

# Early and responsive control measures helped reduce COVID-19 spread in China

July 6 2020, by Stephen Johns, Dr Sabine L. Van Elsland

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In a new report, the Imperial College London COVID-19 Response Team found that early implementation and timely adjustment of control measures could be important in containing coronavirus transmission.

The researchers say that control measures such as school closures, travel restrictions, and [contact tracing](#), were introduced across provinces early on when few cases were reported, so may have been more effective in limiting and averting transmission.

The team also noted that the focus of control strategies shifted, following the first wave of locally driven cases, to compulsory testing and quarantine for all incoming travelers and close monitoring of asymptomatic infections.

The researchers say that these strategies could have helped China to maintain a low level of cases over time.

The work is presented in the latest report from the [WHO Collaborating Center for Infectious Disease Modeling](#) within the MRC Center for Global Infectious Disease Analysis, Jameel Institute (J-IDEA), Imperial College London.

## **Control measures had different impacts**

The study includes situation reports of the COVID-19 epidemic from mid-January up to 31 March 2020 in 31 provinces or municipalities—with equivalent levels of administration—of mainland China.

The data reveals that school closures, [travel restrictions](#), closed-off management and contact tracing were introduced around the same time in late January but resulted in different impacts across provinces, according to Imperial researchers.

Hubei and other provinces in China were the first affected areas of the COVID-19 pandemic.

From January to March 2020, these areas experienced first waves of COVID-19 transmission, which were mostly contained following the implementation of several control measures.

Compared to Hubei [province](#), the origin of the COVID-19 outbreak, the other five most-affected provinces; Guangdong, Henan, Zhejiang, Hunan, and Anhui, reported a lower case-fatality ratio and proportion of severe hospitalized cases over time.

In Hubei, there were fewer contacts traced per case, which might be explained by the reduced contact activity during the lockdown period or the limited capacity of the overwhelmed local health system.

## **Focus of control strategies shifted after first wave**

From March 2020, the first waves driven by local transmission declined, while the burden of imported cases increased.

Focus of control measures was therefore shifted towards testing and quarantine of inbound travelers, to continue the suppression of transmission.

The research suggests that early implementation and timely adjustment of control measures could be important in containing transmission and avoiding adverse outcomes of COVID-19.

The team are making the collated data publicly available, providing an additional source for research and policy planning in other settings with an ongoing epidemic.

Drawing on epidemic progression and response measures in Chinese provinces that were affected by COVID-19 early, the report could provide insights for policy planning in other countries.

Since the emergence of the new coronavirus (COVID-19) in December 2019, the Imperial College COVID-19 Response Team has adopted a policy of immediately sharing research findings on the developing pandemic.

## **Useful data for COVID-19 policymaking**

Three of the report authors from MRC GIDA and J-IDEA explain their findings:

Dr. Han Fu said: "We carried out intensive tasks of data collation for the COVID-19 epidemic across provinces in mainland China. The subsequent analysis shows consistency with the interpretation of the importance of early implementation and proper adjustment of control strategies over the changing epidemic."

Xiaoyue Xi said: "By collecting both epidemic data and intervention strategies from provincial health commission in mainland China, our study compares differences in epidemics and level of controls between provinces and provides detailed data to potentially assess the effectiveness of control policies, which might support the response to ongoing global pandemic."

Haowei Wang said: "The COVID19 epidemic data in mainland China and an overview of [control measures](#) at the subnational level reveal that there is an association between early implementations and containing transmission. These data are made available and should be useful for further researches on [epidemic](#) control and policymaking of COVID19."

## **Imperial and China collaboration on coronavirus**

Earlier this month the leaders of Imperial and Tsinghua University called

for global collaboration to tackle [coronavirus](#) and other global challenges.

A joint symposium organized by the two universities, brought together academics from Imperial and Tsinghua working in economics, vaccine development and diagnostic tools to share their thoughts on the impact of the pandemic and how their research is helping to overcome it.

**More information:** Fu et al., Report 30: The COVID-19 epidemic trends and control measures in mainland China (2020).

[www.imperial.ac.uk/mrc-global- ... -19/report-30-china/](http://www.imperial.ac.uk/mrc-global-...-19/report-30-china/)

Provided by Imperial College London

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