

COVID-19 Clinical and Surveillance Data — December 9, 2022 to February 23, 2023, China

Chinese Center for Disease Control and Prevention

1. COVID-19 Infection Surveillance Data

1.1 COVID-19 Nucleic Acid Test Data

From December 9, 2022 to February 23, 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 and rate of positive nucleic acid tests steadily decreased, reaching a low of 12,738 on February 23, 2023 with a rate of 1.4% (Figure 1-1).

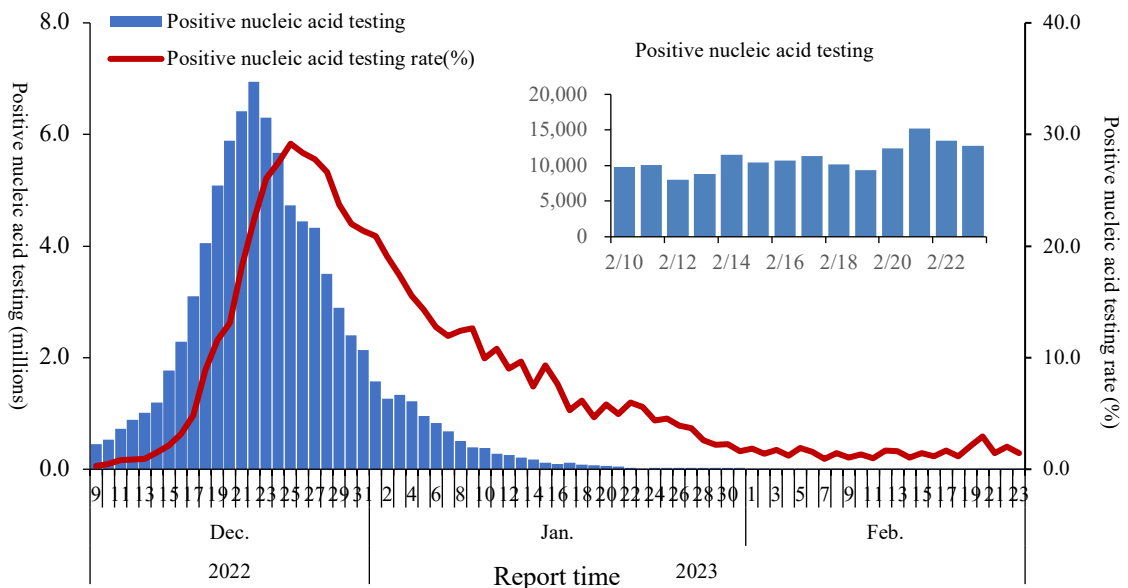


Figure 1-1 Daily number of positive nucleic acid testing and rate.
(Data reported by PLADs in Chinese mainland)

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 6,800 on February 23, 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 337 and 0.5%, respectively, by February 23, 2023 (Figure 1-2).

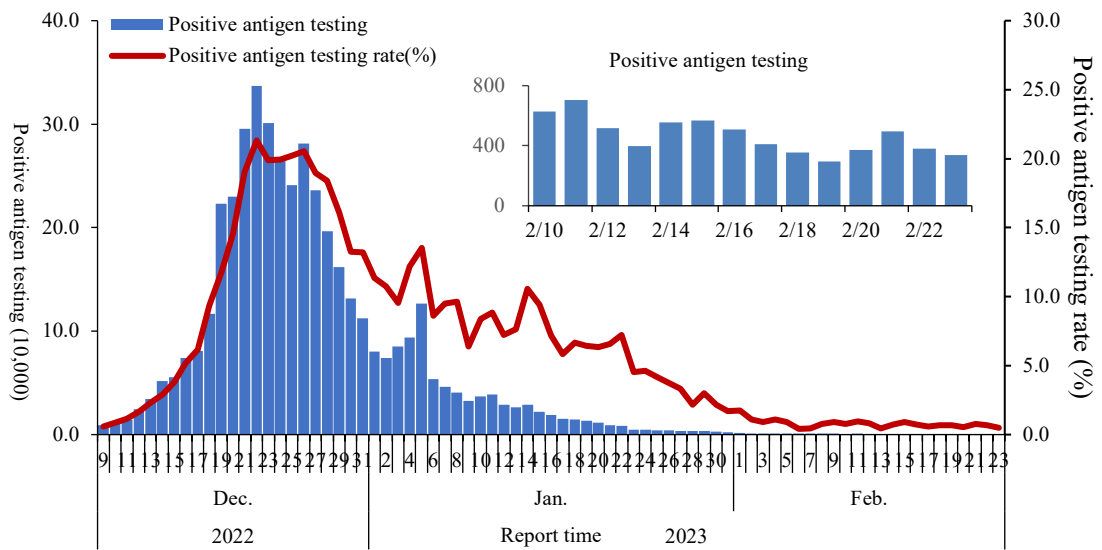


Figure 1-2 COVID-19 antigen test and positive rate.

