

China's Response to Covid-19 and Its Public Health Implications

Prepared statement by

Yanzhong Huang

Senior Fellow for Global Health, Council on Foreign Relations

Professor, School of Diplomacy and International Relations, Seton Hall University

Before the

U.S.-China Economic and Security Review Commission

Hearing on "Challenges from Chinese Policy in 2022: Zero-COVID, Ukraine, and Pacific Diplomacy"

Introduction

Back in 2019, on the eve of the novel coronavirus outbreak, China appeared to be well under way to achieve the objectives of its Healthy China 2030 blueprint, which aims to significantly improve its people's public health standards to the level of high-income countries. Already, health insurance schemes had been extended to cover virtually the entire population, as part of the healthcare reform process that sought to significantly improve access and affordability in China. Meanwhile, more than 16 years of post-SARS disease surveillance and capacity building appeared to have [convinced](#) government officials that China was in a much better position to rapidly and effectively detect and respond to any public health emergencies.

Against this backdrop, it was truly shocking when a novel coronavirus outbreak emerged in Wuhan and quickly spread to other parts of the country before evolving into a global pandemic in March 2020. Leaked documents from the Hubei Provincial Health Commission [revealed](#) that "underfunding, understaffing, poor morale and bureaucratic models of governance" hampered China's disease surveillance and response capacity from day one of the outbreak. The local government not only covered up the cases but was also slow in confirming diagnostics (which in part was caused by the [shortage in coronavirus test kits](#)). In addition to the flawed reporting and testing mechanisms, local hospitals were caught off guard and quickly overwhelmed by the surge of cases.

But once the state recognized the seriousness of the problem, it moved quickly to ramp up its ability to cope with the crisis. On January 23, 2020, the government imposed lockdown on the city of Wuhan, the Covid-19 Ground Zero. In perhaps the largest medical support mission since 1949, the government mobilized [42,600 healthcare personal](#) from across the country to support Wuhan's anti-Covid campaign

during the period of January 24 to March 8. Within the span of a couple of weeks it completed the building of enough hospitals and facilities to treat all the infected cases in the city. Meanwhile, the government has significantly increased its capacity to enforce other public health measures, including masking, quarantine, contact tracing, and monitoring of people's movement.

This course of action soon paid off. By mid-February 2020, daily new case count began to drop dramatically. On April 8, 2020, with the lifting of Wuhan lockdown, China emerged as an early winner in the campaign against Covid-19. This transpired at a time when other countries including the U.S. were still reeling from the crisis. China's initial success beefed up the legitimacy of the Chinese government, lending support to the self-proclaimed superiority of the China model. It also enabled China to start economic recovery earlier and became the only major economy that registered economic growth for 2020. Equally important, the return to some level of normalcy allowed China to buy time for vaccine development and distribution, which ultimately paved way for China to practice "mask diplomacy" and "vaccine diplomacy".

The Launch and Implementation of Zero-Covid Strategy

In view of the global spread of the virus, China's comparative success in fighting Covid also generated strong incentives to secure its "[hard-won achievements](#)" of Covid control, which in turn justified the pursuit of "zero-Covid" policy in pandemic response. The term "*qing ling*" (resetting cases to zero) [appeared in Chinese media as early as February 2020](#). But it was only promoted as a government strategy in the aftermath of the Wuhan outbreak. In order to prevent the imported cases and the rebound of domestic transmission, China started to pursue a strategy under which the government relies on draconian, often nonpharmaceutical intervention measures to reset local cases to zero. That policy, which is sometimes also called "dynamic zero-Covid", has its own variants, including "societal zero-Covid", under which the government can declare success when cases are only found in quarantined or "controlled zones".

