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Covid-19: China stops counting cases as models predict a million or more deaths

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China has effectively stopped counting covid cases and deaths, abandoning mass testing and adopting new criteria for counting deaths that will exclude most fatalities from being reported.

The Chinese National Health Commission's official daily briefing, which had offered detailed if uninformative statistics every day since February 2020, has not been published since 24 December. The commission did not respond to *The BMJ's* questions about why the briefing stopped.

The last briefing reported zero covid deaths across China on 23 December and on each of the previous three days, even as foreign media visited overbooked funeral homes and videos shared online in China showed hospital corridors packed with patients.

China's official death toll has risen by just six deaths since "zero covid" policies were dropped on 7 December, standing at 5241 for the whole pandemic. Modelling by the UK health analytics firm Airfinity estimated that there had been 110 000 deaths from covid-19 in China since the beginning of December and that 11 000 people a day were dying from the virus.¹

Anxious to avoid announcing high case numbers, from early in the pandemic China reported only symptomatic cases, contrary to World Health Organization recommendations and most countries' practice. The government eventually relented to international criticism and began reporting asymptomatic cases. But last month, even before it stopped giving daily briefings, China adopted a new and unique definition of covid death that appears designed to keep mortality numbers low.

Wang Guiqiang, an infectious disease expert working for China's government, told a State Council news conference on 20 December that new criteria would "scientifically and objectively reflect deaths" by only counting as covid deaths fatalities caused by pneumonia and respiratory failure in patients who had tested positive.

"The main cause of death from infection with omicron is the underlying diseases," said Wang. "Respiratory failure directly caused by the new coronavirus infection is rare. Deaths caused by other diseases such as cardiovascular or cerebrovascular diseases and heart attacks will not be classified as deaths caused by coronavirus."

The government's figures for covid deaths throughout December drew widespread scorn and disbelief on Chinese social media. China's army of internet censors have not consistently suppressed the complaints, nor deleted stories of packed hospitals

and empty workplaces, perhaps aware that it represents most people's daily lived experience.

Every unofficial indicator suggests that China is in the grip of a major surge. Pharmacy shelves have been largely emptied of cold and flu drugs and ibuprofen tablets are being sold individually on government orders, with a limit of six pills per customer. Doctors on social media describe hospitals with staff infection rates of 80%.

"In China, what's been reported is relatively low numbers of cases in intensive care units, but anecdotally they are filling up," said WHO emergencies director Mike Ryan at a 22 December press conference. "I wouldn't like to say that China is actively not telling us what's going on. I think they're behind the curve."

Countries impose border tests

Unreliable figures were cited by several of the countries that have announced mandatory covid tests for travellers from China in recent days, including Australia, France, India, Israel, Italy, Morocco, Spain, the UK, and the US.

"This wouldn't be happening if China was upfront and open and shared its data as many other countries do," UK Conservative MP Steve Brine, chair of the Commons health and social care committee, told the BBC Radio 4 *Today* programme.

The border restrictions come after China announced that on 8 January it will end mandatory quarantine for people entering or returning to China, the last remaining pillar of its zero covid policy. The rule change is expected to trigger a flood of outward travel by Chinese tourists.

Few epidemiologists support the new travel restrictions, as the variants circulating in China are already widespread in other destinations. Concerns that a vaccine evading variant might evolve in China are overblown, according to most experts, as there is so little immunity in the population that current variants thrive easily there.

Models point to grim 2023

Airfinity's model predicts that China's outbreak will reach a first peak on 13 January, at 3.7 million new cases a day. Covid deaths are expected to peak 10 days later at around 25 000 a day, which is roughly equivalent to China's normal daily death toll from all other causes. A second peak, striking rural areas hard, will reach 4.2 million new cases a day on 3 March, the model predicts. It foresees 1.7 million deaths across China by the end of April 2023.

The model is based on data compiled from China's provinces before the changes in reporting were

implemented, combined with case growth rates from other former “covid zero” countries which lifted restrictions, such as Hong Kong and Japan.

Mark Woolhouse, professor of epidemiology at the University of Edinburgh, said, “Even though the currently dominant variant, omicron, is considered less virulent than some of its predecessors, it is still capable of causing large waves of hospital admissions and deaths, as we saw in Hong Kong earlier this year.”

The roughly 9000 deaths seen in Hong Kong during a sudden omicron surge in early 2022, if extrapolated to China’s population, would number over 2 million. Hong Kong’s 43% vaccination rate in the over-80s was identical to the current rate among over-80s on the mainland, but Hong Kong offered mRNA vaccines while the mainland does not.

“People vaccinated with SinoVac [a Chinese vaccine used widely in that country] are, according to a study earlier this year, three times more likely to get severe disease than those vaccinated with one of the mRNA vaccines,” said Woolhouse. “So, even with better coverage, there is the potential for a much larger wave of death and disease than occurred in Australia or New Zealand.”

Another model, published as a preprint by state funded researchers at the University of Hong Kong, also suggests that difficult weeks lie ahead for China. It predicts that lifting covid restrictions will result in 684 deaths per million by the end of January 2023.² This would translate to around 964 000 deaths.

China signed a deal last month with Pfizer to import the antiviral Paxlovid, which is already manufactured under licence in the country. Whether it obtains enough to tackle need is a key variable affecting deaths in most models.

But the most important measure according to almost all experts is mass immunisation with an mRNA vaccine. Having rejected a deal to procure Moderna’s vaccine in November because it did not include manufacturing rights for China, the government in Beijing appears no closer to taking that step.

1 Airfinity. China’s covid-19 wave forecast to have two peaks where cases could reach 4.2 million a day. December 2022. www.airfinity.com/articles/chinas-covid-19-wave-forecast-to-have-two-peaks-where-cases-could-reach-4-2.

2 Leung K, Leung GM, Wu JT. Modelling the adjustment of covid-19 response and exit from dynamic zero-COVID in China. [Preprint] 14 December 2022. www.medrxiv.org/content/10.1101/2022.12.14.22283460v1.full.pdf.

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