(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 the Chinese mainland peaked at 2.867 million on December 23, 2022, then decreased continuously until January 23, 2023, and fluctuated to 147,000 visits on February 23, 2023, representing a decrease of 94.9% from the peak (see Figure 2-1).

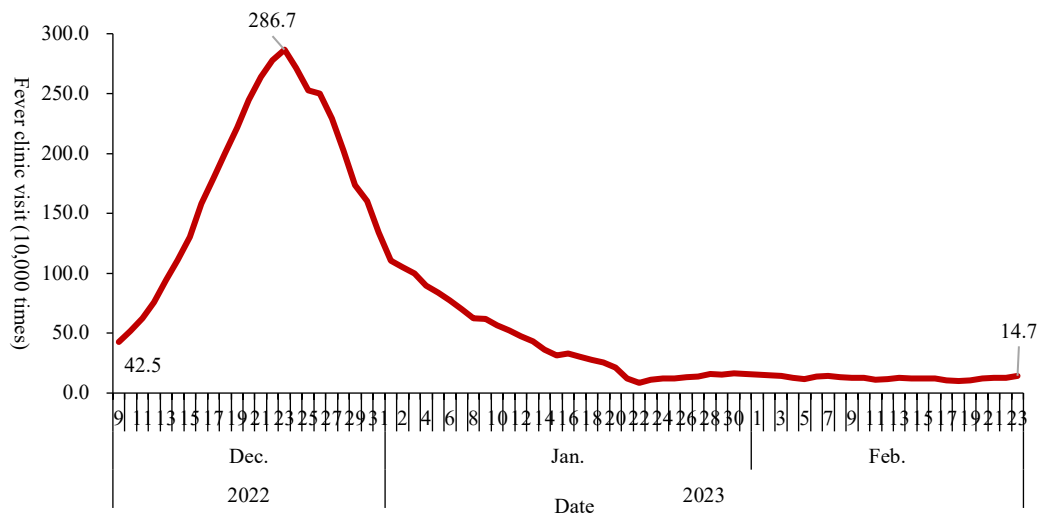


Figure 2-1 Fever clinic visit data.

(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 922,000 on December 23, 2022, then decreased continuously until January 22, 2022, and fluctuated to 33,000 visits on February 23, 2023, representing a decrease of 96.4% from the peak (Figure 2-2).

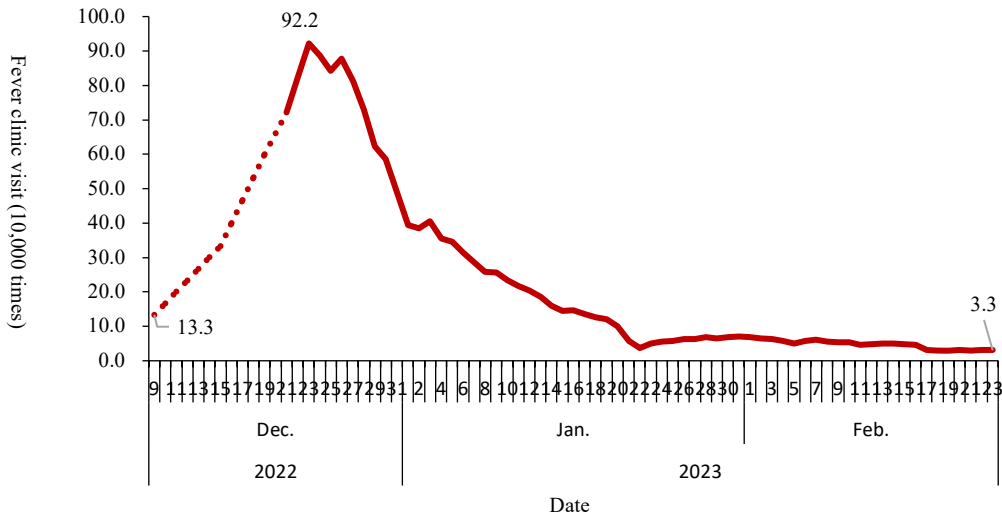


Figure 2-2 Rural fever clinic visit data.

