Coronavirus Disease 2019 (COVID-19) Pandemic

Update Paper 9

6th April 2020, 3pm NZT

Current Status of COVID-19

Globally (*Source*: [Coronavirus COVID-19 Global Cases by the Center for Systems Science and Engineering (CSSE) at Johns Hopkins University (JHU))](#)

- Cases: 1,331,032 (At 7am NZST on 7/4/2020)
- Recovered: 275,851 (20.7%)
- Deaths: 73,917 (5.6%)
- Active Cases: 981,264 (73.7%)

New Zealand (Source: [MoH NZ](#))

- **1106** Total Cases (872 Confirmed and 107 Probable cases)
  - **929** Active Cases
  - **176** recovered
  - **13** cases currently in hospital (3 in ICU),
  - **1** death
  - **DHB Regions: 48% (532)** of the total cases resided within the catchment areas of three Tāmaki region DHBs (of WDHB, ADHB and CMDHB) and the Waikato DHB (See Figure 1).
  - **AGE GROUPS: 25% (or 273) of cases are in the 20-29 age group**. In addition, more than one-third (37% or 389) of total cases were aged 50 years or older (See Figure 2).
  - **GENDER: 53% (584)** of total cases were female (See Figure 3).
  - **ETHNICITY:** Of the total cases **7.9% (79) were Māori**, 73.5% (813) were Pākehā, 8.4% (93) were Asian, and 3.4% (38) were Pacific people (See Figure 4).
  - **SOURCE OF TRANSMISSION: 43%** of total cases were linked to recent overseas travel, 38% were contact with a known case, 2% were community transmission, and 17% are where the source of transmission is still under investigation.

  - **Overseas Data**: Obesity significantly increases the risk of developing severe pneumonia in patients infected with the coronavirus[1] and latest data from China indicates around four-fifths (78% or 130 out of 166) of cases seen in the last 24 hours to the afternoon of Wednesday 1 April were asymptomatic[2].
  - **The current four-week lockdown in NZ**: With Winter approaching the next 2 weeks will be a crucial time for people to remain at home and practicing social distancing measures. It is likely that this suppression measure will need be repeated numerous times until a vaccination becomes available.

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[1] Qingxian, Cai and Fengjuan, Chen and Fang, Luo and Xiaohui, Liu and Tao, Wang and Qikai, Wu and Qing, He and Zhaoqin, Wang and Yingxia, Liu and Jun, Chen and Lei, Liu and Lin, Xu, Obesity and COVID-19 Severity in a Designated Hospital in Shenzhen, China (3/13/2020). Available at SSRN: https://ssrn.com/abstract=3556658 or http://dx.doi.org/10.2139/ssrn.3556658

[2] BMJ 2020;369:m1375

Figure 1: Cases by DHB Catchment

Age group (years)

