

My Estimate of the Death Toll in China During the Three-year Pandemic Using Officially Published Data

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(Minghui.org) According to the Minghui editorial

“[Confirmation](#),” about 400 million people in China have died of COVID since the pandemic broke out more than three years ago. I’d like to present my own analysis of the funeral services industry data published by the Ministry of Civil Affairs. I hope my rough estimate of the death toll helps people better understand the figure of 400 million.

Estimate of the Death Toll in China During the Three-year Pandemic (2019-2021)

Official data			
Year	2019	2020	2021
# of Employees	79,163	85,561	87,000
# of furnaces	6,400	6,619	7,043
Cremation Rate	52.4%	55.7%	58.8%

Death estimates	Furnace on 8 hours a day		
# of Cremations (each furnace burning 8 bodies a day)	18,688,000	19,380,432	20,565,560
# of Cremations (each furnace burning 24 bodies a day)	56,064,000	57,982,440	61,696,680
Average Total Number of Bodies Cremated	37,376,000	38,681,436	41,131,120
Total Deaths	71,328,244	69,446,025	69,950,884

Death estimates	Furnace on 24 hours a day		
# of Cremations (each furnace burning 24 bodies a day)	56,064,000	58,141,296	61,696,680
# of Cremations (each furnace burning 72 bodies a day)	168,192,000	174,423,888	185,090,040
Average Total Number of Bodies Cremated	112,128,000	116,282,592	123,393,360
Total Deaths	213,984,733	208,765,874	209,852,653

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The

number of employees, number of furnaces, and cremation rates are obtained from “Overview of the Funeral Services in China” : <https://www.ceicdata.com/zh-hans/china/funeral-service-overview?fbclid=IwAR1qOLuzG7qXW4NYZaN0hna3RW7lIBfcfXztDLwRVjoc> rest of the figures in the chart are the author’s own calculations based

on the above data source.

Number of Furnaces and Employees

The chart above shows that the number of employees in the funeral services industry increased by 9.9% [= $(87000-79163)/79163$] from 2019 (when the pandemic broke out) to 2021 (the most recent year that data was available). The number of furnaces also increased by about 10% [= $(7043-6400)/6400$] during the same period.

The cremation rate is the percentage of the deceased whose bodies are cremated. For instance, 58.8% of the dead in 2021 were cremated, while the rest were buried without cremation.

The increase in both manpower and furnaces was likely due to the increased demand for cremation. While the cremation rate did increase by 12% [= $(58.5\%-52.4\%)/52.4\%$] from 2019 to 2021, one cannot rule out the increase in total deaths.

2020-2021 Deaths, Assuming Each Furnace Is on 8 Hours a Day

There are a variety of furnaces that require different amounts of time (from 20 minutes to over 60 minutes) to cremate a body.

If a furnace is running 8 hours (or 480 minutes) on a typical work day, then it can burn 8 (=480/60) to 24 (=480/20) bodies a day. The above-mentioned chart shows how many bodies in total would be cremated per year. For instance, if we assume a furnace can burn 8 bodies a day, then the total number of cremated bodies would be 19,380,432 in 2020 (=6,619 furnaces * 8 bodies * 366 days). If we change the assumption to 24 bodies, then the tally would be 57,982,440 (=6,619 furnaces * 24 bodies * 366 days). The average total number of bodies cremated in 2020 would be 38,681,436 [= $(19,380,432 + 57,982,440)/2$] if we assume the number follows a uniform distribution.

If we use the average total number of cremated bodies as our baseline

to calculate the total number of deaths (both cremation and burials), we would have a total death toll of 69,446,436 ($=38,681,436/55.70\%$ cremation rate) in 2020 if we assume each furnace is kept on for 8 hours a day.

The total deaths in 2020 and 2021 would be about 140 million ($139,396,909 = 69,446,436$ in 2020 + $69,950,884$ in 2021).

2020-2021 Deaths, Assuming Each Furnace Is on 24 Hours a Day

There have been many reports about furnaces running 24 hours a day since the pandemic broke out.

If a furnace is kept on for 24 hours (or 1,440 minutes) a day, then it can burn 24 ($=1440/60$) to 72 ($=1440/20$) bodies a day. The above chart also indicates how many bodies would have been cremated given this assumption.

Let's still look at the 2020 data. If a furnace can burn 24 bodies a day, then the total number of cremated bodies would be 58,141,296 in 2020 ($=6,619$ furnaces * 24 bodies * 366 days). If we change the assumption to 72 bodies, then the tally would be 174,423,888 ($=6,619$ furnaces * 72 bodies * 366 days). The average total number of bodies cremated in 2020 would be 116,282,592 [$= (58,141,296 + 174,423,888)/2$] if we assume the number follows a uniform distribution. The total deaths would be 208,765,874 ($=116,282,592/55.70\%$ cremation rate) in 2020.

The total deaths in 2020 and 2021 would be about 420 million ($418,618,527 = 208,765,874$ in 2020 + $209,852,653$ in 2021) if each furnace is kept on 24 hours a day.

Adding 2022 Estimates

Based on the above analysis, my estimate is that the total deaths between 2020 and 2021 is between 140 million (assuming each furnace is on 8 hours a day) and 420 million (assuming each furnace is on 24

hours a day).

The Ministry of Civil Affairs hasn't published the 2022 data yet. The latest COVID tsunami started in November 2022 or even earlier (the CCP's [internal report](#) indicated that Chaoyang District in Beijing was hit by surging cases in mid-October 2022). Additionally, [a health worker in a village of central Henan Province](#) "saw more fever patients during the period of December 17-24, than in the entire previous year," said Yanzhong Huang, a senior fellow for global health at the Council on Foreign Relations (an American think tank). Taken altogether, it is safe to estimate the number of deaths in 2022 would be no less than that in 2021 (which is estimated to be 69,950,884 to 209,852,653 depending on my assumptions about furnace running time).

Therefore, if we assume each furnace runs 8 hours a day, the total deaths from 2020-2022 would be about 209 million ($209,347,793 = 139,396,909 + 69,950,884$).

The number would change to about 628 million ($628,471,180 = 418,618,527 + 209,852,653$) if we assume each furnace is run 24 hours a day.

In summary, the number of deaths in China during the three-year COVID could be between 209 and 628 million based on the above calculations.

One missing piece of information is the cause of death of those whose bodies were cremated. We cannot assume all the bodies that were cremated were COVID-related. Additionally, not every furnace is kept on the same amount of time each day. But the estimates above should at least give us a rough idea of the magnitude of possible COVID deaths.

CATEGORY: Perspective