

Making Balanced Covid Policies

DM Chiu, September 19, 2022

In controlling Covid-19, the slogan of the new SAR government is “Accurate Covid Policies” (ACP, or 精準防疫 in Chinese). This is mainly targeted at policy efficiency. For example, if the original policy needs to isolate 1000 people, and it can be reduced to isolating only 100 people without increasing spreading risks because the group of infected group can be narrowed down to 100 people, this achieves ACP. ACP may require all of us to provide a little more information about our mobility to the government, but it can benefit many people by loosening social distancing.

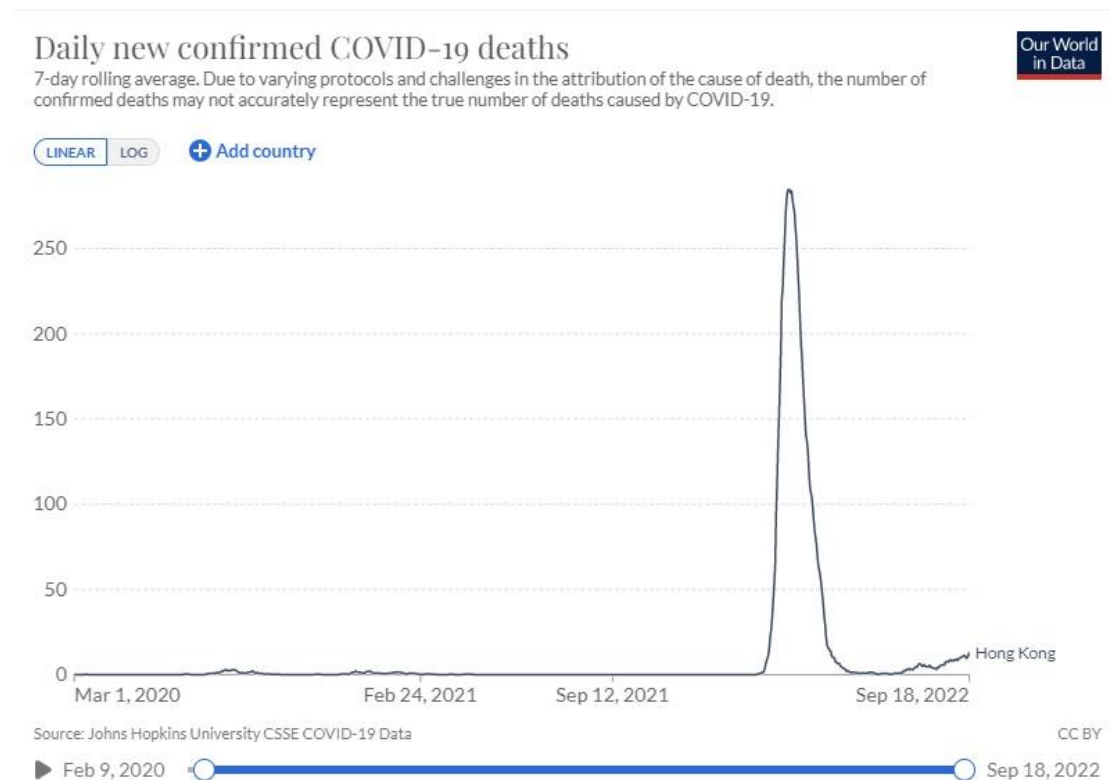
Even with ACP, the Covid controlling policies (social distancing and border control) are still choking the economy too much, and severely impacting our city’s normal functions. Fortunately, the Covid-19 virus has mutated into Omicron, that is less fatal though more transmissible. This situation opens up room for the government to consider “Balanced Covid Policies” (BCP) – various ways to loosen Covid controlling policies, though possibly at the cost of slightly higher health impact. Such decisions are very hard to make, as the government needs to balance the interests of different stakeholders, as well as health impact. The current government has made some BCP decisions, for example allowing schools to reopen, and relaxing the 7-day inbound hotel quarantine to 3-plus-4 (3-day quarantine plus 4-day monitoring). In other countries and regions, governments have adopted other BCPs, ranging from Zero Covid in mainland China to removing most social distancing and border controls in most Western countries. Whatever BCP are adopted, a government needs to justify them. After all, we are talking about potentially extra deaths.

