

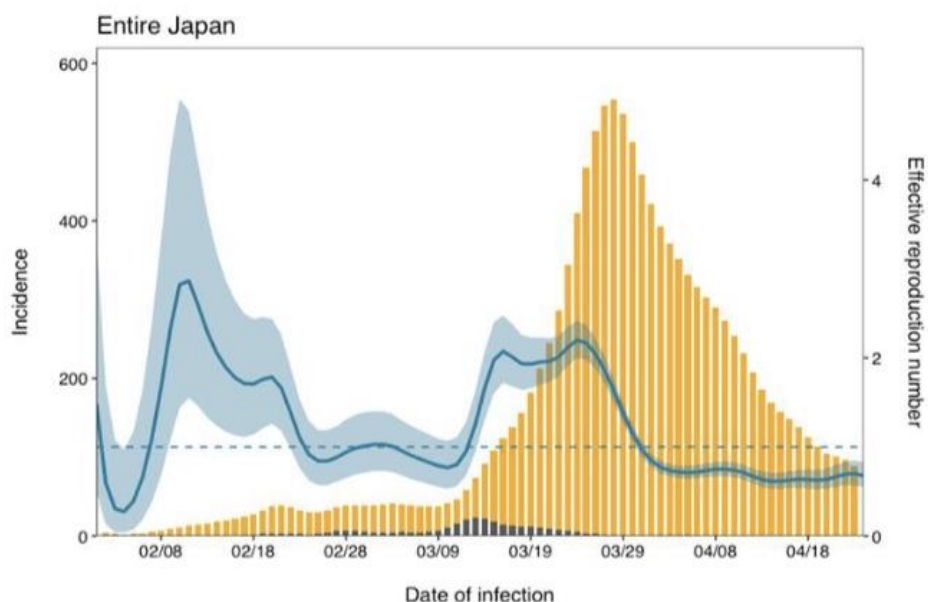
Situation report – COVID19; Japan, Tuesday 19th of May 2020

Confidential – for internal circulation only, not for release to outside parties without the prior consent of the author. This document represents the opinion of the author and does not constitute the provision of medical care. Readers with concerns over their individual health should contact their physician for advice.

Current caseload in Japan

Case numbers continue to fall across Japan, maintaining a trend seen since the national peak of the 12th of April. Recently released figures show that the effective reproduction number (R) has been below 1 for over a month. R represents the number of secondary infections each infected individual will cause, so if $R=2$ then infections will double periodically. An R number of below 1 means that new infections will gradually fall, an R number of over 1 represents a state of rising infections.

Effective Reproduction Number (<1 since the beginning of April)



The situation in Tokyo is broadly similar with a slightly later transition to a consistent fall in numbers of infection.

Hospital wards allocated to care of COVID19 patients are emptying out. Nationally, overall bed occupancy in this category stands at a little over 11% today and in Tokyo over three quarters of COVID19 beds are now empty. More severely unwell patients require longer hospital admissions but in this category the situation is also improving – at peak, across the whole of Japan 328 patients with COVID19 were ventilated on the 30th of April, since then there has been a steady decline to below 250 as of now.

Against this background the state of emergency was lifted in 39 of Japan's 47 prefectures on the 14th of May but remains in effect in other areas, including Tokyo and Osaka. An announcement on plans for a phased re-opening for these remaining areas is anticipated later this week.

Transitioning from the State of Emergency- Medical Care & Testing

The ministry of health, labour and welfare (MHLW) has set three pre-conditions to end the state of emergency –

- New cases should be below 0.5 per 100,000 people, should show a downward trend and there should be a lower proportion of cases where no chain of transmission can be established.
- Enough medical resources should be available to meet an increase in demand.
- A robust surveillance system should be in place with a sufficiently high capacity to test suspected cases, including people with mild symptoms.

The first two of these three conditions are currently satisfied in both Tokyo and Osaka so this statement is an admission that the main deficit is in testing capacity. There has been an encouraging acknowledgement from the ministry that the current system will need to change. Presently a relatively limited testing capacity is managed by overworked local health units who naturally prioritize more unwell patients. A lack of resources to test those with milder symptoms means that many people have had to isolate at home with a label of suspected COVID19 but without the clarity provided by testing. This is tolerable when the whole population is under advice to stay at home as much as possible but will become problematic as many people are called on to return to work or wish to resume more normal daily lives.

The suggestion is that the current system will be replaced by a new one in which doctors are enabled to promptly test patients in whom they believe that there is a reasonable suspicion of infection, including those with mild symptoms. To this end an antigen test kit was approved for use in Japan on the 13th of May and should soon be available at a much higher capacity than PCR. While not as accurate as PCR, antigen testing has the advantage of being available at the point of care with results available in under 30 minutes, in the same manner as rapid influenza testing. As with influenza tests, false positive results are extremely uncommon. However, this test has a lower sensitivity than PCR so symptomatic patients who have a negative antigen test are still likely to require a follow up PCR test to confirm that they do not have COVID19.