Zero-Covid policy has some important components. Keenly aware of the threat of imported cases, the government has imposed the world's most stringent restrictions on inbound international travel, under which anybody who wants to travel to China is subject to multiple tests before departure and long quarantines in designated hotels after entry. Since May 2020, with the introduction of pooled testing in Wuhan, i. e., combining multiple individual samples for testing in a single tube, mass PCR testing has become a major policy tool to quickly ferret out new cases and take early action. In November 2021, the National Health Commission further [stipulated](#) that cities with no more than five million residents should complete mass PCR testing within two days and cities with more than five million residents complete it within three days.

The government also relies on aggressive contact tracing and quarantines to quickly break the transmission chain. Even single-digit cases can trigger immediate contact tracing, and the identified close contacts are then moved to designated places for quarantines. In some cities, the detection of even one Covid case in one building could lead to the quarantining of all residents in the building. In light of Shenzhen's success in resetting local cases to zero after one week of lockdown in the spring of 2022, there has been more frequent and extensive use of lockdown measures across China, which effectively curb business activities and people's movements. These measures are implemented through a mix of traditional and high-tech means, including mutual social monitoring, grid management, big data, and QR codes.

Since April 2022, the government has also moved to institutionalize and routinize key zero-Covid measures, including quarantines and mass PCR testing. In September 2021, Guangzhou [built](#) a 5,000-room facility (officially named “International Health Station”) to replace designated hotels located throughout the city to quarantine travelers arriving from overseas. The central government now [requires](#) each province to build two or three makeshift hospitals. These hospitals will be used to “treat” asymptomatic and mild cases and/or to quarantine their close contacts. In June 2022, the head of NHC [said](#) “permanent makeshift hospitals” should be prepared as a precautionary measure so that they can be activated quickly in case of a health emergency. In a bid to head off future flare-ups, the government has invested in efforts to “normalize” PCR testing services even after the current round of outbreak ends. Mega cities and provincial capitals with high risks of imported cases are asked to set up permanent PCR testing stations which will allow people to access them in just 15 minutes. Thus far, [Beijing](#) and [Shanghai](#) have each completed 9,000 PCR testing stations. Local residents are required to be tested on a regular basis – from 48 hours to one week – and proof of negative tests are required for accessing public buildings and public transportation.

Impact on Healthcare Reform

The pandemic response complicated the healthcare reform process as far as access and affordability are concerned. First, it threatens the coverage of people’s medical needs by siphoning the health insurance fund off for Covid response. According to the National Health Insurance Administration (NHIA), the spending on mass vaccination ([120 billion yuan](#)) would be jointly absorbed by the health insurance fund and the fiscal authorities. Later, the debt-ridden local governments were found to have misappropriated the health insurance fund to finance expenses on mass PCR testing, prompting the NHIA to send a notice [prohibiting](#) this practice. Although the government claims the fund broke even in 2021, the prospect does not look promising for 2022, when more such misappropriation was expected to happen due to frequent and extensive use of mass PCR testing. Already, Chinese social media has [shared](#) stories about how shortage of money in the health insurance fund is leading to higher out-of-pocket pay and the removal of certain drugs from the reimbursement drug list by some local governments.

Second, it has derailed the process of public hospital reform, supposedly the core component of the healthcare reform. The perceived “failure” of the Western countries’ healthcare system and the “success” of China’s in responding to the pandemic convinced the policymakers in China that the country should uphold “the public benefit feature” (*gong yi xing*) of China’s healthcare cause and make the public hospitals “bigger and stronger” (*zuoda zuoqiang*). As an article released by the National Development and Reform Commission (NDRC) [observed](#): during the Wuhan outbreak, all the treatment spending was shouldered by the state and most of the healthcare personnel involved in fighting the outbreak were from the public hospitals, which fully demonstrated that “the medical service treatment system dominated by the government, the public benefit feature, and public hospitals is the important safeguard for the major strategic achievement in fighting the disease.” A provincial-level urban health center is now allowed to have 1,500-3,000 hospital beds (the number was capped at 1,500). The government policy relaxation has [fueled](#) a new wave of investment fever for expanding public hospitals nationwide. As a result, reforming the public hospitals’ internal management, abolishing their profit-seeking mechanisms, rationalizing the distribution of healthcare resources, and improving the quality of the healthcare services become backburner issues in the public hospital reform.

