# China's successful control of COVID-19

**While the world is struggling to control COVID-19, China has managed to control the pandemic rapidly and effectively. How was that possible? Talha Burki reports.**

On Sept 22, 2020, US President Donald Trump gave a combative address to the UN General Assembly referring to severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) as the "China virus". He demanded that China was held accountable for "unleash[ing] this plague onto the world". Chinese premier Xi Jingping, who addressed the General Assembly after Trump, urged nations affected by COVID-19 to "follow the guidance of science…and launch a joint international response to beat this pandemic". He added that "any attempt of politicising the issue or stigmatisation must be rejected". 9 days later, Trump tested positive for SARS-CoV-2.

According to a July survey by the Pew Research Center, two-thirds of Americans believe that China has done a bad job dealing with the COVID-19 pandemic. It is clearly not an opinion shared by WHO. In a press conference in September, Mike Ryan, executive director of the WHO Health Emergencies Programme, offered "deepest congratulations…to the front-line health workers in China and the population who worked together tirelessly to bring the disease to this very low level".

As of Oct 4, 2020, China had confirmed 90 604 cases of COVID-19 and 4739 deaths, while the USA had registered 7 382 194 cases and 209 382 deaths. The UK has a population 20 times smaller than China, yet it has seen five times as many cases of COVID-19 and almost ten times as many deaths. All of which raises the question: how has China managed to wrest control of its pandemic?

Despite being the first place to be hit by COVID-19, China was well-placed to tackle the disease. It has a centralised epidemic response system. Most Chinese adults remember SARS-CoV and the high mortality rate that was associated with it. "The society was very alert as to what can happen in a coronavirus outbreak", said Xi Chen (Yale School of Public Health, New Haven, Connecticut, USA). "Other countries do not have such fresh memories of a pandemic". Ageing parents tend to live with their children, or alone but nearby. Only 3% of China's elderly population live in care homes, whereas in several western countries, such facilities have been major sources of infection.

"The speed of China's response was the crucial factor", explains Gregory Poland, director of the Vaccine Research Group at the Mayo Clinic (Rochester, Minnesota, USA). "They moved very quickly to stop transmission. Other countries, even though they had much longer to prepare for the arrival of the virus, delayed their response and that meant they lost control". The first reported cases of the disease that came to be known as COVID-19 occurred in Wuhan, Hubei province, in late December 2019. China released the genomic sequence of the virus on Jan 10, 2020, and began enacting a raft of rigorous countermeasures later in the same month.

Wuhan was placed under a strict lockdown that lasted 76 days. Public transport was suspended. Soon afterwards, similar measures were implemented in every city in Hubei province. Across the country, 14 000 health checkpoints were established at public transport hubs. School re-openings after the winter vacation were delayed and population movements were severely curtailed. Dozens of cities implemented family outdoor restrictions, which typically meant that only one member of each household was permitted to leave the home every couple of days to collect necessary supplies. Within weeks, China had managed to test 9 million people for SARS-CoV-2 in Wuhan. It set up an effective national system of contact tracing. By contrast, the UK's capacity for contact tracing was overwhelmed soon after the pandemic struck the country.

As the world's largest manufacturer of personal protective equipment, it was relatively straightforward for China to ramp up production of clinical gowns and surgical masks. Moreover, the Chinese readily adopted mask wearing. "Compliance was very high", said Chen. "Compare that with the USA, where even in June and July, when the virus was surging, people were still refusing to wear masks. Even in late September, President Trump still treated Joe Biden's mask-wearing as a weakness to be ridiculed".

Drones equipped with echoing loudspeakers rebuked Chinese citizens who were not following the rules. The state-run Xinhua news agency has released footage taken from the drones. "Yes Auntie, this drone is talking to you", one device proclaimed to a surprised woman in Inner Mongolia. "You shouldn't walk around without wearing a mask. You'd better go home and don't forget to wash your hands". In the UK, 150 000 people were permitted to attend a horse racing meet in mid-March, 10 days before the country went into lockdown. In August, 460 000 Americans congregated in Sturgis, South Dakota, for a motorcycle rally.

On Febr 5, 2020, Wuhan opened three so-called Fangcang hospitals. Another 13 would appear over the next few weeks. The hospitals were established within public venues

such as stadiums and exhibition centres and were used to isolate patients with mild-to-moderate symptoms of COVID-19. Patients who started to show symptoms of severe disease were quickly transferred to conventional hospitals. The network of Fangcang hospitals, which held 13 000 beds, meant that patients with COVID-19 did not have to isolate at home, which reduced the risk of family members becoming infected. By Mar 10, 2020, the Fangcang hospitals were no longer needed. From around the same time, the focus of China's countermeasures shifted from controlling local transmission to preventing the virus from taking hold as a result of imported cases. Those who entered the country were tested and quarantined.

A modelling study co-authored by Chen calculated that the public health actions undertaken by China between Jan 29 and Feb 29 may have prevented 1·4 million infections and 56 000 deaths. Still, it does not necessarily follow that China's response to the pandemic is generalisable. "As each country has its own health system and epidemic curve, measures implemented in one country may not be easily replicated by another", points out Imperial College London's Han Fu. "Other factors such as coordination between government sectors and civil compliance with regulations may also affect the effectiveness of the response". Much also depends on each nation's conception of civil liberties.

"In China, you have a combination of a population that takes respiratory infections seriously and is willing to adopt non-pharmaceutical interventions, with a government that can put bigger constraints on individual freedoms than would be considered acceptable in most Western countries", adds Poland. "Commitment to the greater good is engrained in the culture; there is not the hyper-individualism that characterises parts of the USA, and has driven most of the resistance to the countermeasures against the coronavirus." Poland noted that the Chinese accept the notion that disease control is a matter of science. "China does not have the kind of raucous anti-vaccine, anti-science movement that is trying to derail the fight against COVID-19 in the USA", he said.

In August, Wuhan hosted an enormous pool party. There were objections from some foreign media outlets. The state-owned Global Times was unapologetic. It suggested that the event stood as "a reminder to countries grappling with the virus that strict preventive measures have a payback". The newspaper quoted a local resident who back in April had feared he might be bankrupted by the pandemic. "There weren't even many local people, not to mention tourists. But now my business is blooming with the city having fully recovered", he said.

*Talha Burki*