



Office of the Prime Minister's Chief Science Advisor
Kaitohutohu Mātanga Pūtaiao Matua ki te Pirimia

Title:

EVIDENCE BUNDLE: COVID-19-Advice Bundle - April 2020

Author:

OPMCSA

Output type: PDF				
Pages: 77 pp				
Date: May-20				
Language: English				
Review: -				
Versions				
<i>Record number:</i>	<i>Version:</i>	<i>Date V1 created:</i>	<i>Date:</i>	<i>Printed version</i>
PMCSA-20-6	V1	01-May-20	01-May-20	N
Archive page link: https://dpmc.govt.nz/our-programmes/special-programmes/prime-ministers-chief-science-advisor-archives/archive/gerrard-2018-2021				
Notes: -				



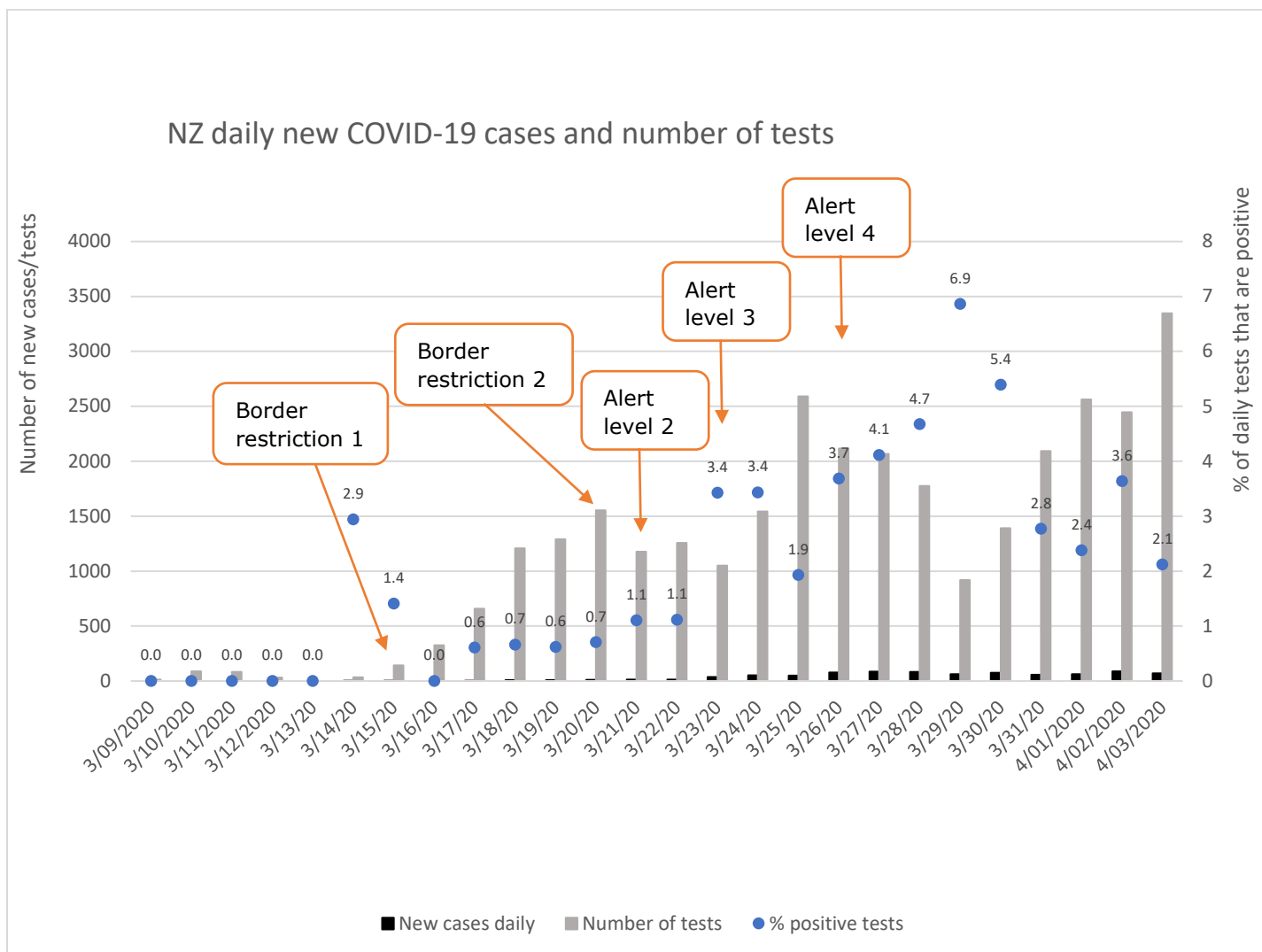
Office of the Prime Minister's Chief Science Advisor
Kaitohutohu Mātanga Pūtaiao Matua ki te Pirimia

