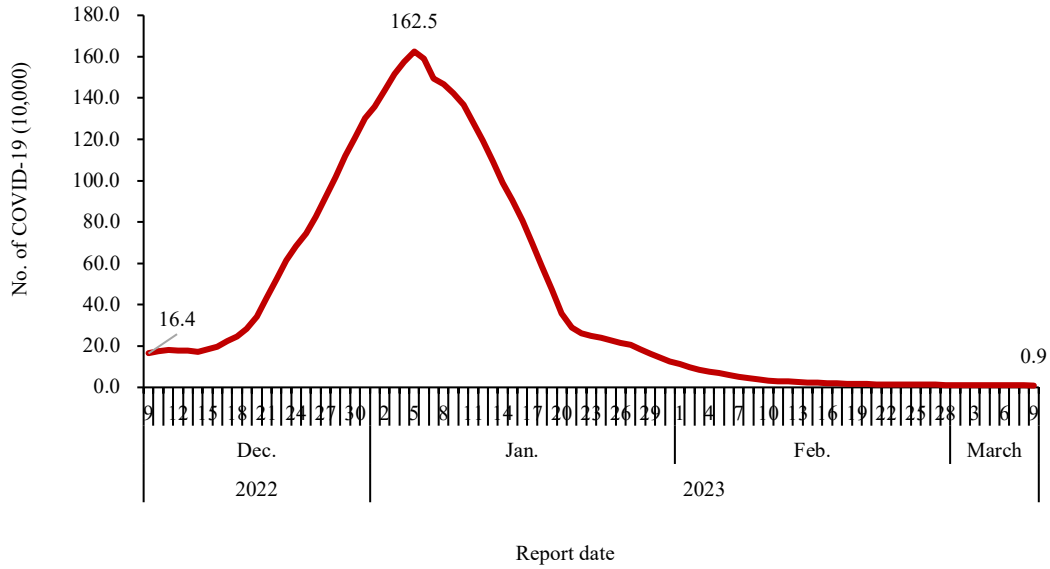

Figure 3-1 Number of COVID-19 cases in hospitals.
(Data were reported by PLADs in Chinese mainland)

3.2 Number 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. This number then continually decreased to 6 (0 severe cases of SARS-CoV-2, and 6 cases with comorbidities and SARS-CoV-2) on March 9, 2023, representing a decrease of 99.9% from the peak (Figure 3-2).

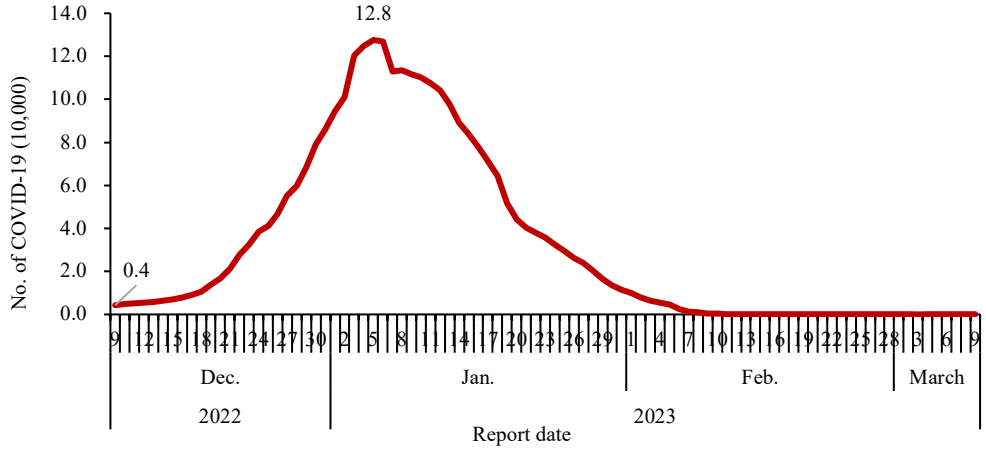

Figure 3-2 Number of severe cases in hospitals.
(Data were reported by PLADs in Chinese mainland)

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

The number of deaths in hospitals increased to a peak of 4,273 on January 4, 2023, and then steadily decreased to 0 on March 9, 2023. From March 3rd to March 9th, no deaths associated with SARS-CoV-2 were reported by medical institutions from provincial-level administrative divisions (PLADs), including no deaths due to respiratory failure caused by SARS-CoV-2, and no deaths due to underlying comorbidities with SARS-CoV-2 infection.

