

## POLICY BRIEF

### CHINA ESSENTIAL POLICY IN RESPONSE TO THE COVID-19 EPIDEMIC

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#### Introduction

The organizations that the Chinese government mainly relies on when controlling the novel coronavirus pneumonia epidemic, namely the China National Health Commission and the Joint Prevention and Control Mechanism of the State Council. Under the leadership of these two institutions, the Chinese government has issued two main policies to deal with the novel coronavirus pneumonia, namely, the Diagnosis and Treatment Protocol for Novel Coronavirus Pneumonia and the Protocol on Prevention and Control of Novel Coronavirus Pneumonia. Researcher would first provide a brief introduction to the content of these two protocols. In the next part, would point out the specific time of the announcement of the two protocols, and then compared the time with some specific figures of the epidemic in China, then we could find the basic link between the time of policies issuance and the control of the epidemic. The last part was a short summary of the section.

#### 1. China's main departments in response to the novel coronavirus Disease 2019 epidemic

During China's response to the COVID-19 epidemic, considering the policies and documents released in the country level by the Chinese government on the response to the COVID-19 epidemic, the main departments are the National Health Commission of the People's Republic of China (NHC) and the Joint Prevention and Control Mechanism of the State Council (JPCMSC).

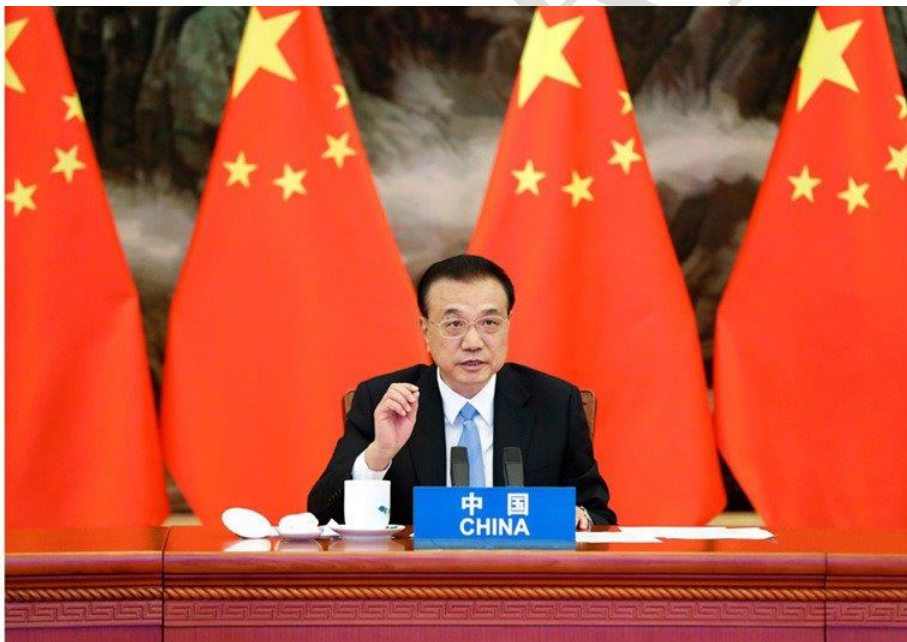
**NHC** is a ministry-level department under the State Council of China. Its main responsibility is to organize the formulation of national health policies, make overall plans for the allocation of health resources, formulate and organize the implementation of disease prevention and control plans, national immunization plans, and public health that seriously endanger people's health, organizing and guiding the prevention and control of public health emergencies, such as intervention measures, respond for health emergency problems and medical and health rescue of various public emergencies. In terms of organizational structure, the NHC has established the health committees in all provinces, autonomous regions, municipalities, and even in cities in the corresponding levels throughout the mainland of China. The municipal health committee, there are hospitals or medical organizations under their management. During the response to the COVID-19 epidemic, till May 2, 2020, while the emergency level of public health emergencies in Hubei Province has been reduced from the First to secondary response level (The people's government of Hubei province, 2020), and NHC has successively formulated and revised 6 versions of Diagnosis and Treatment Protocol, and 7 editions of Protocol on Prevention and Control of Novel Coronavirus Pneumonia. (The State Council Information Office of the People's Republic of China [SCIO], 2020), which are the two most important policy in China's response to the COVID-19 epidemic.