COVID-19: April Advice

Collated 1 May 2020

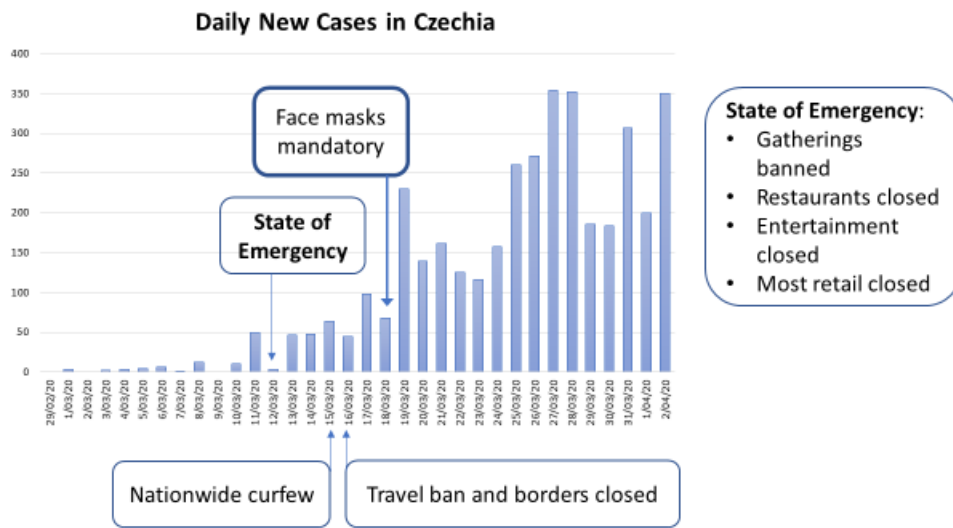
Charts and data provided to support verbal advice

For further information and context, listen to an [interview Juliet gave on RNZ's Nine to Noon](#).