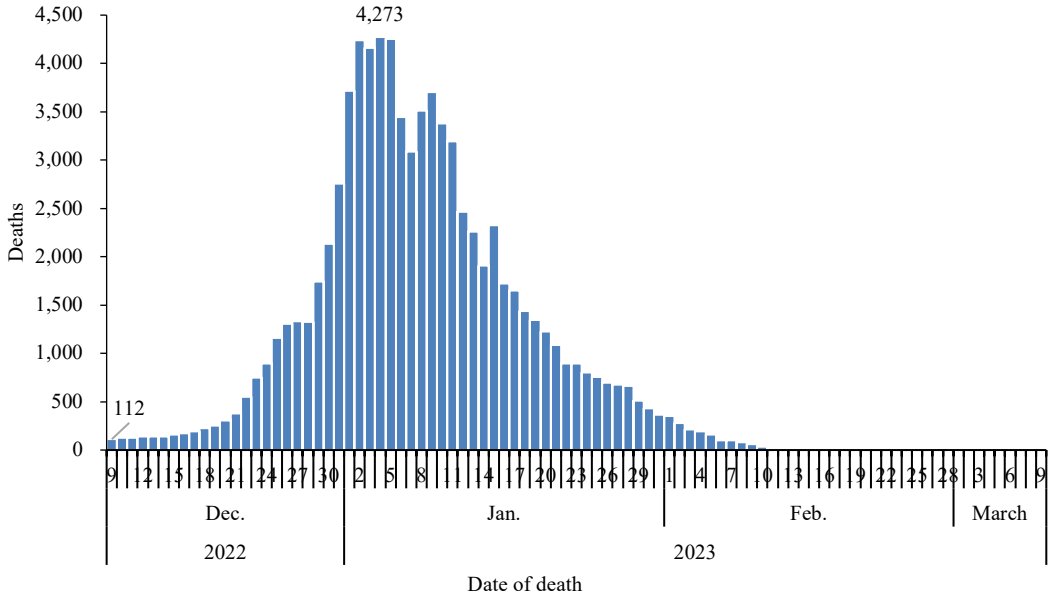

Figure 3-3 Number of deaths associated with SARS-CoV-2 in hospitals.
(Data were reported by PLADs in Chinese mainland)

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

4.1. Dynamics of SARS-CoV-2 Variants from Domestic Cases in Chinese mainland

From September 26, 2022 to March 9, 2023, 31,109 valid SARS-CoV-2 genome sequences from domestic cases were reported nationwide. Of these, 104 Omicron lineages were identified, with the predominant lineages being BA.5.2.48 (45.5%), BF.7.14 (23.4%), BA.5.2.49 (10.5%), and DY.1 (8.3%). Twenty-four lineages had a proportion of 0.1% to 2.8%, including BF.7.14.1, among others. The remaining 76 lineages were minority lineages, with a proportion below 0.1%, accounting for 0.9% (Figure 4-1).