(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 million on December 22, 2022. Visits then continuously decreased until January 22, 2022, and fluctuated to 115,000 visits on February 23, 2023, representing a decrease of 94.1% from the peak (Figure 2-3).

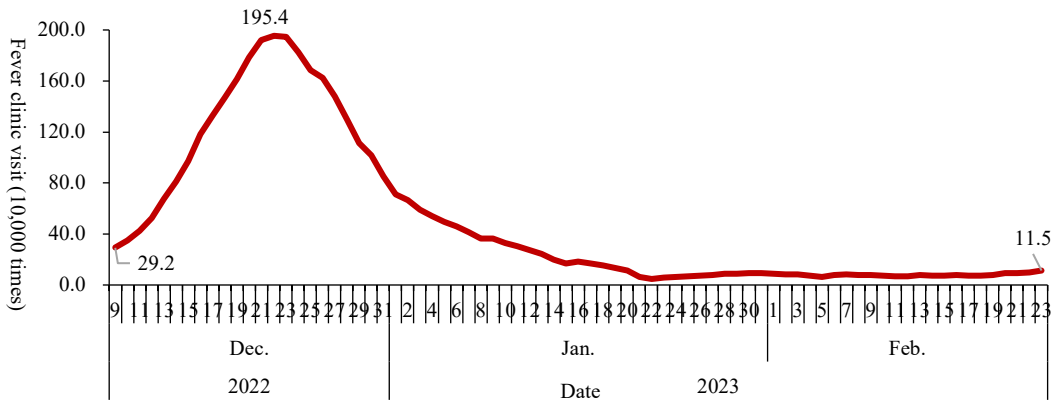


Figure 2-3 Urban fever clinic visit data.

(All data were reported by PLADs in Chinese mainland)

2.4 Surveillance Data 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 $\geq 38^{\circ}\text{C}$, 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. In Week 7 (February 13-19, 2023), the ILI% was 1.8% (see Figure 2-4).

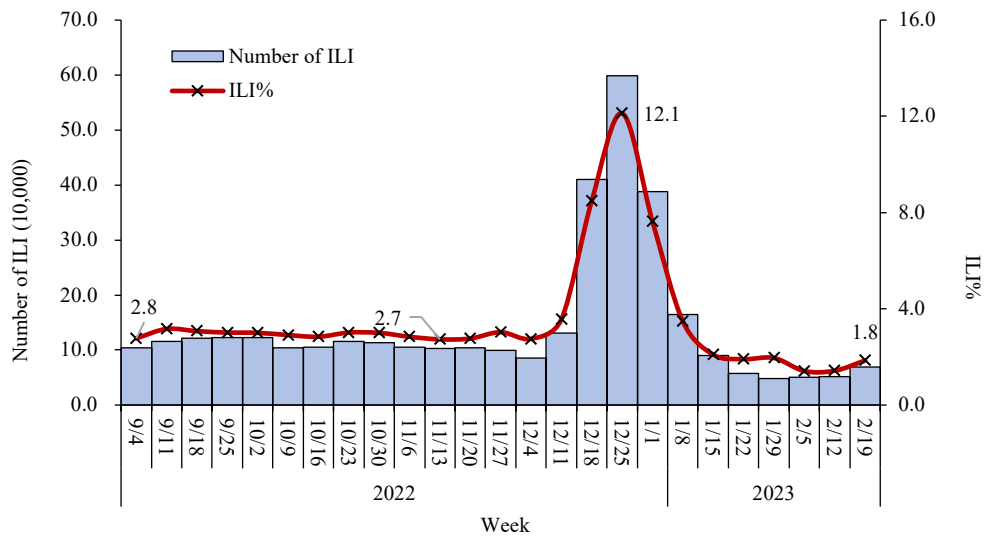


Figure 2-4 ILI and ILI% reported by sentinel hospitals in Chinese mainland.

(Reported data were from 824 sentinel hospitals)

In the influenza surveillance network laboratories, both SARS-CoV-2 and influenza viruses were tested simultaneously in ILI samples. The positive rate of SARS-CoV-2 began to increase in Week 49 (December 9–15, 2022), reaching its peak between Weeks 51 and 52, then gradually decreasing. By Week 7 (February 13-19, 2023), the positive rate of SARS-CoV-2 had reduced to 3.4%. During the same period, the positive rate of influenza virus decreased to a very low level in late December 2022, remaining less than 1% until early February. In Week 7 (February 13-19, 2023), it increased to 14.3% (Figure 2-5).

