MassCPR emergency level database

> As MassCPR expands into more cities, we need to find a scalable way to gather policy data across China (estimate full policy records took `20` hours for Beijing alone). This document outlines our emergency response level database and how we collected it

Links:

Code	policy-database / notebooks / clean-masscpr-emergency-db.R
Input data	policy-database / data / internal / MassCPR_emergency_v3_verified_20201001
Output data	policy-database / notebooks / outputs

Table of contents:

Emergency levels

Background

Emergency response levels were used in China to address evolving COVID-19 concerns between 21 Jan 2020 and 20 Jul 2020. Today, emergency response level announcements have largely been replaced by district-level announcements about COVID-19 risk (high, medium, low) **(looking for confirmation from other sources)**. For example, there was little-to-no mention of response levels by the second wave in China (around `mid-june`).

Emergency response levels determine the level of government responsible for setting policies and managing the emergency (in this case, COVID-19). Provincial governments are responsible for setting the Emergency Response Level, but must confer with the Chinese central government in order to change the Emergency Response Level and set the corresponding policies **(looking for confirmation from other sources)**. In most cases, policies are recommended by the Commission on Health and Hygiene (), and carried out by the government. It is also worth noting that oftentimes provincial governments look towards each other when determining Emergency Response Levels, a trend that leads to bunching which we observe in the data.

There are four levels of emergency response, which are determined by the nature of the emergency, its degree of harm, and its scope.

Level	Scope	Level of government setting policy
Level I	Serious	Provincial government with authority from central government
Level II	Major	Provincial government
Level III	Large	Prefecture-level government with authority from provincial government
Level IV	General	County/city/district-level government with authority from provincial government

Example rollout of Emergency Response Levels

To illustrate process, we will walk through the process followed in the Zhengjiang province, which has been praised for its response to the pandemic.

1. On 23 Jan 2020, the provincial leaders in Zhengjiang petitioned to the Chinese central government to declare Emergency Response Level I. This response was approved by the central government **(looking for confirmation from other sources)** and allowed the Zhengjiang province to adopt measures not usually allowed by the province (e.g., banning travel from Wuhan, calling in the national medical army, and closing restaurants) (link to announcement).

2. On 02 Mar 2020, the provincial leaders in Zhengjiang petitioned to the Chinese central government to reduce the Emergency Response Level to level II **(looking for confirmation from other sources)**. This signaled to its citizens that there was a decreased risk of the virus, but established that upcoming policies would be set for the province by the Provincial government (link to announcement)
3. On 23 Mar 2020, the provincial leaders in Zhengjiang authorized each city government to implement prevention and control measures based on the local situation. In this announcement, Zhengjiang canceled unified provincial degrees (e.g., closing of public places) and requested the districts and cities to make decisions based on local epidemic risk factors (link to announcement)

How might emergency response levels impact protective behavior?

While lower Emergency Response Levels are associated with more restrictive policies, there can be variation in policies within each province's emergency response levels. As mentioned above, the Emergency Response Level set by the provincial government determines the uniformity of policies implemented across a province, and the possible extent of the policies (e.g., Level I allows the provincial government to adopt more policies than Level II).

It is likely that most citizens in China were aware of their city's emergency response level and changes to it. WeChat, Weibo, TikTok, and traditional media outlets all communicated the Emergency Response Levels. Emergency Response Level announcements often preceded policy announcements so Chinese citizens were not necessarily notified of new policies at the time of the emergency level declarations, however expectations were set at this time that the policies would be changing.

Anecdotally, announcements about changes to emergency response levels did have an impact on citizen's expectations, but behavior changes often resulted from other announcements including restaurant advertising or subsequent policy implementation.

- EXAMPLE **Xinyi in Heilongjiang:** An announcement of emergency response level 1 was a strong indicator for him and his family to stay indoors and minimize socializing with others. Around the time of this announcement, he noticed that restaurants were closed and that everyone was wearing masks. A subsequent announcement of emergency response level 2 signaled that business operations would begin reopening, but under modified conditions. And a later announcement of emergency response level 3 indicated to Xinyi and his family that he would likely be able to return to school in Beijing in the coming months
- EXAMPLE **Puxi in Beijing:** Emergency Response Level announcements were not as impactful for Puxi as the more detailed policy announcements that followed. To Puxi, Emergency Response Level announcements were broad statements about general risk in Beijing, but these announcements did not indicate what was meant by a change in Levels. Puxi did agree that an increase from Level I to Level II did indicate that things were getting better in his area. These announcements also signaled to him that policy announcements were coming in the future. Beijing always implemented policies that were more strict than other provinces. Since Beijing is the country's capital, the central government decided it wanted to minimize the risk of an outbreak there

