



COVID-19 Incidences across Countries and Provinces of China: Some Observations

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Abstract: Analysing COVID-19 cases across countries and provinces of China indicates that the highest transmission of one-fifth was in Diamond Princess where there was no or limited social distancing. As against this, Hubei province, the epicentre of the pandemic, had cases detected among 0.11% of its population. The global incidence is below that of Hubei, but if effective steps are not taken then this could become much higher. What is of concern is that with relatively lower cases, deaths in Italy has already surpassed that of China and there are many European countries with deaths per case are much higher than that of China and incidences are also increasing in the United States. It is time to take lessons from China and take steps at multiple layers including social distancing and lockdown.

1. On 20 March 2020 (5.50 GMT), there were 2,45,912 detected [cases](#) of COVID-19 reported in 180 out of 236 [countries and territories](#) and in Diamond Princess, a cruise ship.
2. From among the detected cases, there have been 10,048 deaths (or, 4.1% of total detected cases) in 69 countries, territories and conveyance including Diamond Princess.
3. Globally, there have been 31.5 cases per million (or, ten lakh) [population](#). This will keep increasing, as the situation is unfolding on a daily basis. It is difficult to say at this stage whether this would increase by ten-fold or hundred-fold or thousand-fold or more.
4. The worst scenario is that of Diamond Princess where cases per million has been 191,862 (or 19.2% of the people in the ship). The [ship](#) had 3,711 people (2,666 passengers and 1,045 staff) and from among them 712 have been the number of detected cases and from these there have been seven deaths till date. The reason from this high case per million is because the passengers and staff were not aware of a possible risk for more than a week. In other words, there was no recourse to [social distancing](#).
5. An analysis of Hubei province of China ([data](#) up to 18 March 2020 and [population](#) for 2018 made sub-group consistent with China's [population](#) of 2020) indicates that there were 1,112 cases per million population (that is 0.11% of population) and for rest of China it is 10 cases per million population, and at the aggregate level, for China, the detected COVID-19 cases are 56 per million population.²
6. Comparing the Global cases per million with that of Hubei province then the cases can increase another 35-fold and a comparison with Diamond Princess indicates a possible increase by more than 6,000 times.
7. There are no countries or territories with more than 50,000 population that have crossed the cases per million population of Hubei province.
8. For countries with more than half-a-million population, Italy, with a population of more than 60 million, has the maximum cases of 679 per million population (0.07% of population). With total cases of 41,035 and deaths of 3.405, which has already [surpassed](#) China, the healthcare system there has been working beyond capacity and is in [breakdown](#). Besides, the cases also continue to increase.

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² In this note, China refers to mainland provinces, as COVID-19 [cases](#) in Hong Kong, Macau and Taiwan have been reported independently.



9. COVID-19 deaths per million population at Hubei province has been 51 so far. Excluding Diamond Princess and San Marino (with less than 35,000 population, but with 14 deaths), the maximum deaths per population is also [Italy](#) at 56. The deaths per million population is 2.3 in China. In addition to Italy, countries, with more than one million population, where deaths per million is already higher than China are Spain (17.8), Iran (15.3), France (5.7), Switzerland (5.0) and Netherlands (4.4). All these, except perhaps Iran, have relatively [better](#) healthcare infrastructure compared to many developing countries. Now, this does not augur well for the developing countries who may have an uphill task if their population gets exposed to COVID-19 pandemic in a similar manner.
10. From the 81,202 cases in China (18 March 2020 [data](#)), 67,800 or (83.8% of all cases in China) have been in Hubei province. Further, from the 31 provinces in China (see note 2), the detected cases, so far, have been in nine provinces only. It is remarkable that there have been no cases in 22 provinces of China having 62% of its population have no detected case of COVID-19. Contrast this with the [United States](#) where, as of date, cases have been detected in all its 50 states.
11. In China (18 March 2020 [data](#)), deaths per case is 4.0% and deaths per closed case is 4.4% (a case is closed either because of death or on account of recovery). In Hubei province, the proportions are 4.6% and 5.2% respectively. It may also be mentioned that 86% of the cases in China and 84% of the cases in Hubei province have recovered. China's [response](#) has been able to achieve this with strict lockdown to ensure social distancing.
12. It is understandable that each country or sub-national region has its own compulsions and has to address them. Nevertheless, the [steps](#) taken in China in general and Hubei province in particular have important lessons. Their protocols for [healthcare](#) will also be helpful. The resources by the World Health Organisation ([WHO](#)) is important and will add value. The [message](#) from Director General of WHO suggests that we prepare for the worst and take our foot forward.
13. India, with a [message](#) from its Prime Minister with an appeal for Janata Curfew, as also [messages](#) from Chief Minister of Odisha and a [special package](#) from Kerala along with initiatives in other states are being taken and updated on a daily basis. And, California in the United States has declared a [lockdown](#).
14. All these point to different measures and restrictions including social distancing and perhaps inching towards lockdown in some locations at a country or sub-national level. However, care should be taken so that social distancing does not take the form of social discrimination. Stay safe, stay healthy.

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