**JPCMSC** was established by the NHC in the form of a joint prevention and control work mechanism for novel coronavirus pneumonia. The members included the State Council of China and other related 32 Departments. Under the JPCMSC, there are working groups such as epidemic prevention and control, medical treatment, scientific research, publicity, foreign affairs, logistics support, and front line work units. The unit's team leader position was held by the officer chiefly responsible from the relevant ministries. In the meantime, China has established a provincial-level leading group or headquarters for the JPCMSC

According to the essential of the documents issued by the NHC and JPCMSC during the COVID-19 epidemic, the documents of the NHC mainly focused on the novel coronavirus pneumonia prevention, control, diagnosis and treatment plan. In the same time, the JPCMSC mostly gave administrative orders to the leading group or headquarters of JPCMSC in the provincial-level, to ensure that the measures of the protocols, which issued by the NHC can be effectively implemented. By the time the COVID-19 epidemic was brought under control, the NHC stopped updating the Diagnosis and Treatment Protocol, and the Protocol on Prevention and Control of Novel Coronavirus Pneumonia. Instead, the JPCMSC continued to take precautions against the re-spread of the COVID-19 in the following seasons.

Considering the organization structure and responsibilities of the NHC and JPCMSC, and their work distribution and connection during the COVID-19 outbreak in China, it shows the obvious characteristics that both of the medical and health system, and administrative systems had a full integration in the actions fighting the COVID-19 epidemic. Namely, the NHC was responsible for the formulation of various professional policies and measures to combat the epidemic, and JPCMSC was responsible for ensuring the effective implementation of these policies and measures.



## 2. China's essential policy in response to the COVID-19 epidemic

Chinese officials have divided the action against the COVID-19 epidemic as of May 31, 2020 into 5 stages (SCIO, 2020): The stage 1 was the emergency response from the discovery of a case of unknown caused pneumonia (December 27, 2019 - January 19, 2020). The stage 2 was as of the first time that the number of newly cured and discharged cases in Wuhan, Hubei province was greater than the number of newly confirmed cases (January 20 -February 20, 2020). The stage 3 was the number of new cases in China decline to single digits (February 21 - March 17, 2020). The stage 4 was that the spread of the

epidemic in China was basically blocked, and the traffic blockade measures in Hubei Province were lifted (March 18 - April 28, 2020). The stage 5 was the normalization of epidemic prevention and control across China (since April 29, 2020). As mentioned above, the NHC has formulated and revised 6 versions of the Diagnosis and Treatment Protocol, and 7 editions of the Protocol on Prevention and Control of Novel Coronavirus Pneumonia, during the first to third phases

### 2.1 The Diagnosis and Treatment Protocol

The Diagnosis and Treatment Protocol for Novel Coronavirus Pneumonia issued by the NHC was continuously updated and announced the latest medical understanding, to doctors and the whole society, based on in-depth understanding and the accumulation of diagnosis and treatment experience of the disease, according to the Diagnosis and Treatment Protocol for Novel Coronavirus Pneumonia (Trial Version 4) (NHC, 2020). The versions of the Diagnosis and Treatment Protocol mainly include the etiological characteristics, epidemiological characteristics, clinical characteristics, case definitions, clinical classification, case finding and reporting, and treatment.



### 2.2 The Protocol on Prevention and Control of Novel Coronavirus Pneumonia

The Protocol on Prevention and Control of Novel Coronavirus Pneumonia was a policy document issued by the Joint Prevention and Control Mechanism of the State Council of China to guide country in the prevention and control of novel coronavirus pneumonia. According to the characteristics of the epidemic of novel coronavirus in different periods, the protocol would make corresponding update, as said by the notice on the issuance of the Protocol on Prevention and Control of Novel Coronavirus Pneumonia (Edition 7) (NHC, 2020). Some of the main prevention and control measures include: the organizational structure of the prevention and control work, the detection and reporting of cases and emergencies, epidemiological

investigation, case treatment and nosocomial infection prevention and control, close contact tracking and management, training of professionals in medical and health institutions, prevention and control measures targeting at key settings, institutions and populations, disinfection measures for specific places, public education and risk communication, prevention and control of overseas epidemic import, etc.