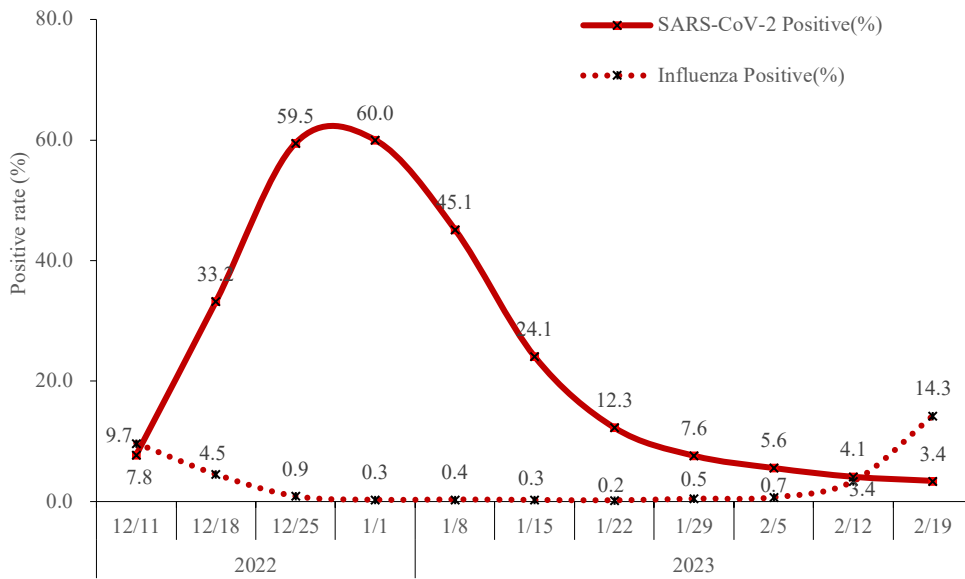


Figure 2-5 The positive rate of SARS-CoV-2 and influenza virus in ILI samples from sentinel hospitals in Chinese mainland.

(Reported data were from 402 laboratories)

3. Hospitalization Data

3.1 No. of COVID-19.

The number of COVID-19 hospitalizations nationwide peaked at 1.625 million on January 5, 2023, and then steadily decreased to 14,500 on February 23, 2023, representing a 99.1% decrease from the peak (see Figure 3-1).

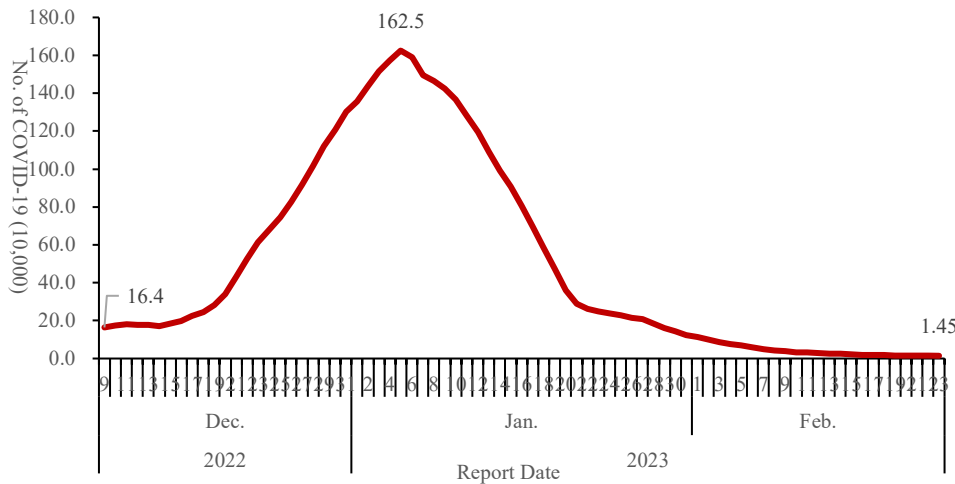


Figure 3-1 The Number of COVID-19 in Hospitals.

(All data were reported by provinces 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. This number then continually decreased to 8 (0 severe cases of SARS-CoV-2, and 8 cases with comorbidities and SARS-CoV-2) on February 23, 2023, representing a decrease of 99.9% from the peak (see Figure 3-2).