Third, while reinforcing the dominance of the public sector in providing healthcare services, private hospitals, which accounted for [2/3 of China’s hospitals](#) in 2021, received little government support and were instead [pushed over the edge](#) by the need to comply with the strict zero-Covid measures, such as

sending patients with COVID-like symptoms to public hospitals. Since the beginning of the outbreak, more than 2,000 private hospitals, representing more than 8 percent of all private hospitals, have [gone bankrupt](#).

Impact on Surge Capacity Building

The rapid spread of the virus and the devastating impact it has caused highlight the importance of surge capacity building in weathering Covid and other disease outbreaks. Indeed, one of the main reasons of China's adamant pursuit of zero Covid is the fear of [China's fragile healthcare system](#) being overwhelmed by the surge of cases. In order to beef up "public health prevention and control ability", the central government earmarked [45.7 billion yuan](#) for hospital renovation and construction, which focused on 1) improving housing conditions of fever clinics and ERs; 2) increasing infectious disease diagnostic and treatment capabilities of county-level hospitals, which were required to have stand-alone PCR testing capacities by the end of 2020; and 3) expanding ICU capacity. That was followed by additional central fiscal investment of [30 billion yuan](#) to support the construction of "public health epidemic prevention barriers", including 8.44 billion to support the building of centers of disease prevention and control at the provincial, city, and county levels.

These efforts promise to beef up China's capacity to respond effectively to infectious disease outbreaks. Focusing on Covid response, however, the investment may face fungibility issues, i.e., to what extent it can be translated into surge capacity in coping with other public health emergencies. This summer has seen a spike of H3N2 cases in southern China, but there is no indication that China's public health infrastructure was ready to cope with the flu outbreaks. Not only was the flu vaccination rate extremely low (around [5 percent](#)), but some of the anti-Covid measures, like [stringent government control over anti-fever drugs](#) (which force those with flu symptoms to seek care at fever clinics), undermined China's capacity to handle other diseases.

The investment in building infectious disease diagnosis and treatment capacities at hospitals also raises the question of balancing run-of-the-mill healthcare with infectious disease prevention and control. Hospital managers typically do not have strong incentives in investing in the latter, which "[does not make money](#)." This may explain why in certain localities, a big chunk of the central public health investment was used for renovating and expanding hospital buildings. It may also explain why in 2021, the hospital beds per 1,000 population in China had reached 6.51, which exceeds the level in some developed countries, but the [ICU beds per 100,000 population](#) was only 3.6 or 1/10 of the U.S. Interestingly, China's total size of ICU beds, which is ranked no. 2 in the world (50,000-60,000), and its ability to rapidly mobilize resources across the nation to make up for the ICU bed shortages in one locality, also reduces the local incentives to expand ICU bed capacity.

In addition, the politicization of the Covid response, including the recognition that its hobbled response in the early days of the outbreak would tarnish its image as a success story in fighting Covid, created a taboo in the "lessons learned" discourse in China. The government has discouraged any serious discussion of the political and institutional problems (e.g., lack of transparency, upward information flow problem, and the highly centralized political system) that hindered speedy and effective response to the outbreak. In the immediate aftermath of the Wuhan outbreak, for example, there were [calls](#) for increasing the power and authority of China CDC in public health policymaking. Such calls were soon silenced with the creation of the disease control bureau in the NHC, which further marginalizes China CDC's role in policymaking by placing it under the bureau's supervision. In the absence of meaningful political and institutional reform, these problems will continue to haunt China's future outbreak response.