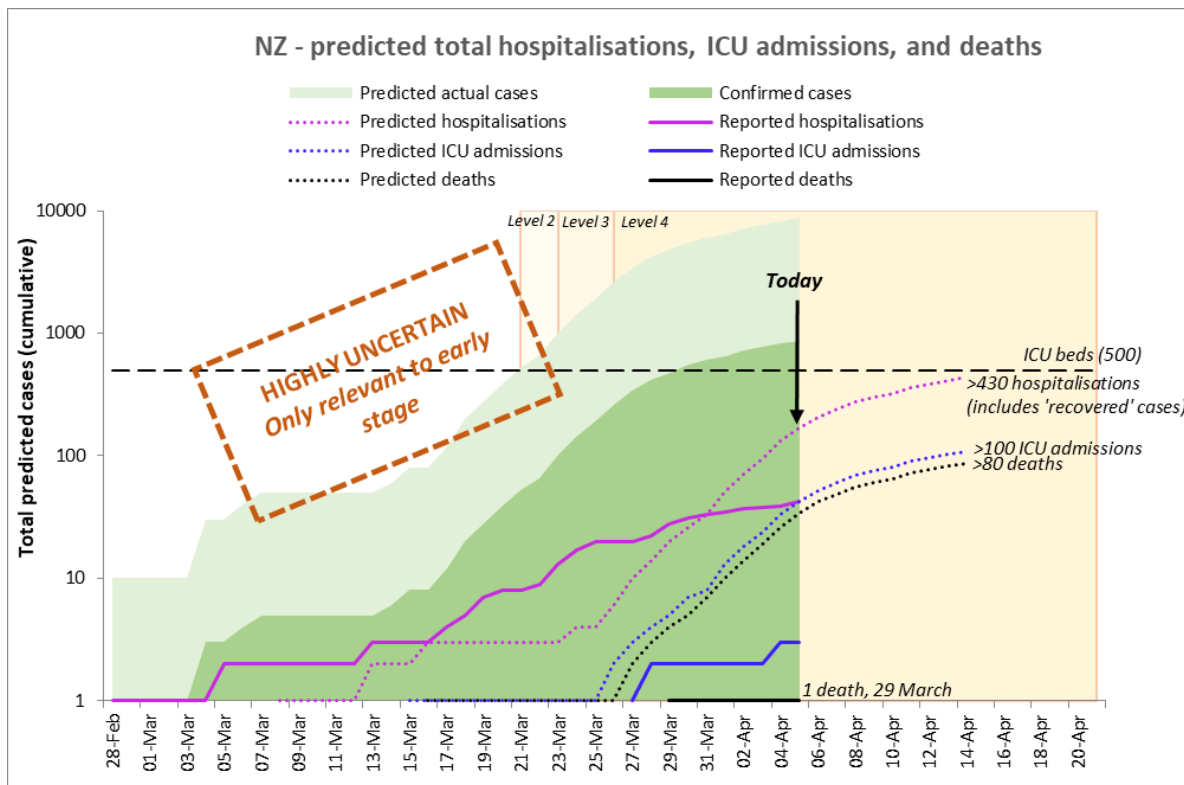


Note: Daily new cases include confirmed and probable

4/04/2020



Case numbers: Johns Hopkins University
Interventions: Ministry of the Interior of the Czech Republic, Wikipedia



Median time from onset of symptoms to ICU admission has been reported as approximately ten days.¹ This time has been applied to confirmed NZ cases² with an assumption that 90% of actual cases have been missed³, at a rate of 5% for hospitalisations, 1.25% for ICU admissions and 1% for deaths⁴.

Reported hospitalisations are from Ministry of Health data.⁵ The hospitalisations are cumulative and have not allowed for those leaving hospital, so the graph is only relevant to the early stage of the response.

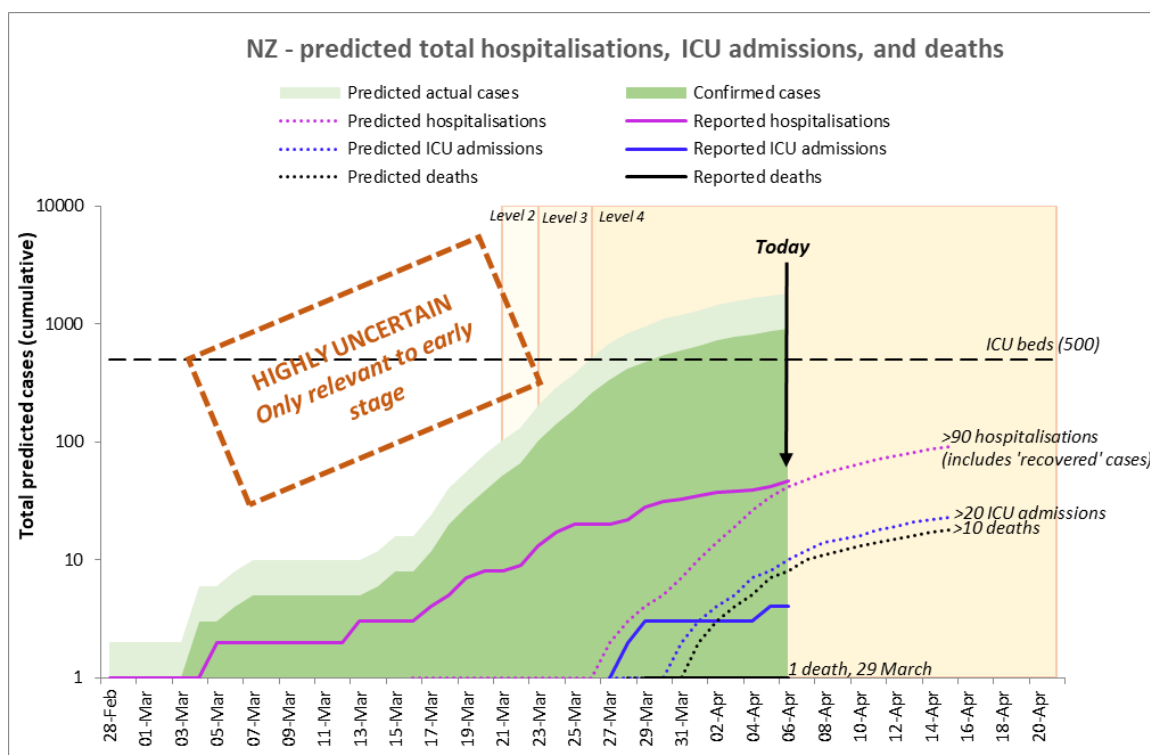
¹ See [https://www.thelancet.com/journals/laninf/article/PIIS1473-3099\(20\)30195-X/fulltext](https://www.thelancet.com/journals/laninf/article/PIIS1473-3099(20)30195-X/fulltext) and <https://www.nejm.org/doi/full/10.1056/NEJMe2002387>

² NZ data to 25 March collated from daily stand-up meetings; only **confirmed** cases included here.