This is the trigger for comparing Omicron with Flu. For seasonal Flu, government policies have minimum impact on normal live for citizens; they normally only involve making vaccines available, or free for the more vulnerable group (elderly). This practice is already adopted and accepted by people in most countries. If Omicron’s harmfulness is comparable to Flu, then adopting a back-to-normal-live BCP is easily justifiable. Otherwise, there will always be criticism by some that government is not doing enough to save lives. So is Omicron sufficiently similar to Flu? There are two different metrics commonly used to compare the harmfulness of different viruses: Case Fatality Ratio (CFR); and Mortality Rate (MR).

CFR is simply the ratio of number of deaths (caused directly or indirectly by the virus) divided by the number of cases of infection. CFR can be used by people to gauge the risk of the virus when infected; it is also a way to make a gross comparison between the risk of different viruses, which can range from 0.1% all the way to 99%. CFR is hard to measure precisely – although the number of related deaths can often be determined accurately, the number of cases may not be accurately measurable. So the estimated CFR is often only an upper bound of the true CFR. Even if CFR can be measured accurately, however, it should be noted that CFR is dependent on immunity in the population (through vaccination and infection/recovery) and availability of treatment; CFR is also usually different for different age groups so the overall CFR of a population depends on the distribution of people getting infected.

As reported in the news, there are some arguments between government officials and other experts about the CFR of Omicron in Hong Kong, and its comparison to that of Flu (which is widely agreed to be 0.1%). The government side calculates Omicron's CFR to be 0.6% by considering the numbers from January to September 2022, while some experts calculates it to be around 0.1% by considering the numbers from June to September; the latter is roughly the same as Flu. If we use the longer period (January to September), the (average) immunity level was significantly lower earlier on, especially with the frail elderly group which was hit hard. In the later part of the period, immunity level was increased due to more vaccination and natural immunity (from infection and recovery). So who is right about the CFR of Omicron? Both can be right as long as they state what is the population immunity level and treatment available, as part of their CFR number. But which CFR number should be used to justify BCP? Neither is strictly suitable, but the CFR calculated based on the June to September immunity level (and treatment available) is more appropriate. The reason is that the calculation of CFR (in both case) does not take into consideration of the BCP implemented at the time CFR is measured.

Mortality rate measures the number of deaths in a fixed time period (year is often used). For comparison purposes, MR is normalized to a fixed population size (1000 or 100000). During normal times, MR is usually 0.7-0.9% per year for different populations around the world. When there is a pandemic (or other catastrophic event like war), the harm can also be measured in terms of MR associated with the pandemic (if deaths caused by the pandemic can be counted), or in terms of excess mortality rate. For Covid-19 caused deaths in Hong Kong, the MR is plotted in the following figure (from Our World in Data Website)



Here the time period is daily, but the values are smoothed over a seven-day period.

What is the MR due to Flu in Hong Kong? Since the standardized set of death reason (e.g. heart disease, cancer etc) does not include Flu, the actual number of deaths due to Flu, hence the MR of Flu is usually only estimated. But it is fairly safe to say it is at most on the order of low single digits per day on average. Thus according to MR, Omicron during the period of June to September 2022 is reasonably close to that of Flu, probably marginally higher within a factor of 2.

It should be noted that unlike CFR, MR is dependent on Covid controlling policies. Although the MR of Omicron may be reasonably comparable to that of Flu from June to September of 2022, it reflects the BCP adopted during that period of time. If we relax BCP after September, what is the resulting MR is something that needs to be predicted based on epidemic models or experience. Because of much higher immunity in the population, experts are widely predicting MR will not increase much after relaxing BCP. But the uncertainty is certainly still challenging for decision makers.

To help our government make decisions, we have the following suggestions:

- 1) Take a step-by-step approach. If changing the (3+4) day inbound hotel quarantine policy to (0+7) day is too risky to make, how about setting some limits on it? Currently number of inbound passengers through the airport fluctuates between 3000 to 6000, with the majority being Hong Kong citizens. The imported infections are usually around 150 to 250, so lower than 5%. How about loosening the policy first for Hong Kong Citizens, and visitors with approved list of reasons first? And gradually loosen the policy depending on the MR after loosening?
- 2) Consider experience from other countries and regions. Most of the Western countries, including Asian countries such as Singapore, Japan and Korea, have removed most of the border control and/or social distancing policies. The fact that so many other places have adopted this BCP, it reflects certain level of public acceptance. When we try to compare Omicron to Flu and use it to justify our BCP, it is because we consider BCP for Flu has already received public acceptance, so we can use the experience from other countries and regions in the same vein. It should be noted, however, the resultant MR after loosening BCP can be quite different for these places. Hong Kong needs to use these as benchmark and strive to achieve as low MR as possible, after loosening quarantine rules.