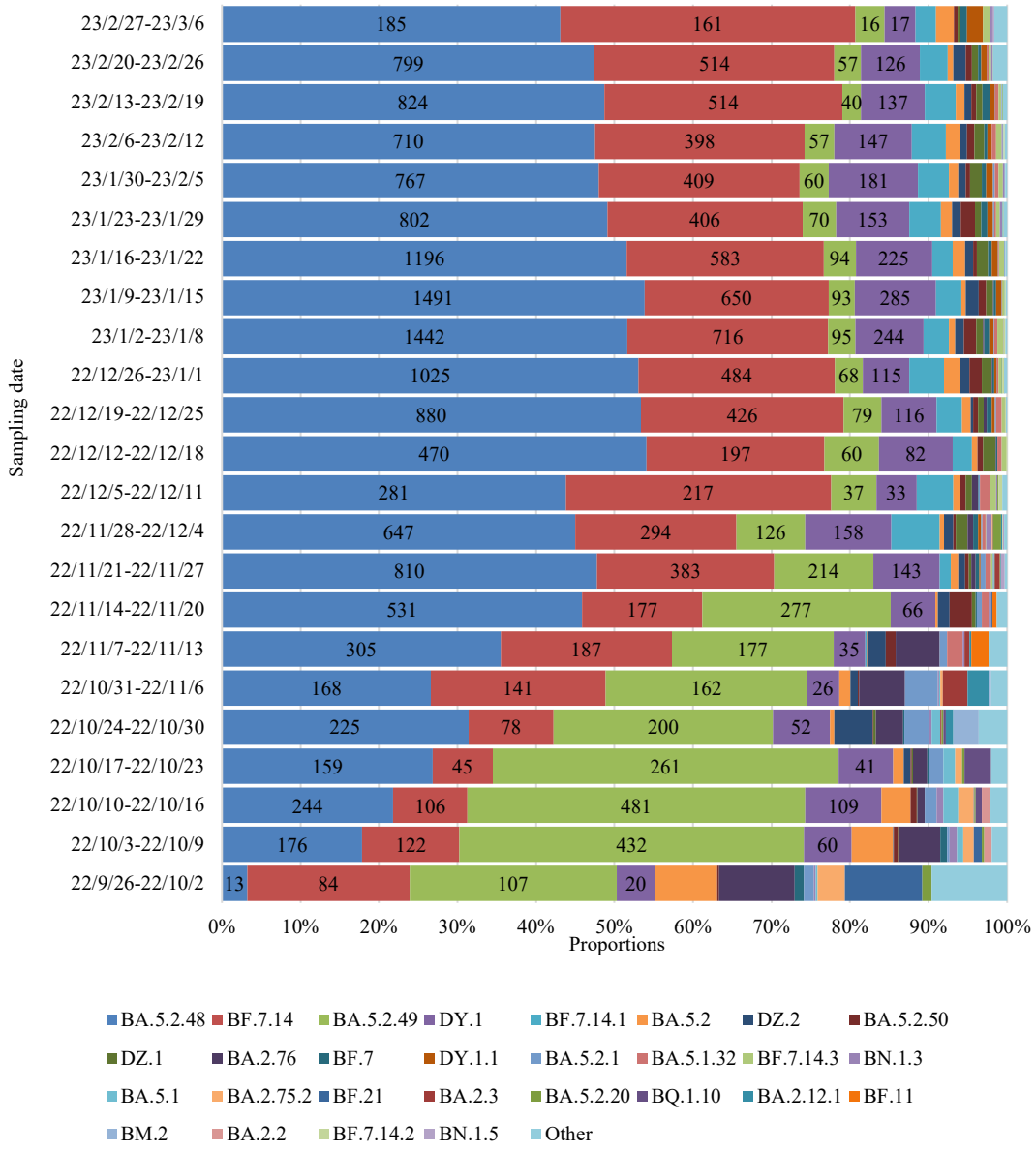

Figure 4-1 Dynamic trend of SARS-CoV-2 lineages from domestic cases in Chinese mainland by week.

Note: 1) Sampling date range: September 26, 2022 to March 6, 2023; 2) The numbers indicated in the figure represent the number of valid genome sequences of BA.5.2.48, BF.7.14, BA.5.2.49, and DY.1 lineages, respectively; 3) "Other" refers to lineages with a nationwide proportion of Omicron variants less than 0.1%.

4.2 Genomic Surveillance of SARS-CoV-2 Variants in Domestic Cases

From December 1, 2022 to March 9, 2023, 22,412 valid SARS-CoV-2 genome sequences from domestic cases were reported nationwide, all of which were Omicron variants with a total of 59 lineages. The predominant lineages were BA.5.2.48 (50.4%), BF.7.14 (26.1%), and DY.1 (8.8%) (Table 4-1). A total of 48 domestic cases of variants

of concern were identified, including four cases of BQ.1, two cases of BQ.1.1, one case of BQ.1.1.17, one case of BQ.1.1.38, two cases of BQ.1.1.66, one case of BQ.1.1.69, five cases of BQ.1.2, two cases of BQ.1.8, one case of DT.2, two cases of XBB.1, one case of XBB.1.12, fourteen cases of XBB.1.5, one case of XBB.1.5.5, five cases of XBB.1.5.7, two cases of XBB.1.9.1, two cases of XBB.1.9.2, and two cases of XBB.3.