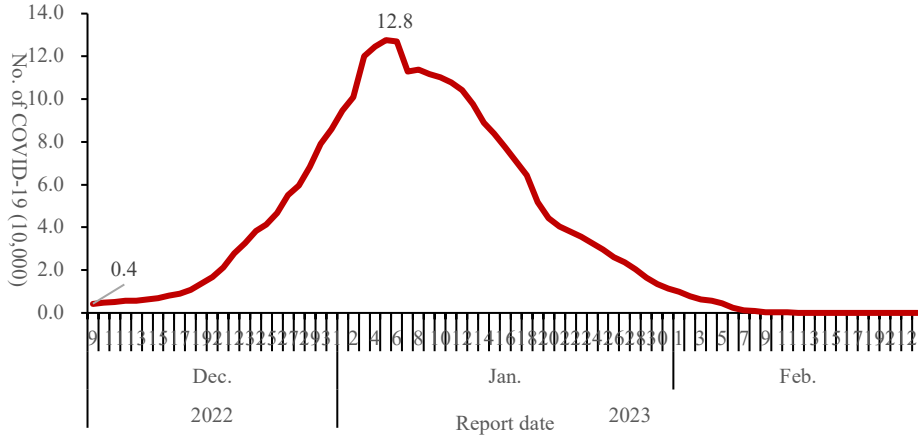


Figure 3-2 No. of severe cases in hospitals.

(All data were reported by provinces in Chinese mainland)

3.3 No. of Deaths 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 February 23, 2023. From February 17 to 23, seven deaths associated with SARS-CoV-2 were reported by medical institutions from provincial-level administrative divisions (PLADs), including zero deaths due to respiratory failure caused by SARS-CoV-2, and seven deaths due to underlying comorbidities with SARS-CoV-2 infection.

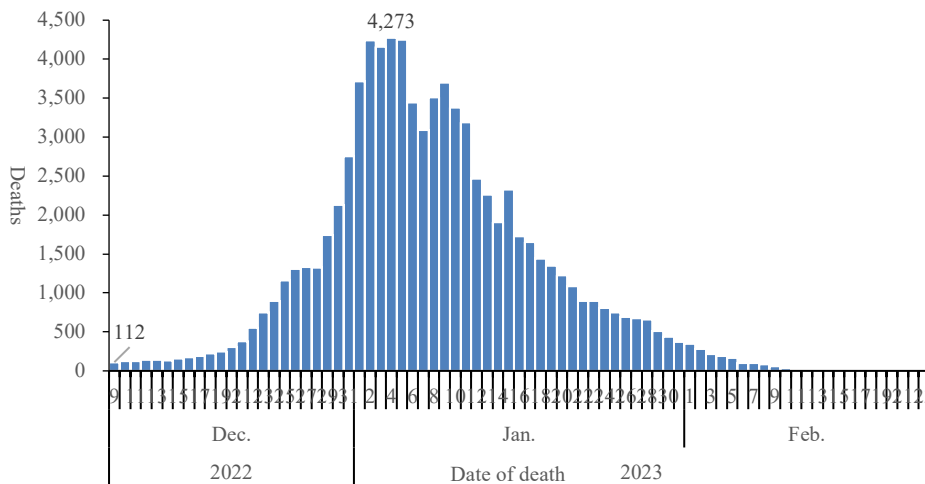


Figure 3-3 No. of deaths with SARS-CoV-2 in hospitals.

(All data were reported by provinces 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 February 23, 2023, 27,315 valid SARS-CoV-2 genome sequences from domestic cases were reported nationwide. Of these, 80 Omicron lineages were identified, with the predominant lineages being BA.5.2.48 (53.9%), BF.7.14 (25.2%), and BA.5.2.49 (13.4%). Eighteen lineages had a proportion of 0.1% to 2.4%, including BA.5.2. The other 59 lineages were minority, with the proportion below 0.1%, accounting for 0.7% (see Figure 4-1).