Transitioning from the State of Emergency – Impact on Daily Life

As in many other countries, policy makers in Japan are considering how to reduce social distancing without allowing the effective reproduction number to rise above 1. Given that the current R number is approximately 0.7, there is limited scope for relaxing social distancing without a further increase in infections and a second peak in cases. As detailed above, close monitoring of case numbers will be required in order that restrictions on interaction can be re-imposed locally when the need arises.

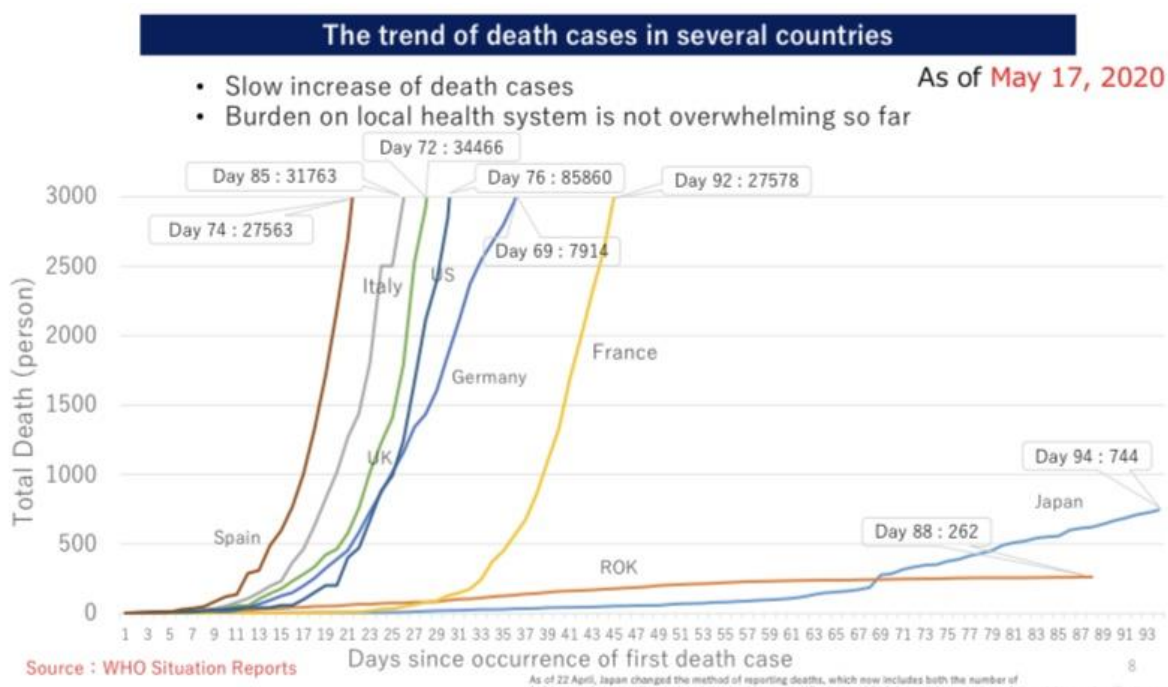
An outline of a three tier system has been released by the cabinet but remains under consideration. In prefectures designated as under special cautionary measures, tighter restrictions are envisioned, much as are in place under the state of emergency. Even in regions on the lowest of the three tiers, though, some restrictions are likely to remain in place and it is likely that indoor events with over 100 people and outdoor events with over 200 participants will be off limits. Some specific detail will be devolved to regional governments.

Universal advice on hand and respiratory hygiene and on avoiding higher risk social situations (3 C locations) will remain in place everywhere for the foreseeable future as will recommendations on limiting commuter traffic by making changes to work culture.

Predicting the Future – how will Japan manage the next phase?

In trying to assess how successfully Japan will manage its transition to a “new normal”, it is worth considering factors which have led Japan’s COVID19 outbreak being relatively less severe as well as the problems which remain to be solved.

On the positive side, even at its worst, the COVID outbreak moved considerably more slowly in Japan than it did in many other countries, for reasons which we can speculate on but still don’t fully understand. At peak (late March and early April), case numbers and deaths doubled every 6-7 days compared to every 2-3 days in Europe and North America, allowing much more time for the healthcare system to be adapted to anticipated needs.



Stacked against this, the Japanese government moved relatively slowly on some key issues such as expansion of testing and was sometimes tardy in acknowledging errors or deficiencies in its response to the evolving situation. In dealing with an essentially unknown entity such as a novel pathogen, errors are inevitable as responses require guesswork in the absence of definitive information. A flexible approach, a willingness to learn from other countries’ successes and failures and an ability to reflect openly on poor outcomes are all attributes which enable an optimal response to a pandemic. These qualities may not always sit comfortably within a system of government which relies on evolving consensus decisions over a period of time.

References

Reported Caseload Graphs and data sourced from MHLW press release of 18th November

Resources

How to get help if you suspect that you have COVID19 (Tokyo residents)

<https://stopcovid19.metro.tokyo.lg.jp/en/flow>