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

(December 1, 2022 to March 9, 2023)

Omicron lineages	Proportions (%)
BA.5.2.48	50.4
BF.7.14	26.1
DY.1	8.8
BA.5.2.49	4.0
BF.7.14.1	3.7
BA.5.2	1.1
DZ.1	1.0
DZ.2	1.0
BA.5.2.50	1.0
DY.1.1	0.6
BF.7.14.3	0.5
BF.7	0.5
BA.5.1.32	0.3
BA.2.76	0.1
BN.1.3	0.1
BA.5.2.1	0.1
BA.5.2.20	0.1
BF.7.14.2	0.1
XBB.1.5	0.1
Other	0.4
Total	100.0

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

Overall, BF.7 and its descendant lineages were predominant in Beijing and Inner Mongolia. The proportions of BF.7 and its descendant lineages and BA.5.2 and its descendant lineages were approximately the same in Tianjin. BA.5.2 and its descendant lineages were predominant in other PLADs (Figure 4-2).

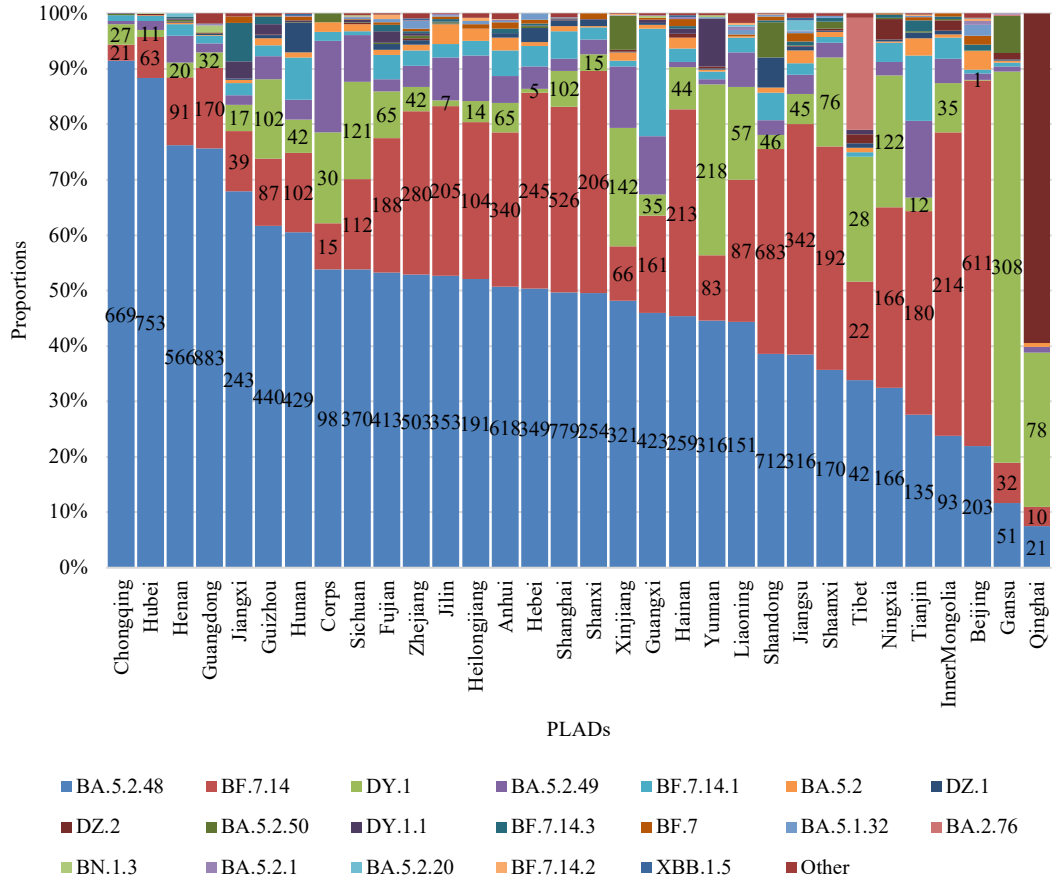

Figure 4-2 SARS-CoV-2 variants surveillance by PLADs.

Notes: 1) Sampling date interval: December 1, 2022 to March 6, 2023; 2) The numbers marked in the figure represented the number of valid genome sequences of BA.5.2.48, BF.7.14, and DY.1 lineages respectively; 3) "Other" referred to the lineages with the proportions of Omicron variants less than 0.1% nationwide.