Both of the Diagnosis and Treatment Protocol issued by NHC, and Protocol on Prevention and Control of Novel Coronavirus Pneumonia by JPCMSC, had timeline as follows:

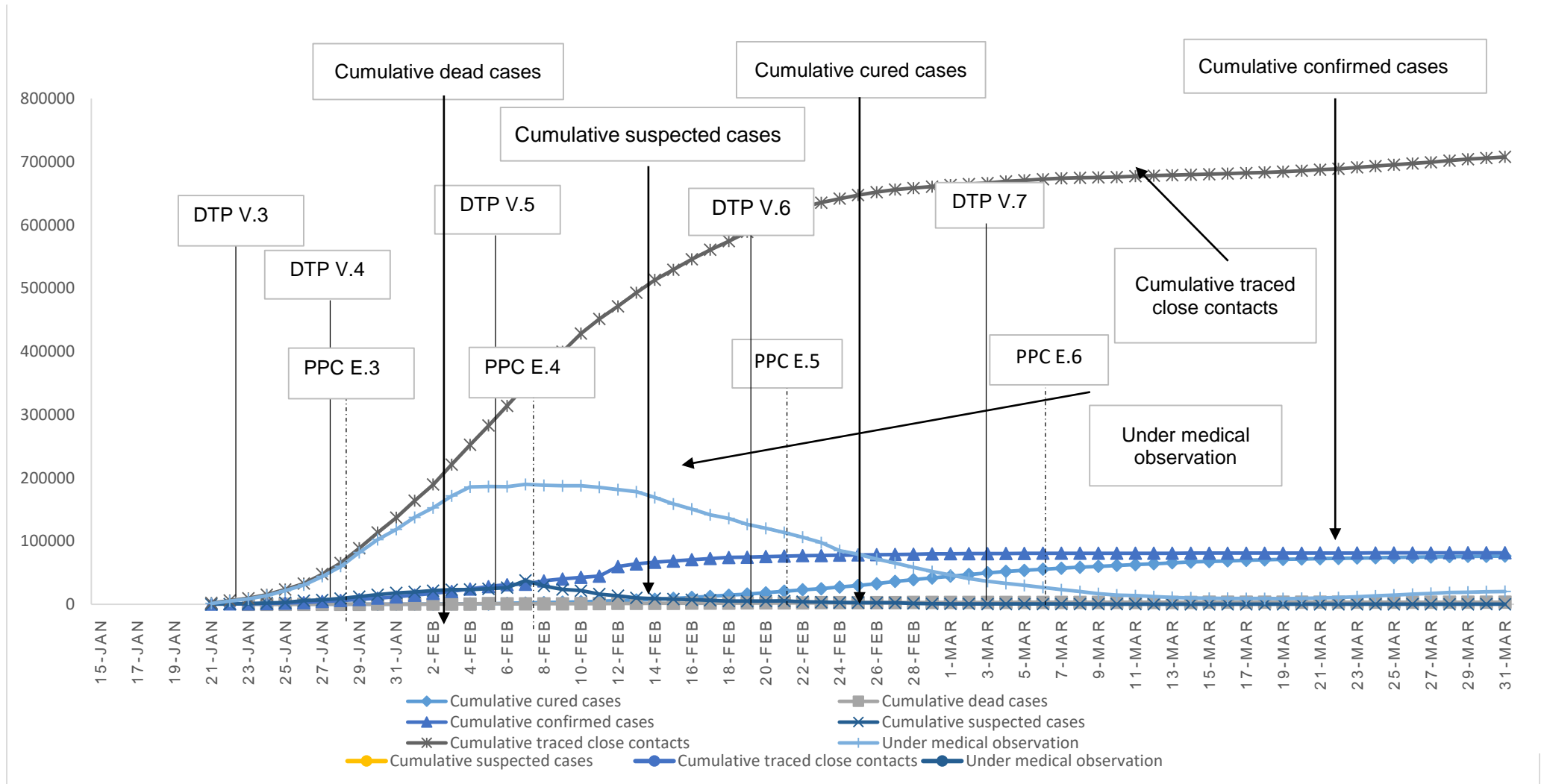
**Table Timeline of protocol issued by China's NHC and the JPCMSC**

Issued Time	Diagnosis and Treatment Protocol (NHC)	Protocol on Prevention and Control of NCP (JPCMSC)
Jan 15	Version 1	Edition 1
Jan 18	Version 2	
Jan 20		Edition 2
Jan 22	Version 3	
Jan 27	Version 4	
Jan 28		Edition 3
Feb 5	Version 5	
Feb 7		Edition 4
Feb 19	Version 6	
Feb 21		Edition 5
Mar 3	Version 7	
Mar 7		Edition 6

Source: China's NHC and the JPCMSC

### 2.3 The relationship between the spread of the Novel Coronavirus Pneumonia epidemic and the Diagnosis and Treatment Protocol and Protocol on Prevention and Control of Novel Coronavirus Pneumonia

When we compared the date of the issuance of the two policies, the Diagnosis and Treatment Protocol issued by the NHC, the Protocol on Prevention and Control of issued by the JPCMSC, with 6 data in the official Chinese epidemic report, namely: cumulative cured cases, cumulative dead cases, cumulative confirmed cases, cumulative suspected cases, cumulative traced close contacts and cases under medical observation, we could find some relationship between the timing of these policies and the changes in data, as showed in the graph.



