

New Zealand's Experience and Recovery from Covid-19

Covid-19 is now the fifth-worst global pandemic in terms of deaths, surpassed only by the Black Death, the Encephalitis Lethargica Pandemic (of 1915), the Spanish Flu, and the Asian Flu (of 1957).

Economic history provides some crucial lessons. First, early and aggressive intervention improves economic recoveries; trying to stay open to protect one's economy results in more deaths and worse economic outcomes. Second, while economies can bounce back quickly, pandemics do cast long shadows. Interest rates are likely to be two percentage points lower than they would otherwise have been for 20 years.

New Zealand's experience with covid-19 repeats the lessons from history. Going earlier and hard has produced better economic outcomes (and saved thousands of lives). The best way to track covid-19 in real-time is by using the R0 measure. The reproduction number (R0) is an epidemiologic metric used to describe a disease's transmissibility. It is the average number of secondary cases generated by a primary case in a fully susceptible population. R0 depends on the probability of meeting an infected person times the probability the disease is transmitted during the meeting.

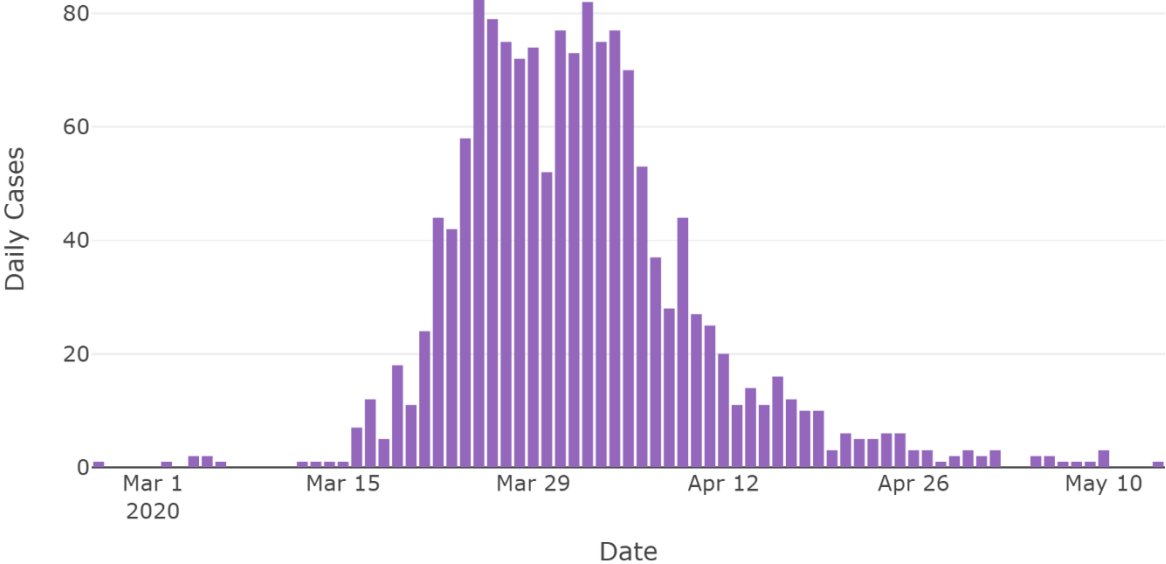


Figure 1: New Zealand Covid-19 epidemic data

When it was announced that New Zealand was entering a lockdown on 24 March, New Zealand had 174 cases but an R0 over 3.4, having been as high as 5 in the weeks prior.

This signalled that New Zealand was facing multiple outbreaks and the prospect of escalating case numbers over the next few weeks. By the time lockdown restrictions had eased on 27 April, the R_0 had declined to 0.2, with case numbers declining to zero over subsequent weeks.

Using mobility data (from Apple or Google devices), it is possible to track economic activity daily and trace that mobility through to its impact on covid-19 cases and GDP outcomes. In New Zealand, we saw GDP fall sharply because of the lockdown, but it has recovered some of that lost output due to the release of pent-up demand.