5. COVID-19 Vaccination Progress

As of March 9, 2023, 3.49 billion doses of COVID-19 vaccine have been administered in China's mainland (Figure 5-1). Since the start of the vaccination campaign, 1.31 billion people received at least one dose, 1.28 billion people completed a primary series, and 827.49million people received their first booster dose (booster doses are recommended only for adults 18 years and older). Therefore, based on the population size in the seventh census of mainland China, 93.0% of the entire, all-ages population initiated vaccination and 90.6% completed their primary series (Figure 5-2). Among the 60-years and older population, 680.18 million doses of COVID-19 vaccine have been administered, 241.70 million people received at least one dose, 230.34 million completed primary series, and 192.97 million received their first booster dose.

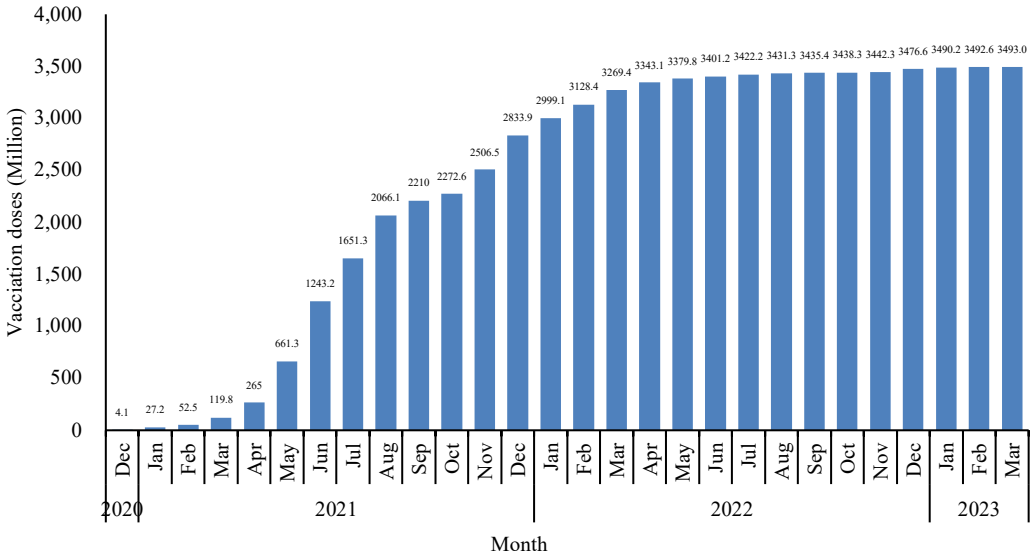

Figure 5-1 Cumulative COVID-19 vaccine doses administered in Chinese mainland by month.
(Data were reported by PLADs in Chinese mainland)