Age group	Cases
0 to 9	15
10 to 19	86
20 to 29	273
30 to 39	162
40 to 49	155
50 to 59	181
60 to 69	146
70+	86
Unknown	2
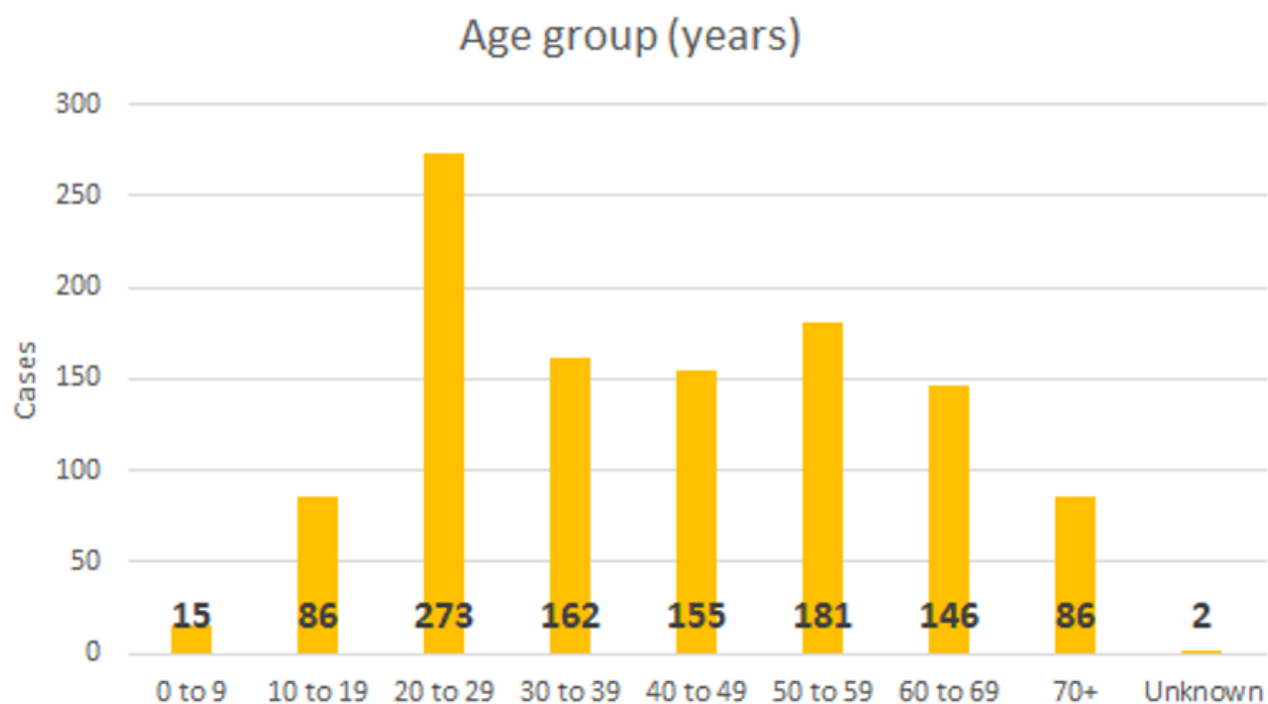
Figure 2: Cases by Age group

Sex

Male: 513, Female: 584, Not Specified: 9

■ Male   ■ Female   ■ Not Specified

Figure 3: Cases by sex

Ethnicity

Ethnicity	Total Confirmed and Probable Cases
European or Other	813
Asian	93
Unknown	75
Maori	87
Pacific Peoples	38

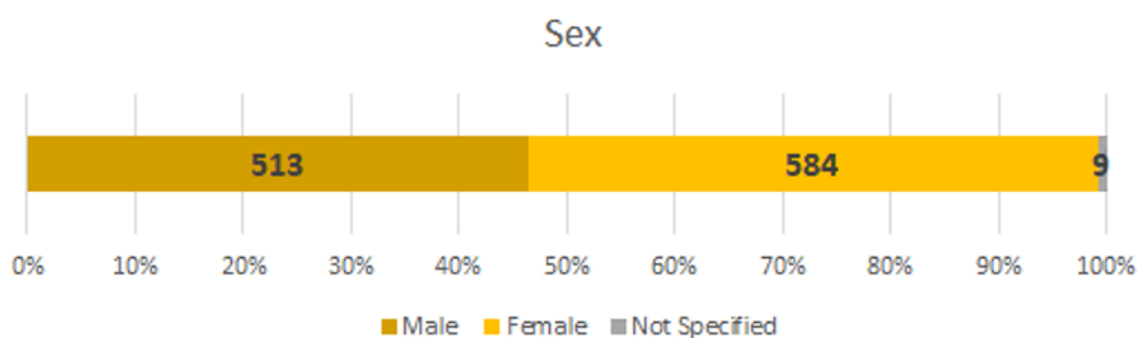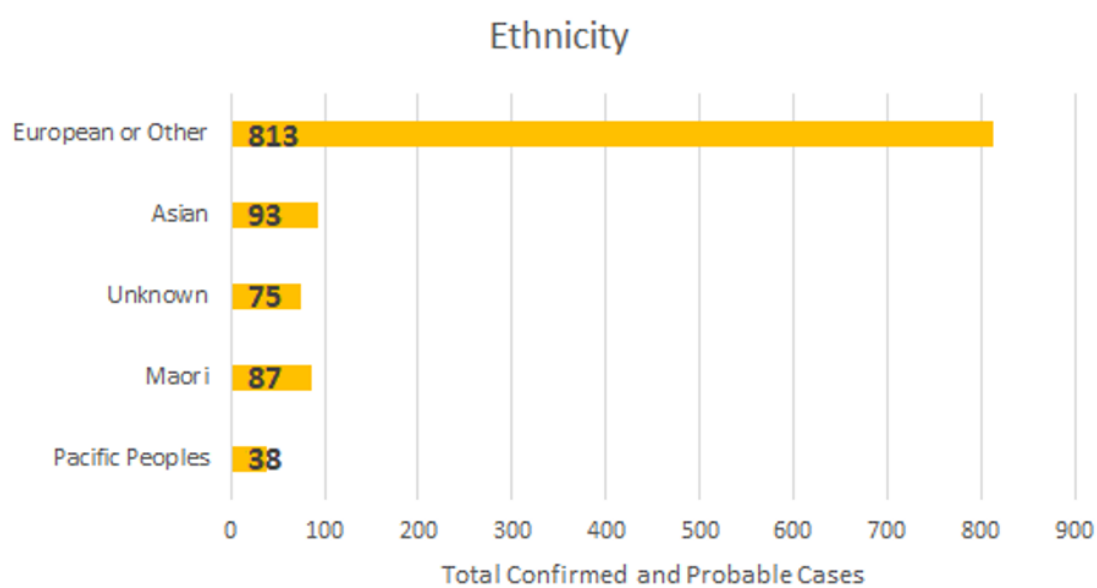**Figure 4: Cases by Ethnicity**