³ We have assumed only 10% of actual cases in NZ have been identified and confirmed.

⁴ Figures taken from model assumptions under 'realistic' scenario from 'COVID-19 Modelling Update', 26 March 20, produced by Te Punaha Matatini with support from Orion Health, Contact Shaun Hendy.

⁵ Hospitalisation date may not align with actual admission date.



Median time from onset of symptoms to ICU admission has been reported as approximately ten days.⁶ This time has been applied to confirmed NZ cases⁷ with an assumption that 50% of actual cases have been missed⁸, at a rate of 5% for hospitalisations, 1.25% for ICU admissions⁹ and 1% for deaths¹⁰.

Reported hospitalisations are from Ministry of Health data.¹¹ The hospitalisations are cumulative and have not allowed for those leaving hospital, so the graph is only relevant to the early stage of the response.

⁶ See [https://www.thelancet.com/journals/laninf/article/PIIS1473-3099\(20\)30195-X/fulltext](https://www.thelancet.com/journals/laninf/article/PIIS1473-3099(20)30195-X/fulltext) and <https://www.nejm.org/doi/full/10.1056/NEJMe2002387>

⁷ NZ data to 25 March collated from daily stand-up meetings; only **confirmed** cases included here.

⁸ We have assumed only 10% of actual cases in NZ have been identified and confirmed.

⁹ ICU data is approximate – official data not accessed.

¹⁰ Figures taken from model assumptions under 'realistic' scenario from 'COVID-19 Modelling Update', 26 March 20, produced by Te Punaha Matatini with support from Orion Health, Contact Shaun Hendy.

¹¹ Hospitalisation date may not align with actual admission date.

6/04/2020

Data up to 5 April via JHU at https://github.com/CSSEGISandData/COVID-19/blob/master/csse_covid_19_data/csse_covid_19_time_series/time_series_covid19_confirmed_global.csv

Country	Population	Cases April		Deaths April	
		5	% of popn tested positive	5	% of cases that died
France	65000000	64338	0.10%	8078	12.56%
Italy	60000000	128948	0.21%	15887	12.32%
UK	67800000	47806	0.07%	4934	10.32%
Spain	47000000	131646	0.28%	12641	9.60%
Sweden	10000000	6830	0.07%	401	5.87%
Canada	37600000	5687	0.02%	259	4.55%
Denmark	5800000	4369	0.08%	179	4.10%
US	330500000	337072	0.10%	9619	2.85%
Germany	83700000	100123	0.12%	1584	1.58%
Finland	5500000	1927	0.04%	28	1.45%
Taiwan	23800000	363	0.002%	5	1.38%
Croatia	4100000	1182	0.03%	15	1.27%
Norway	5400000	5687	0.11%	71	1.25%
Australia	25500000	5687	0.02%	35	0.62%
Singapore	5800000	1309	0.02%	6	0.46%
Hong Kong	7500000	890	0.01%	4	0.45%
NZ	4800000	1039	0.02%	1	0.10%