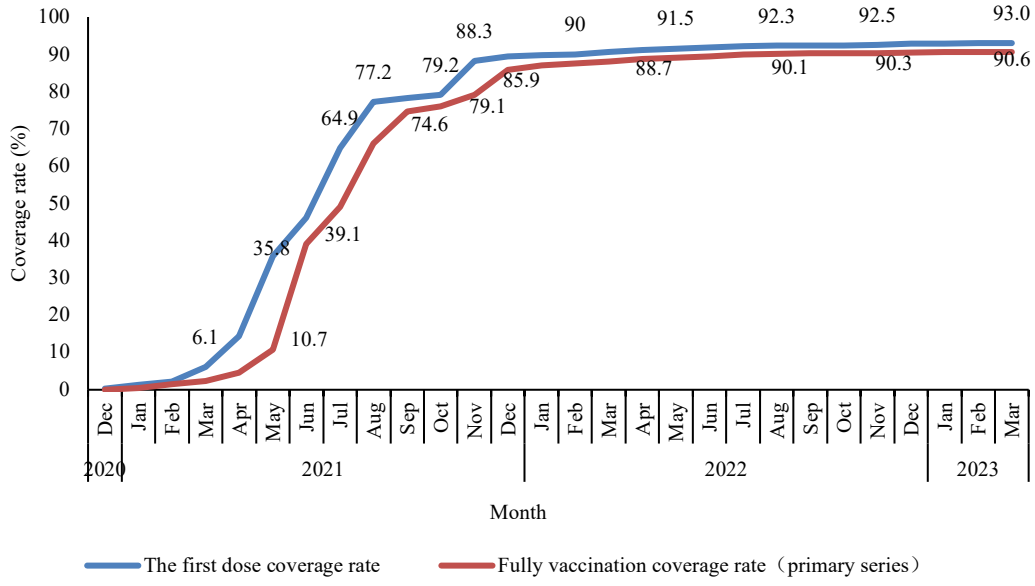

Figure 5-2 First-dose and primary series COVID-19 vaccine coverage of the entire population ofChinese mainland by Month.
(Data were reported by PLADs in Chinese mainland)

Based on an investigation on vaccination among elder population in early December 2022, vaccination rate of people over 60 years old reached 96.1%. In these elderly populations, 96.6% completed their full primary series and 92.5% of minimum-interval-eligible elderly individuals received their first booster dose (Figure 5-3).

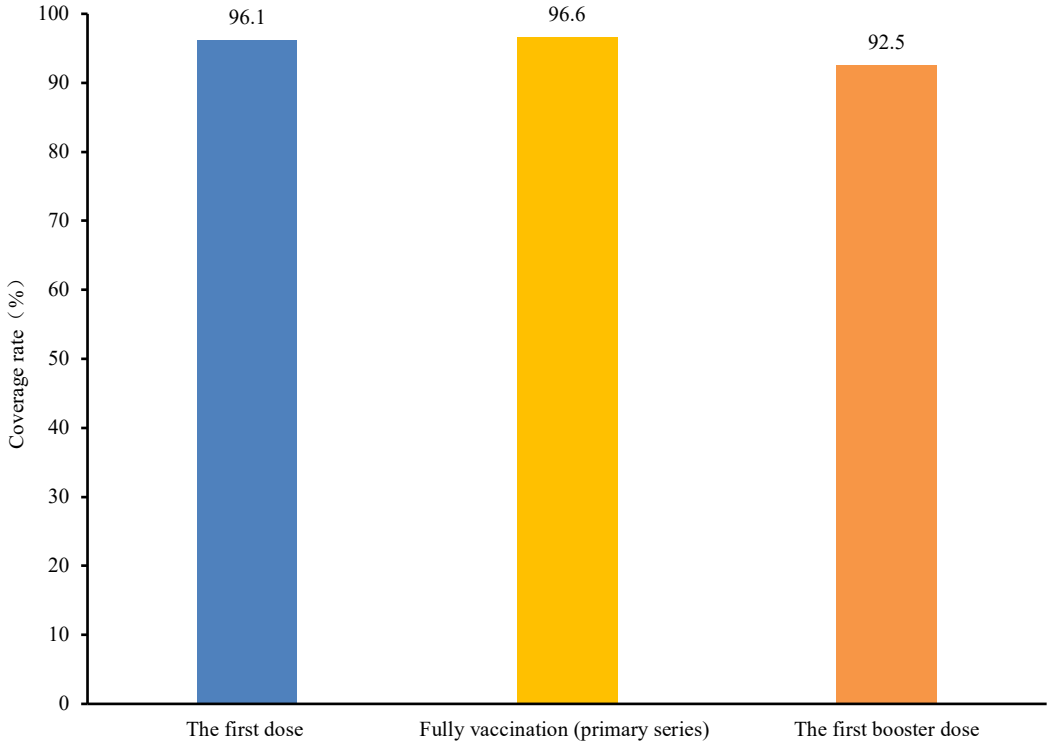

Figure 5-3 COVID-19 vaccine coverage of individuals 60 years and older: first-dose coverage, primary series coverage among interval-eligible individuals, and booster dose coverage among booster-dose-eligible individuals (based on reported population by each PLAD).

Notes: For calculating first dose coverage, the numerator was the number of people who had 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 (aged 60 or older) in a recent investigation targeting the elderly population.

For calculating full, primary series coverage, the numerator was the number of elderly people who 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 received their first booster dose, and the denominator was the number of people who received full primary series with either two doses of inactivated vaccine or one dose of adenovirus vectored vaccine, with a three-month interval between primary series completion and booster dose administration. Individuals who 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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