**Note:**

DTP: Diagnosis and Treatment Protocol

PPC: Protocol on Prevention and Control of Novel Coronavirus Pneumonia

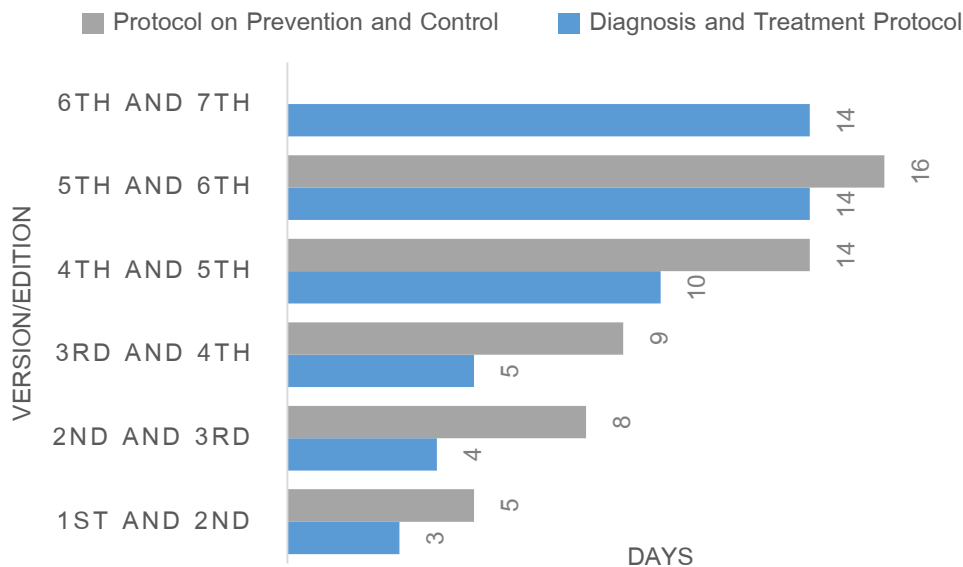
Source: The State Council the People's Republic of China. Retrieved 10 Nov. 2020 from <http://www.gov.cn/fuwu/zt/yqfwzq/yqfkbkt.htm>

### 2.3.1 Issued time

The Diagnosis and Treatment Protocol issued by the NHC has issued a total of 7 versions. The interval between the 1<sup>st</sup> and 2<sup>nd</sup> version was 3 days, and the interval between the 2<sup>nd</sup> and 3<sup>rd</sup> version was 4 days. The interval between the 3<sup>rd</sup> and 4<sup>th</sup> version was 5 days, the interval between the 4<sup>th</sup> and 5<sup>th</sup> version was 10 days, the interval between the 5<sup>th</sup> and 6<sup>th</sup> version was 14 days, and the interval between the 6<sup>th</sup> and 7<sup>th</sup> version was 14 days.

A total of 6 editions of the Protocol on Prevention and Control of Novel Coronavirus Pneumonia promulgated by JPCMSC. The interval between the 1<sup>st</sup> and 2<sup>nd</sup> editions was 5 days, and the interval between the 2<sup>nd</sup> and 3<sup>rd</sup> editions was 8 days. The interval between the 3<sup>rd</sup> and 4<sup>th</sup> editions was 9 days, the interval between the 4<sup>th</sup> and 5<sup>th</sup> editions was 14 days, and the interval between the 5<sup>th</sup> and 6<sup>th</sup> editions was 16 days.

The time interval relationship between the Diagnosis and Treatment Protocol and the Protocol on Prevention and Control of Novel Coronavirus Pneumonia was shown in the figure below



**Figure:** Issued time of the Diagnosis and Treatment Protocol and the Protocol on Prevention and Control of Novel Coronavirus Pneumonia

It could be seen from the distribution of the time for the Diagnosis and Treatment Protocol, and the Protocol on Prevention and Control of Novel Coronavirus Pneumonia to be promulgated, at the beginning of the epidemic, the time interval between both of the policies was relatively short, perhaps because there was not much knowledge about the virus, With the spread of the epidemic, people's information and knowledge of the virus have increased, and also needed to see what would happen after protocol promulgated, then the time interval between each version or edition of the two policies has begun to increase.



