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## Moving away from zero COVID in China

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For the **Airfinity** analysis see  
<https://www.airfinity.com/articles/china-risks-between-1-3-and-2-1-million-deaths-if-it-ends-its-zero-covid>

On Dec 7, 2022, China's National Health Commission announced major changes to the country's policies on COVID-19. Individuals with mild symptoms of disease, or who are asymptomatic, are now permitted to isolate at home rather than in designated quarantine facilities. People will no longer have to show an electronic health pass to gain entry into most public places. Lockdowns will be targeted at high-risk zones, specific buildings, rather than entire districts and cities, and will be discontinued after 5 days without any new cases of COVID-19.

The changes mark the end of China's dynamic zero COVID policy, which deployed mass testing and strict quarantine measures to prevent outbreaks of COVID-19 from taking hold. The policy was proving extremely difficult to sustain against the highly transmissible omicron variant. On Nov 29, 2022, there were more than 70 000 new infections with SARS-CoV-2 in mainland China, the highest number for a single day since the pandemic began. Several cities have endured lengthy lockdowns, often prompted by a handful of infections. There were indications that people were starting to run out of patience. The days prior to the announcement by the National Health Commission saw protests in several cities, including one in Shanghai in which the crowd chanted "we don't want COVID tests, we want freedom".

Feng Zijian, former deputy director of the Chinese Center for Disease Control and Prevention, has suggested

that 60% of the country's population could become infected with SARS-CoV-2 in the first wave of disease following opening up, which equates to 840 million people. Airfinity, a science information and analytics company, extrapolated from the experience of Hong Kong with omicron earlier this year to make projections for China. It concluded that ending the zero COVID strategy would result in 167–279 million cases of disease.

Predicting the number of deaths is tricky. Much will depend on the coverage and timing of the COVID-19 vaccines among the elderly and vulnerable, as well as the availability of antivirals. Serological studies from the UK have shown that almost everyone in the nation has antibodies against SARS-CoV-2; equivalent data for China are not publicly available, but levels of natural immunity will certainly be low. The country has registered fewer than 2 million cases of COVID-19 throughout the course of the pandemic.

China has declined to approve either of the highly effective mRNA vaccines that have been rolled out elsewhere. Instead, it has used two homegrown inactivated vaccines, one of which has an efficacy rate against symptomatic disease of 51%. More than 90% of the Chinese population have had two doses of the COVID-19 vaccine. But take-up among the elderly has been inadequate, partly because of vaccine hesitancy and partly because zero COVID implied concentrating on those who were most likely to spread the infection, rather than on those who were most vulnerable to severe disease. Moreover, WHO has recommended a three-dose schedule of the inactivated vaccines for people over the age of 60 years. As of November, 2022, around two-thirds of individuals over the age of 80 years had received two doses of the COVID-19 vaccine in China;

only 40% of the same age group had received all three doses.

The Airfinity analysis projected that somewhere between 1.3–2.1 million people will die from COVID-19 after China re-opens. Modelling commissioned by *The Economist* has put the likely death toll at 680 000; however, this was based on the assumption that there would not be a lack of intensive care unit beds. But China has just 3.6 intensive care unit beds per 100 000 population. "In the last 3 years, China has made large investments in laboratory testing resources and in isolation camps and quarantine facilities. But there has not been as much money directed to hospitals", noted Ben Cowling, professor of epidemiology at the University of Hong Kong.

Zhengming Chen, professor of epidemiology at the University of Oxford (Oxford, UK), questioned the timing of the shift in policy. The Chinese New Year is a few weeks away, which will entail a huge amount of travelling and social interaction. "China has not done enough to prepare for re-opening", Chen told *The Lancet Respiratory Medicine*. "They should have been promoting vaccination and preparing the media, the health-care system, and the general public. I have not seen much of any of this over the past 6 months."

Cowling agrees. "If China had said that zero COVID was only a temporary measure to buy time until people got vaccinated, and communicated the policy accordingly, they would be in a far better position right now", he said. "They could have laid the groundwork for a planned opening 3 months ago, for example, rather than in the middle of winter, which is the worst time to open. Now, they have to suddenly change their messaging on zero COVID and on the dangers of omicron. It is not going to be easy."

Talha Burki