Helpful links

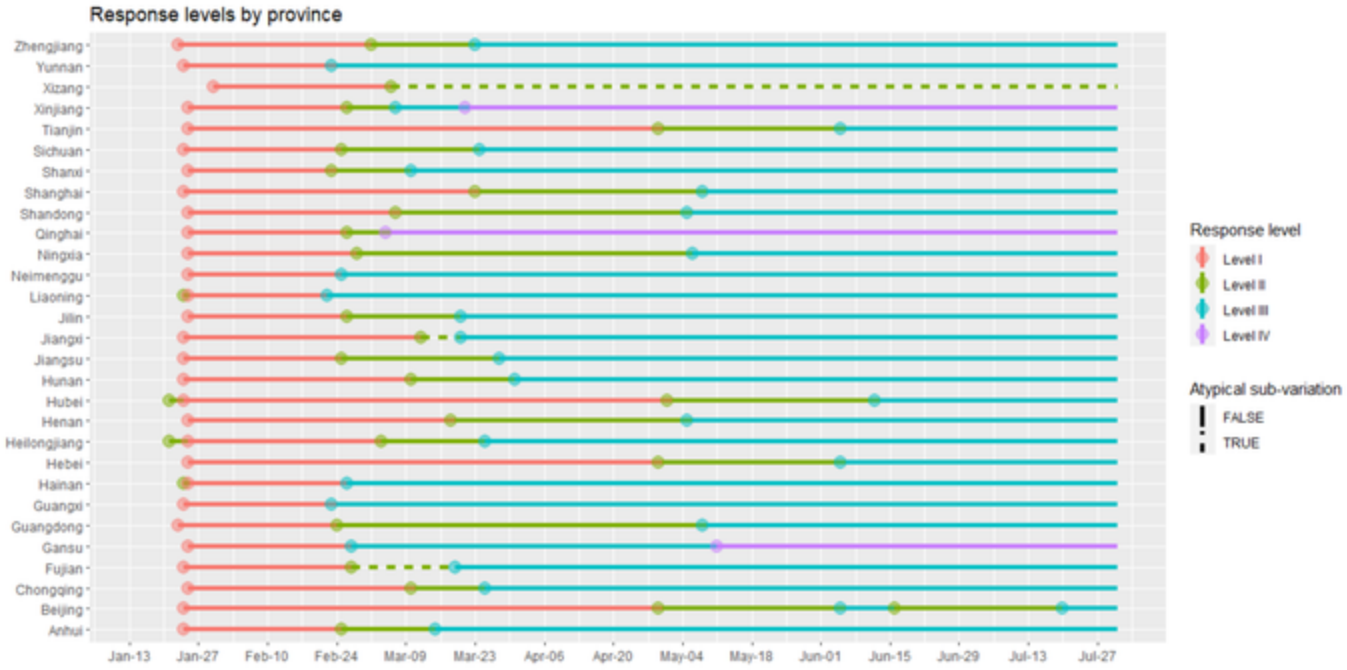
- An overview of response levels and their implementation in China (link)
- A unique example in Jiangxi where the province remained at level 2, but allowed certain cities to operate at Level 3 (link)
- News article about the status of independent emergency level declarations across China (link)

Database

Summary

Emergency Response Level announcements have been collected for each province in China over the course of the pandemic. For each province, Government Websites (e.g., search criteria "" in the Beijing government website) and Baidu (e.g., search criteria "[city] ") were queried to for announcements. In addition to the data collection, each entry included the underlying link to the source and was verified by a second researcher.

The chart below summarizes the results in this dataset with the points indicating the date of the announcement, and the lines indicating the period over which the emergency response level was in place.



Special cases

As of the time this document was written (01 Oct 2020), all Chinese cities remain in Emergency Response Levels III or IV. In some provinces (i. e., Xizang, Jiangxi, and Fujian), the provincial government set an Emergency Response Level that was a mix of Level II and Level III. In some low-risk areas the cities were allowed to set their own policies, while the Province set policies in other parts of the state (e.g., Fujian). These levels have been marked in the chart above with `dashed` lines

Data collection template

Tasks and timeline for data collection

Exercise has been completed (✅) by Puxi and Xinyi, RAs at the China Central Finance University, who each had `16 hours / week` this semester for research assistance.

	# - Task		Est. time	Complete by	Responsibility
✅	0	Review existing COVID-19 emergency level databases	1 hr	10 Sep 2020	Determine if any emergency level databases already exist
✅	1a	Pilot COVID-19 emergency level database: `Hubei Province, Guangdong Province`	1.5 hrs	15 Sep 2020	• Conduct a review of all COVID-19 emergency level announcements by the provincial headquarters. • Determine if database structure works • Determine fasted approach to collecting policies. Are LI and LII easier to collect than LIII and LIV?
✅	1b	Verify pilot database	0.25 hrs	16 Sep 2020	For each entry in the pilot database, read the comment and check the link
✅	2a	COVID-19 emergency level database: 35 province-level administrations	45 hrs	01 Oct 2020	Conduct a review of all COVID-19 emergency level announcements by the provincial headquarters. Check in weekly on progress
✅	2b	Verify database	7.5 hrs	01 Oct 2020	For each entry in the pilot database, read the comment and check the link