Second-Order Crises

Zero-Covid policy has also caused second-order problems in China's public health. First, it has contributed to a major mental health crisis. Many other countries instituted some form of lockdown measures during the pandemic, but China's zero-Covid policy is among the most stringent in the world. While depression and anxiety have increased worldwide due to the pandemic—which is also [evidenced](#) in an online survey of mental health status among residents in Hubei province in early 2020—the extremely strict and prolonged control measures in China, including the extensive and mandatory quarantines, school closures, and stay-at-home order imposed on millions of people, has made the situation even worse in China. A national survey taken in 2020 [found](#) that 35 percent of the 52,000 respondents suffered from panic, disorder, anxiety, depression and other mental health problems during the pandemic.

The situation could be even worse in 2022, as the government upped the ante in implementing zero-Covid measures. During the first month of Shanghai lockdown, searches for “psychological counselling” on Baidu (the most used search engine in China) [rose](#) by 253 percent. This will surely exacerbate the already fragile mental health status in the country (the first national survey of mental disorders in China, conducted during 2013-15, [suggested](#) that 16.6 percent of the adults in China had experienced mental health problems). Given the [extremely poor access to treatment](#) and the rapid slowdown of Chinese economy (which resulted in an all-time high [youth-unemployment rate](#) of 19.3 percent in June), the mental health crisis may lead to a highly volatile Chinese society. Premier Li Keqiang recently [warned](#) that the government will closely monitor social problems to “prevent moral red lines from being crossed out”.

Second, the policy might have caused high-level of excess deaths from non-communicable diseases (NCDs), including diabetes, heart attacks, stroke, and cancer. Thanks to the zero-Covid policy, the Covid-related death toll in China remains relatively low (5,226), and most of the deaths occurred in Hubei province (4,512) and Shanghai (595). But the implementation of the policy – through lockdowns, closure of hospitals, and redesignation of hospitals for treating Covid – has also discouraged (and even denied) people from accessing food, medicine and care for other illnesses. A study conducted by Chinese scientists based on nationwide mortality registries data [found](#) that excess deaths from NCDs were much higher than expected during three months of the outbreak in Wuhan (cardiovascular disease: 29 percent increase; hypertensive heart disease: 100 percent; and diabetes: 84 percent). Based on the Wuhan study, a prominent Shanghai physician, Miao Xiaohui, [estimated](#) in April 2022 that the number of excess diabetes deaths alone could reach more than 2,000 during the one month of lockdown in Shanghai. Since NCDs kill more people in China than infectious disease, the significant increase of excess NCD death will make it more difficult for China to achieve the goals of the Healthy China program, which aims to increase average life expectancy to 79 by 2030 and raise survival rates for cancer and other chronic illnesses.

Third, the zero-Covid policy has contributed to a demographic crisis, accelerating the population decline in China. A 2021 study conducted by four leading Chinese demographers [identified](#) two new developments during the outbreak that comprehensively and drastically depressed the fertility rate in China: 1) the rising unemployment and reduced disposable income, which negatively affected people's willingness to get married. In the first quarter of 2020, the number of marriages registered fell by 45 percent from a year ago; and 2) lockdown measures like school closures significantly increased the burden of childcare and housework, which further reduced women's fertility desires. Not surprisingly, the number of births in November and December 2020 fell by 45 percent from five years ago. The trend

has apparently continued in 2021 and 2022. The UN *2022 Revision of World Population Prospects* [concludes](#) that China's population began to drop this year and should fall by 8 percent between 2022 and 2050. A leading Chinese demographer [estimated](#) that actual first-order fertility rate has dropped below 1.0, which is among the lowest in the world.