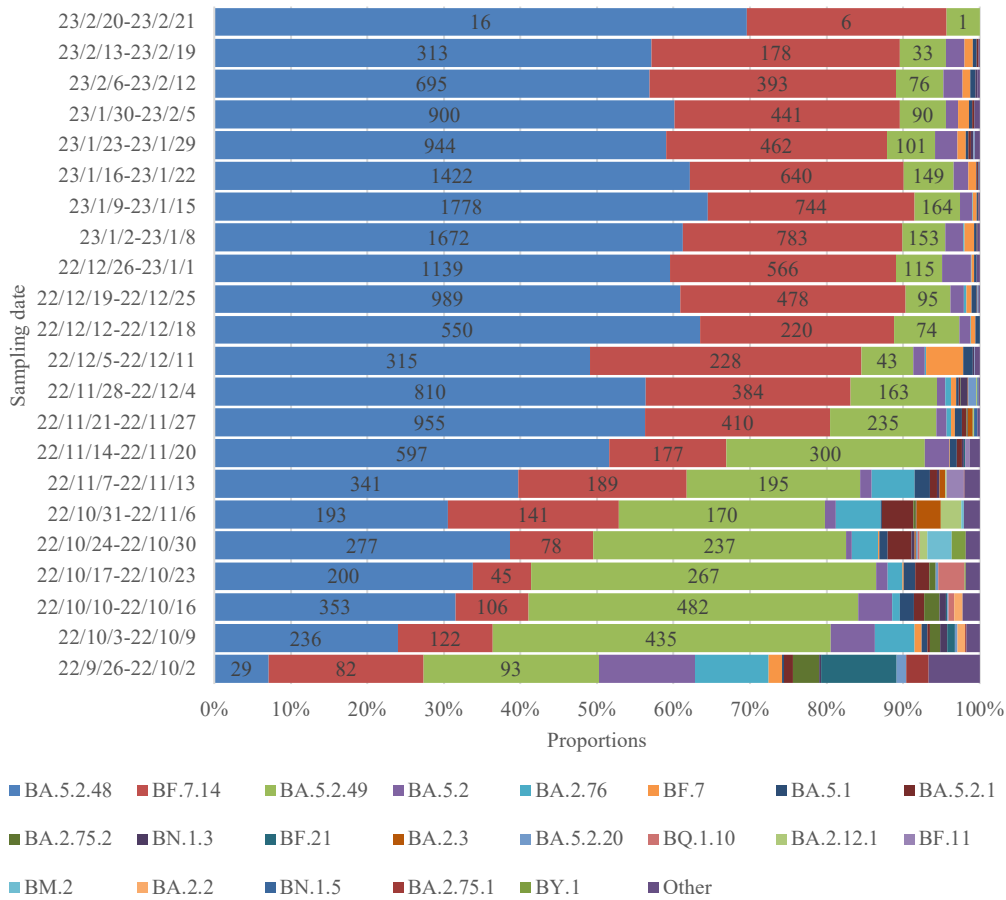


Figure 4-1 Dynamic trend of SARS-CoV-2 lineages from domestic cases in Chinese mainland by week.

Note: 1) Sampling date range: September 26, 2022 to February 21, 2023; 2) The numbers indicated in the figure represent the number of valid genome sequences of the BA.5.2.48, BF.7.14, and BA.5.2.49 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 February 23, 2023, 18,618 valid SARS-CoV-2 genome sequences from domestic cases were reported nationwide, all of which were Omicron variants with a total of 36 lineages. The predominant lineages were BA.5.2.48 (60.5%) and BF.7.14 (28.9%) (see Table 4-1). A total of 22 domestic cases of variants of concern

were identified, including one case of XBB.1, five cases of XBB.1.5, four cases of BQ.1, five cases of BQ.1.1, one case of BQ.1.1.17, four cases of BQ.1.2, and two cases of BQ.1.8.

Table 4-1 National Proportions of SARS-CoV-2 Variants
(December 1, 2022 to February 23, 2023)

Omicron lineages	Proportions (%)
BA.5.2.48	60.5
BF.7.14	28.9
BA.5.2.49	6.4
BA.5.2	2.1
BF.7	1.0
BA.5.1	0.4
BA.2.76	0.1
BA.5.2.1	0.1
BA.5.2.20	0.1
BN.1.3	0.1
Other	0.3
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, Inner Mongolia, and Tianjin, while BA.5.2 and its descendant lineages were predominant in other PLADs (see Figure 4-2).