### 2.3.2 The effect of the Diagnosis and Treatment Protocol

The Diagnosis and Treatment Protocol issued by the NHC, each version has similarities, and also contains updates and changes in content. It can be seen from the 2nd to 7th versions that the contents of each version were basically the same in terms of etiology, clinical characteristics, case diagnosis, differential diagnosis, exclusion of suspected cases, treatment and disposal. Content updates sometimes occurred in epidemiological characteristics, clinical characteristics, diagnostic criteria, clinical classification, case discovery and reporting, treatment and disposal (Wang, Chen & Zhang, 2020; Wang, 2020; NHC, Sep 11, 2020).

When we analyzed together the time of the Diagnosis and Treatment Protocol and the epidemic data, we could find that the cumulative cure rate has increased significantly since the 6<sup>th</sup> version of the Diagnosis and Treatment Protocol, and gradually moved closer to the cumulative number of confirmed cases. Starting from the 7<sup>th</sup> version of the Diagnosis and Treatment Protocol, the cumulative cure rate and cumulative diagnosis rate continued to be move closer and gradually approached. The cumulative number of deaths is constantly increasing, but a gentle trend has been maintained, with the number remaining between hundreds of people per day. The cumulative number of confirmed cases has increased since the 3<sup>rd</sup> version of the Diagnosis and Treatment Protocol, and the magnitude was not too much. From the 5<sup>th</sup> version to the 6<sup>th</sup> version, the number of confirmed cases tended to be flat until after the 7<sup>th</sup> version. So we could find the renewal of the Diagnosis and Treatment Protocol was important for reducing mortality. (Liu & Sun, 2020)

### 2.3.3 The effect of the Protocol on Prevention and Control of Novel Coronavirus Pneumonia promulgated

The Protocol on Prevention and Control of Novel Coronavirus Pneumonia promulgated issued by JPCMSC mainly aimed to achieve early detection, early reporting, early diagnosis, early isolation, and early treatment, control the spread of the epidemic, and reduce the fatality rate (NHC, Jan 28, Feb 6 & Sep 11, 2020). In each edition, the contents of the measures mentioned above have been updated according to the changes in the situation of the novel coronavirus pneumonia epidemic in China.

When we analyzed together the time of the Protocol on Prevention and Control of Novel Coronavirus Pneumonia promulgated and the epidemic data, we could find that with the announcement and update of the Protocol on Prevention and Control of Novel Coronavirus Pneumonia, the cumulative number of close contacts tracked has begun to rise, and presented obviously the increased trend between the 3<sup>rd</sup> and 5<sup>th</sup> editions. Starting from the 5<sup>th</sup> edition of the protocol, the figure of increase has been gentle. After the release of the 6<sup>th</sup> edition of the protocol, the number of cases increased per day was roughly a few hundred to a thousand.

The number of cases under medical observation showed an upward trend between the 3<sup>rd</sup> and 4<sup>th</sup> editions of the Protocol on Prevention and Control of Novel Coronavirus Pneumonia. It started to

decline from the 4<sup>th</sup> edition and reached the lowest level after the 6<sup>th</sup> edition. The number of cases under medical observation and the cumulative number of close contacts tracked show two distinct trends that as the latter increased, the former decreased. This tendency should reflect that the update of the Diagnosis and Treatment Protocol and the update of prevention and control measures have effectively inhibited the spread of new coronary pneumonia.

### 3. Conclusion

In responding to the novel coronavirus pneumonia epidemic, China has adhered to the principles of early detection, early reporting, early diagnosis, early isolation, and early treatment to control the spread of the epidemic and reduce the mortality rate. The National Health Commission of China, taking the lead, started from two aspects that were medical treatment and control, and continuously promulgating and updating Diagnosis and Treatment Protocol and Protocol on Prevention and Control of Novel Coronavirus Pneumonia promulgated, it took more than a month to initially curb the spread of the epidemic, and it took about two months to control the daily new cases in the main land of China within single digits. The epidemic in Wuhan City and Hubei Province, which were the most severely affected, was controlled in about three months. Diagnosis and Treatment Protocol and the Protocol on Prevention and Control of Novel Coronavirus Pneumonia promulgated have played an extremely important role in coordinating epidemic response measures and treatment methods.

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