Lack of Progress in Vaccinating the Elderly

Unlike most countries that prioritize vaccination among the elderly, who are more likely to develop severe symptoms from infecting COVID-19, China adopted a vaccination sequence that focuses on vaccinating healthy young adults. Indeed, it did not promote vaccination among the elderly until November 2021. While the government justified this on grounds of the lack of data on the effectiveness of the vaccines on this segment of the population, it had the unintended result of leaving the elderly under-vaccinated. As of late July, while [90 percent](#) of the population in China have received two doses of inactivated vaccines, more than 27 million people aged over 60 remain completely unvaccinated and 100 million of them still haven't received a booster shot (according to the WHO, people with inactivated vaccine [should get COVID-19 booster](#)). [More than a quarter of people aged over 80](#)—the most vulnerable population—have not received any vaccine doses. The relatively low vaccination rates among the elderly, coupled with the low efficacy rate of Chinese vaccines, has produced a [huge immunity gap](#) between China and the rest of the world that leaves the country vulnerable to a Covid-19 tsunami.

Paradoxically, the acclaimed success of the zero-Covid strategy in shielding the population from Covid-19 has also generated a false sense of security in China, reducing the incentives to prioritize this segment of the population for vaccination. The government's lukewarm attitude toward vaccinating the elderly was reinforced after the highly transmissible delta variants hit China last summer, which significantly lowered the efficacy rates of their vaccines in preventing infection, effectively shattering the dream of using vaccines to achieve herd immunity in the country. Since zero-Covid policy does not tolerate any infections, the vaccines ceased to be a major policy tool in China's fight against Covid-19. That might explain why we have not seen top leaders publicly promote the broader domestic use of the vaccines, and why they have failed to come up with a clear and consistent message on vaccine effectiveness and the need to inoculate the elderly, who (and whose family members) are convinced that the vaccine poses more risks than the virus.

As a result, China is caught in a Catch-22 situation: moving away from zero-Covid and avoiding the worst-case scenario requires boosting the immunity level among the elderly, which can be achieved by significantly increasing the vaccination rate among this segment of the population. But [vaccine skepticism](#) becomes a bigger problem in reaching this "last mile", and the relatively low vaccination rate among the elderly only makes sustaining zero-Covid justifiable.

Scenarios of Moving Away from Zero-Covid

Due to the high political stakes, it would be unlikely to expect China to give up its zero-Covid strategy before the completion of leadership transition by March 2023. A political window may open after the 20th Party Congress in the fall, when President Xi is expected to secure his third term as China's paramount leader. In order for China to move away from zero-Covid prior to the Party Congress, either the top leader himself abandons the zero-Covid mentality, or rapid, nationwide spread of the virus overwhelms the country's response capacity, forcing him to change course.

In the first scenario, a reverse course will be immediately followed by a spike of cases nationwide, which could undermine Xi's personal leadership and spawn social-political instability. But the Chinese state can still muddle through the crisis, if it moves to redefine the narrative that warrants the shift to a mitigation-based approach, educate the people about the actual risks posed by the virus, implement workable triage plans so that hospitals are only used to treat severe cases, and make more effective vaccines and therapeutics available to at-risk population.

In the second scenario, the government remains determined to pursue zero-Covid, but the virus has become so highly transmissible that the existing intervention measures are no longer able to cut the transmission chain. As the Covid-19 flareups and localized outbreaks quickly develop into a nationwide outbreak, the existing approach would become meaningless. This involuntary policy shift could be socially and politically devastating. Poorly prepared for the worst-case scenario, the Chinese hospital system could be quickly overwhelmed, which in turn would exacerbate fear and panic in the society. Worse, Beijing would lose the trust of the people on fighting the virus. As a result, a regime that was once known for its technocratic efficiency could soon face [a legitimacy crisis](#).

That said, once the worst stage of the crisis is over and China ends up coexisting with Covid-19, a swift and strong economic rebound may help reestablish the legitimacy for Chinese leaders, even though a growing number of well-to-do Chinese may choose to "exit", i.e., leaving the country. Chances are that some of the tools used in implementing zero-Covid, such as QR codes, may be retained to strengthen the surveillance state, and in order to divert domestic woes the state may increasingly turn to nationalism as a main pillar of regime legitimacy, which would render China's relationship with Western countries even more prickly.