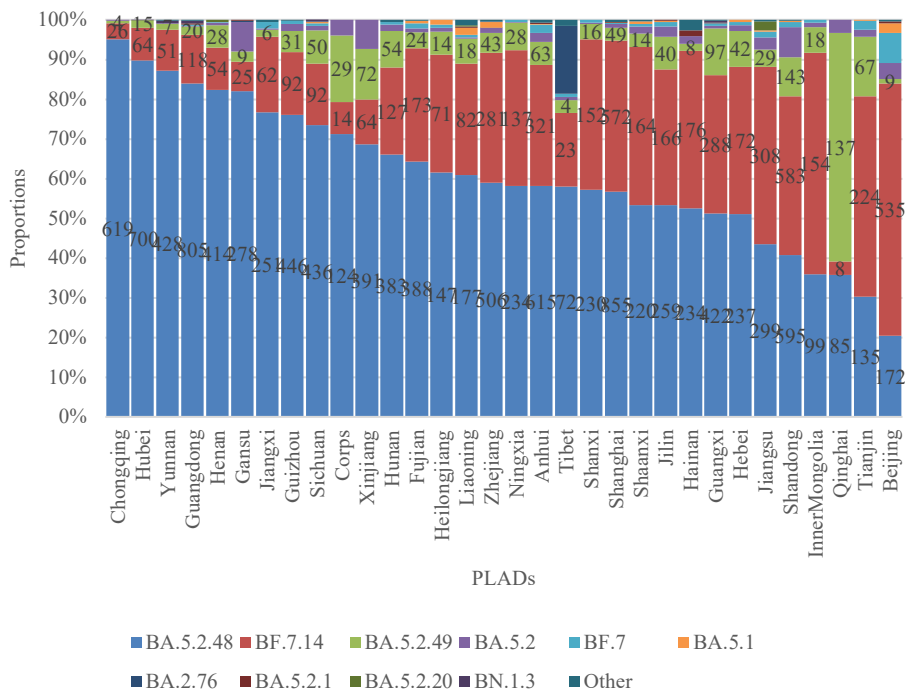


Figure 4-2 SARS-CoV-2 variants surveillance by PLADs.

Notes: 1) Sampling date range: December 1, 2022 to February 21, 2023; 2) The numbers indicated in the figure represent the number of valid genome sequences of BA.5.2.48, BF.7.14, and BA.5.2.49 lineages, respectively; 3) “Other” refers to lineages with a nationwide proportion of Omicron variants less than 0.1%.

5. Progress of COVID-19 Vaccination

As of February 23, 2023, 3.49 billion doses of COVID-19 vaccine had been administered in mainland China (see Figure 5-1). Since the start of the vaccination campaign, 1.31 billion people had received at least one dose, 1.28 billion had completed a primary series, and 827.32 million had 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 had initiated vaccination and 90.6% had completed their primary series (see Figure 5-2). Among the 60-years and older population, 679.84 million doses of COVID-19 vaccine had been administered, 241.69 million people had received at least one dose, 230.30 million had completed primary series, and 192.83 million had received their first booster dose.

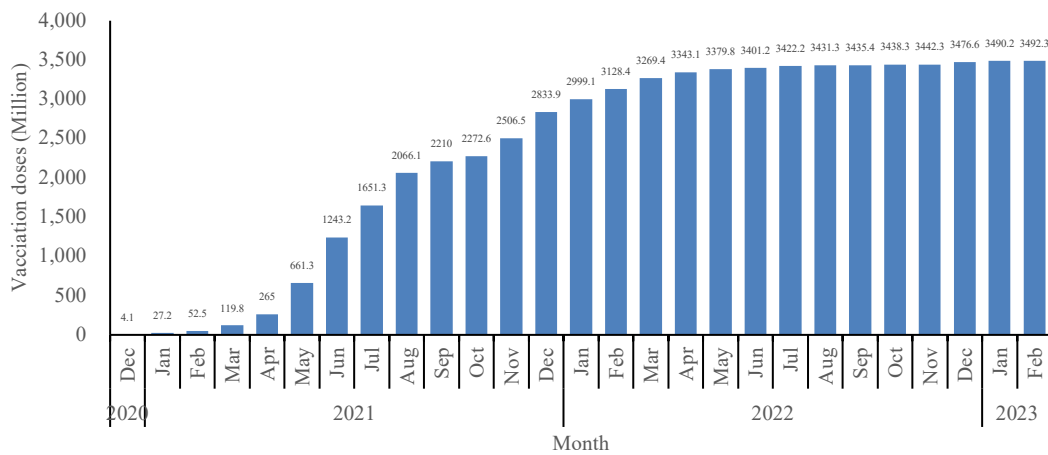


Figure 5-1 Cumulative COVID-19 vaccine doses administered in China by month.

