



Detection of SARS-CoV-2 infections in passengers arriving from China and their implications on air travel and public health in Italy

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Dear Editor,

Two recent flights from Beijing and Shanghai to Milan brought near about 100 severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2)-infected passengers to Italy on 26 December 2022. All the arrivals were tested and sequenced to ensure the detection of possible variants of the virus amid China's surge in coronavirus disease 2019 (COVID-19) cases after it nullified the stringent zero-COVID-19 policy following mass public protests. About 38% (35/92) of the travellers on the first flight landed at Milan's airport, and 52% (62/120) of those on the second flight were positive. Although COVID-19-positive travellers had already known Omicron variants, Italy plans to mandatorily test all arrivals from China henceforth^[1].

Considering the uncertainty of the scale of spread, many countries like United States of America, United Kingdom, Japan, India, South Korea, Malaysia, and Taiwan have imposed similar restrictions on air travel from China^[1]. US Centres for Disease Control and Prevention (CDC) is encouraging the Traveller-based Genomic Surveillance programme (TGS) to characterize and sequence emerging variants at a faster rate. TGS collects random nasal swabs from arriving international travellers; the programme is expanding to include 290 weekly flights from China^[2].

European CDC, and the European Union/European Economic Area (EU/EEA) Member States are working closely with the WHO to enhance surveillance on emerging variant threats via the Strategic Analysis of Variants in Europe (SAVE) Working Group. The number of COVID-19 cases surged in China and peaked on

HIGHLIGHTS

- Two recent flights from Beijing and Shanghai (China) to Milan (Italy) brought near about 100 severe acute respiratory syndrome coronavirus 2-infected passengers to Italy on 26 December 2022.
- 38% (35/92) of the travellers on the first flight landed at Milan's airport, and 52% (62/120) of those on the second flight were positive.
- All the travellers had to stay in quarantine in places marked by local health authorities.

31 December 2022 (Fig. 1). There is a lack of authentic data from China on COVID-19 cases. China has started depositing SARS-CoV-2 sequences in Global Initiative on Sharing Avian Influenza Data (GISAID) EpiCoV in higher numbers. Out of the total 592 sequences submitted from China, 437 (collected in December 2022) mainly belonged to the lineages BA.5.2, BF.7, BQ.1, BA.2.75, XBB, BA.2, and the variants BA.5.6, BA.4.6, BM.4.1.1 and BA.2.3.20. Considering EU/EEA citizens have relatively high vaccine coverage rates and population immunity, as well as the prior emergence and subsequent replacement of variants circulating in China by other Omicron sublineages, this surge in cases in China is not expected to impact Europe^[3,4].

The world is all set to welcome the New Year 2023, but things may not stay normal as it has become after a long period of obligatory antipandemic measures^[5]. The WHO has requested Beijing to provide real-time data on the number of positive cases, genetic sequencing, hospitalisations, mortality and vaccinations. WHO has backed steps taken by other countries imposing travel restrictions to protect their populations. When the most populated country in the world, China, with 1.4 billion people, suddenly scrapped the zero-COVID policy, an explosion in the number of cases was expected^[6].

Air travel is contemplated to facilitate the spread of COVID-19 cases worldwide via travellers. Safe and efficient 'travel bubbles' across the borders, strict temperature screening at entries, rapid testing, quarantine, GPS (Global Positioning System) tracking, dissemination of public health information, and mandatory certification of COVID-19-free status in the form of test reports can lead to some extent curb transmission of COVID-19^[7]. The pandemic has affected the travel and aviation industry. While new vaccines and antiviral agents have greatly reduced the risk of severe hospitalisation and mortality, the threat of new emerging variants that evade vaccine immunity can complicate efforts to return to a normal travel routine^[8]. In such a scenario, there should be a thorough evaluation of vaccine effectiveness

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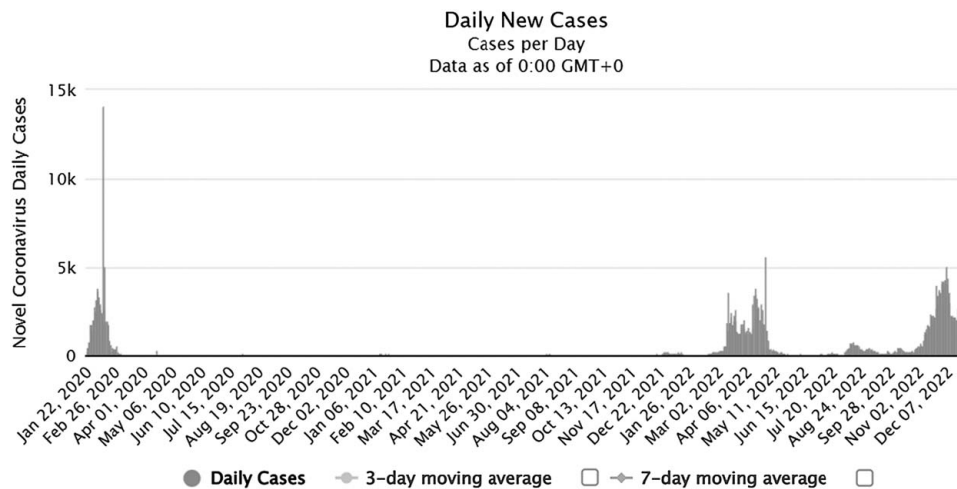


Figure 1. The highest peak after the year 2020 corresponds to 7204 cases on 31 December 2022. Taken from <https://www.worldometers.info/coronavirus/country/china>.

postintroduction. As vaccine efficacy may vary considerably among different vaccine products, vaccines with lower effectiveness may impact public health negatively. A national cohort study from Chile by Wilder-Smith A. and Mulhollan M. can serve as a useful model to monitor vaccine effectiveness over time against different variants and in different ethnic groups and settings^[9].

As per a Cochrane systematic review, the favourable evidence for most travel-related control precautions is very low. Most studies predicted a positive effect in the form of a delayed peak of case surges; however, results varied from no delay at all to a delay of 1 day to 85 days. International travel restrictions may help limit the spread of COVID-19; however, screening travellers only for symptoms at borders or at arrival is likely to miss many cases. Quarantine that lasts for a minimum of 10 days, along with testing and people following rules, can prevent the spread of COVID-19^[8,10]. The measures taken by different countries regarding international travel should be watched in recent times, and the outcomes can be analysed to comment on the effectiveness of the same.

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Author contribution

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All authors declare no conflicts of interest.

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Data availability

All data are included in the manuscript.

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