Policy Recommendations

The U.S. has a long history of engaging in China's healthcare sector. As early as 1834, Peter Parker, an American missionary, physician, and diplomat, built China's first modern hospital in Guangzhou. Eighty-five years later, the China Medical Board, created by the Rockefeller Foundation, founded Peking Union Medical College, which had a profound impact on the nature of public health delivery and medical care in China. The U.S.-built hospitals and medical schools continued to function even after 1949. In the 1970s, public health-related cooperative activities were among the first to resume following the resumption of official bilateral exchanges. Indeed, over the past four decades, cooperation in the field of health has been among the most successful aspects of the bilateral relationship. The cooperation helped stabilize other aspects of the bilateral relationship and brought the two countries together to address a wide array of global health issues, including HIV and AIDs, pandemic flu, and health-related development assistance.

Unlike U.S.-China military and security relations, U.S.-China health cooperation was independent of the strategic foundations and other sensitive issues undergirding the bilateral relationship. Back to September 1989, when there was a sharp dip in U.S.-China relations, pharmaceutical company MSD signed an agreement with China's Ministry of Health to transfer its hepatitis B vaccine technology to China. The MSD-China deal, an example of U.S. soft power in China, is credited with saving millions of lives in China. The cooperation continued during the early stages of the Covid-19 outbreak, when China CDC exchanged information with its U.S. counterpart and the U.S. offered to send public health experts to China to help it fight the novel coronavirus. It was not until after March 2020, with the intensified politicization of the pandemic, that government-to-government public health cooperation came to a halt.

Despite deterioration of the bilateral relations during the pandemic, the two countries still share an interest in cooperation over a range of public health issues, from surge capacity building to NCD prevention and control. The U.S. might be willing to forsake the considerable benefits brought by the cooperation, but it cannot afford to decouple from China, arguably one of the biggest risk factors for global health security. The bottom line: we need China's cooperation in beefing up our capability to detect dangerous pathogens and take early and effective actions before they develop into a global epidemic. Unfortunately, while the highest levels of both governments now have acknowledged that public health should be a priority for bilateral cooperation, there is still no government-to-government conversation in global health security. The Biden administration has no problem reaching out to the Chinese to discuss cooperation over climate change but is lukewarm in starting a serious dialogue with China on how to prepare for future disease outbreaks. Concerned about the lack of cooperation from China in the pandemic origin probe and being seen as "soft" on China (especially before the mid-term election), Congress is also not enthusiastic about public health cooperation with China.

Given the global repercussions of China's zero-Covid strategy, "letting China rip" is not a viable policy option for the U.S. After all, what is at risk is not only the lives of millions but also global economic and political stability. What is needed is a forward-looking and pragmatic approach in seeking a détente with China in promoting global health security. It is in the best interest of the U.S. to register more compassion for China's fight against Covid-19 by offering to 1) share cutting-edge mRNA vaccines and antivirals as well as best practices on developing them; and 2) work with China on issues that are of their immediate interest, including surge capacity building, vaccination of at-risk populations, and mitigating the growing disease burden associated with NCDs and mental health issues. Evincing sincerity and commitment that current U.S. overtures have lacked in dealing with China would facilitate the U.S. discussion with China on issues that are crucial for global health security, including lab safety, data and sample sharing, supply chain resilience, and vaccinating the world.

Given the enduring political differences and the lack of trust between the two nations, Congress can support the initiation of a small-level, closed-door Track 1.5 dialogue, bringing together officials, scientists, public health experts, and thought leaders from both sides. The initial dialogue would avoid hot button issues and start with specific, more technical topics including modeling of pathogen trajectory, harmonizing test standards from Covid to flu, and surveillance of new variants or pathogens like monkey pox. The dialogue, if successfully initiated, would help build momentum for a broader, sustainable, and results-oriented bilateral cooperation over public health.