Data comparing New Zealand's incidence of cases to that of other countries appear to show we are at a critical point and the four-week lockdown is very timely (Source of Data: Johns Hopkins University and NZ MoH)

- The graphs below show NZ compared to Australia over the last 5 weeks the absolute increase in numbers of cases per day and the rate of increase in number per day (number of cases per day on a logarithmic scale with gridlines for ten-fold increases in cases).
- We note when NZ is compared to our neighbour Australia, the gap between our countries absolute number of cases is large but when seen on the logarithmic scale, our increase in number of cases over the last 3 or 4 days shows that our cases are now increasing at similar rate to that of Australia's (that is why the lines on the logarithmic scale are beginning to stay a similar distance apart).
- Hence the current four-week lockdown is appearing to have been a crucial and timely Public Health measure that is beginning to show early signs that our rate of increase is beginning to slow down.
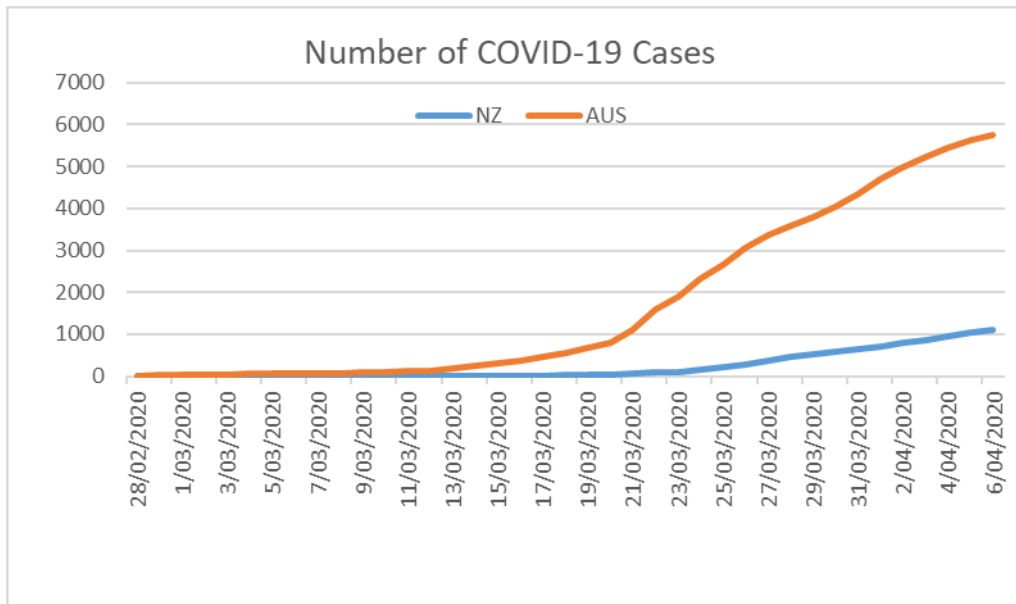