(All data were reported by provinces in Chinese mainland)

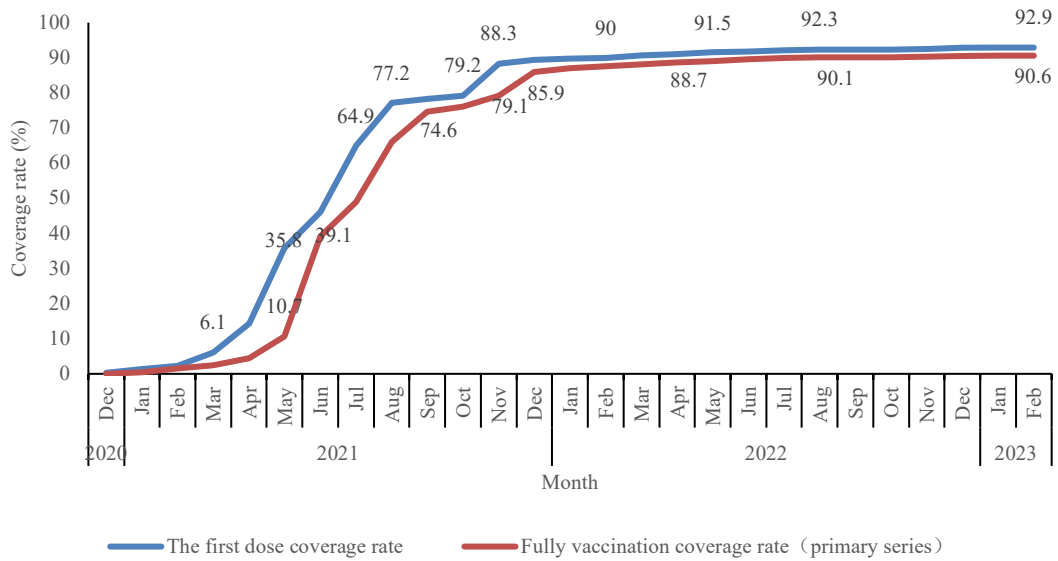


Figure 5-2 First-dose and primary series COVID-19 vaccine coverage of the entire population of Chinese mainland, by Month.
(All data were reported by PLADs in Chinese mainland)

An investigation of vaccination among the elderly population in early December 2022 revealed that the vaccination rate of individuals over 60 years old was 96.1%. Of these elderly populations, 96.6% completed their full primary series and 92.4% of those eligible for a minimum-interval booster dose received it (see Figure 5-3).

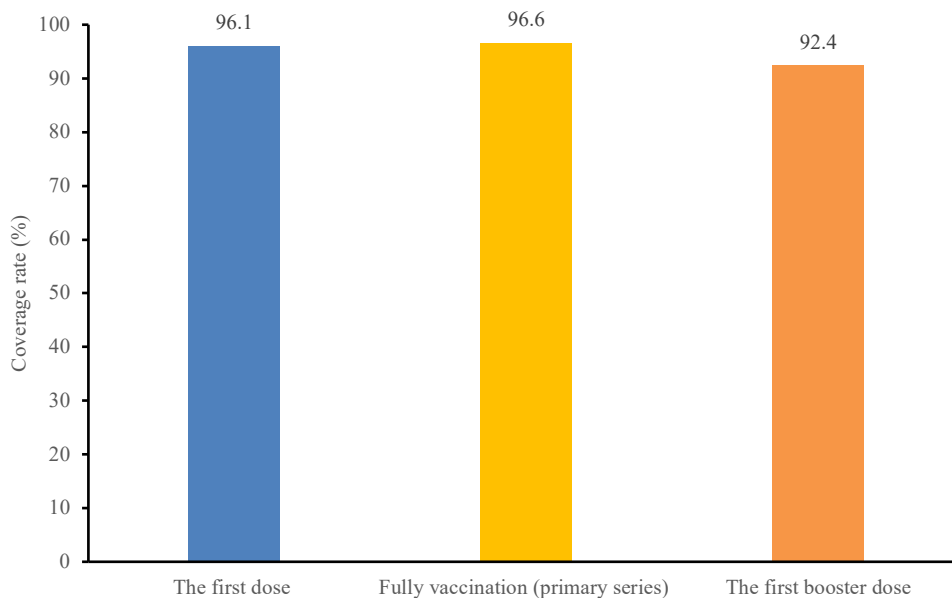


Figure 5-3 COVID-19 Vaccine Coverage of Individuals 60 Years and Older: first-dose coverage, Primary Series Coverage among Interval-eligible Individuals, and Booster Dose Coverage among Booster-dose-eligible Individuals(based on reported population by each PLAD).

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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