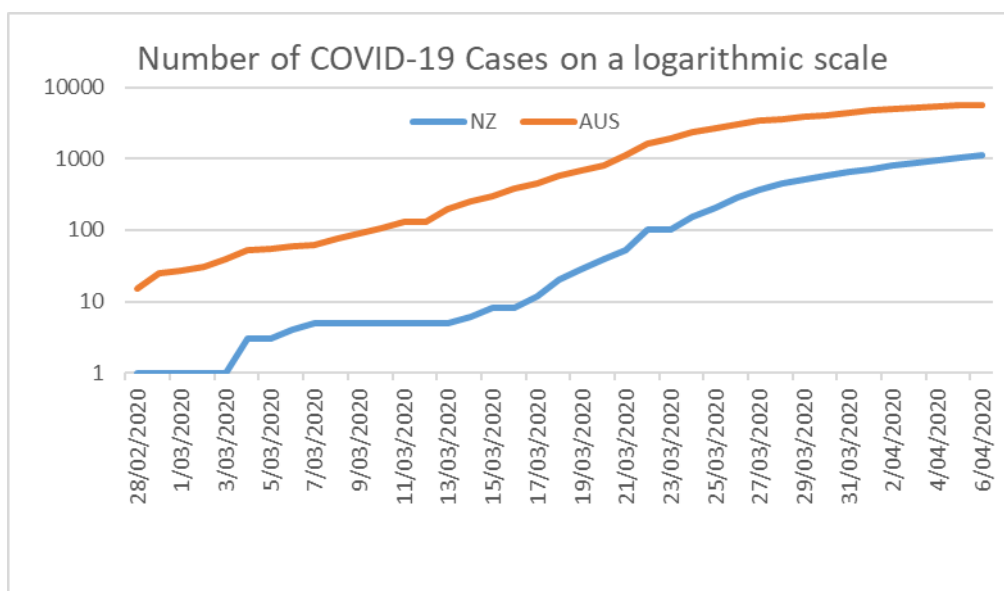**Figure 6: COVID-19 Cases in New Zealand & Australia**

Figure 7: COVID-19 Cases (Logarithmic scale) in New Zealand & Australia

A real-time tracker of how governments respond to Covid-19 across the world[3]:

Oxford University has launched a Covid-19 government response tracker (https://www.bsg.ox.ac.uk/research/research-projects/oxford-covid-19-government-response-tracker), which shows how governments vary in their responses and policies and how it can be compared with the result of the outbreak in their country. The indicators they used to compare the government responses include:

- School closure; Workplace closures; Public event cancellation; Public transport closure;
- Public information campaigns; Restriction on internal movement;
- International travel controls; Fiscal measures;
- Monetary measures; Emergency investment in healthcare; Investment in vaccines.

The tracker combines all the indices into a Response Stringency Index. However, the index should not be interpreted as measuring the appropriateness or effectiveness of a country's response but instead allows for efficient cross-national comparisons.

One method to compare countries is to use a stringency-risk ratio which is the maximum level of stringency a government has reached compared to the total number of cases in that country. The results are depicted in the figure below. Countries above the line can be interpreted as having more stringent measures than the average country, given their number of confirmed cases.

Relationship between number of COVID-19 cases and government response

It can be seen that New Zealand (NZ) is close to other Asia-Pacific countries such as Singapore (SGP) and Taiwan (TWN) in the graph above. NZ is below the average stringency-risk ratio but also has a lower total number of cases. NZ compares more favourably than say Australia (AUS) and the United Kingdom (GBR) that score more highly on the stringency-risk ratio and have higher numbers of cases.

The United States (US), has the highest number of cases and scores a lower stringency in comparison with China, Italy, Spain and France, with similar number of cases.

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[3] Hale, Thomas, Anna Petherick, Toby Phillips, Samuel Webster. "Variation in Government Responses to COVID-19" Version 3.0. Blavatnik School of Government Working Paper. March 31, 2020. Available: www.bsg.ox.ac.uk/covidtracker