6/04/2020

Country	Date	total # positive tests	total # tests	% positive tests	total # deaths	% of deaths
New Zealand	5/04/2020	1039	36209	2.9%	1	0.1%
New Zealand	29/03/2020	476	17120	2.8%	1	0.2%
New Zealand	22/03/2020	66	6000	1.1%	0	0.0%
New Zealand	15/03/2020	8	440	1.8%	0	0.0%
New Zealand	8/03/2020	5	229	2.2%	0	0.0%
New Zealand	1/03/2020	1	136	0.7%	0	0.0%
South Korea	5/04/2020	10237	461233	2.2%	183	1.8%
South Korea	29/03/2020	9583	394,141	2.4%	152	1.6%
South Korea	22/03/2020	8897	331,780	2.7%	104	1.2%
South Korea	15/03/2020	8162	268,212	3.0%	75	0.9%
South Korea	8/03/2020	7132	188,518	3.8%	50	0.7%
South Korea	1/03/2020	3526	96,985	3.6%	17	0.5%
Italy	5/04/2020	128948	691461	18.6%	15887	12.3%
Italy	29/03/2020	97689	454030	21.5%	10779	11.0%
Italy	22/03/2020	59138	258402	22.9%	5476	9.3%
Italy	15/03/2020	24747	124889	19.8%	1809	7.3%
Italy	8/03/2020	7375	49937	14.8%	366	5.0%
Italy	2/03/2020	2036	23345	8.7%	54	2.7%
UK	5/04/2020	47806	195524	24.5%	4934	10.3%
UK	29/03/2020	19522	127737	15.3%	1228	6.3%
UK	22/03/2020	5018	72818	6.9%	233	4.6%
UK	15/03/2020	1140	37746	3.0%	21	1.8%
UK	8/03/2020	273	23513	1.2%	2	0.7%
UK	1/03/2020	35	11750	0.3%	0	0.0%
US	5/04/2020	332308	1762050	18.9%	9498	2.9%
US	29/03/2020	139061	831351	16.7%	2428	1.7%
US	22/03/2020	31879	225342	14.1%	398	1.2%
US	15/03/2020	3173	25724	12.3%	60	1.9%
US	8/03/2020	417	2752	15.2%	0	0.0%
US	1/03/2020					

COVID-19 in Australia

A state-by-state analysis, data collated 7 April 2020

Data up to 5 April from Johns Hopkins University <https://github.com/CSSEGISandData/COVID-19>

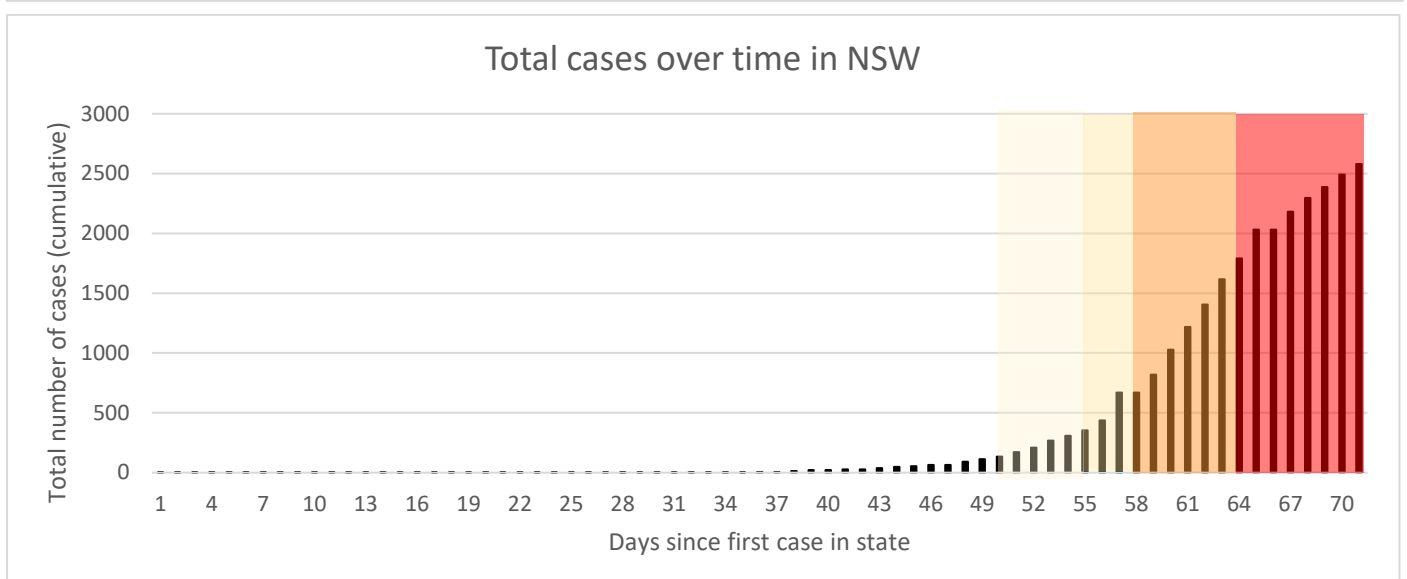
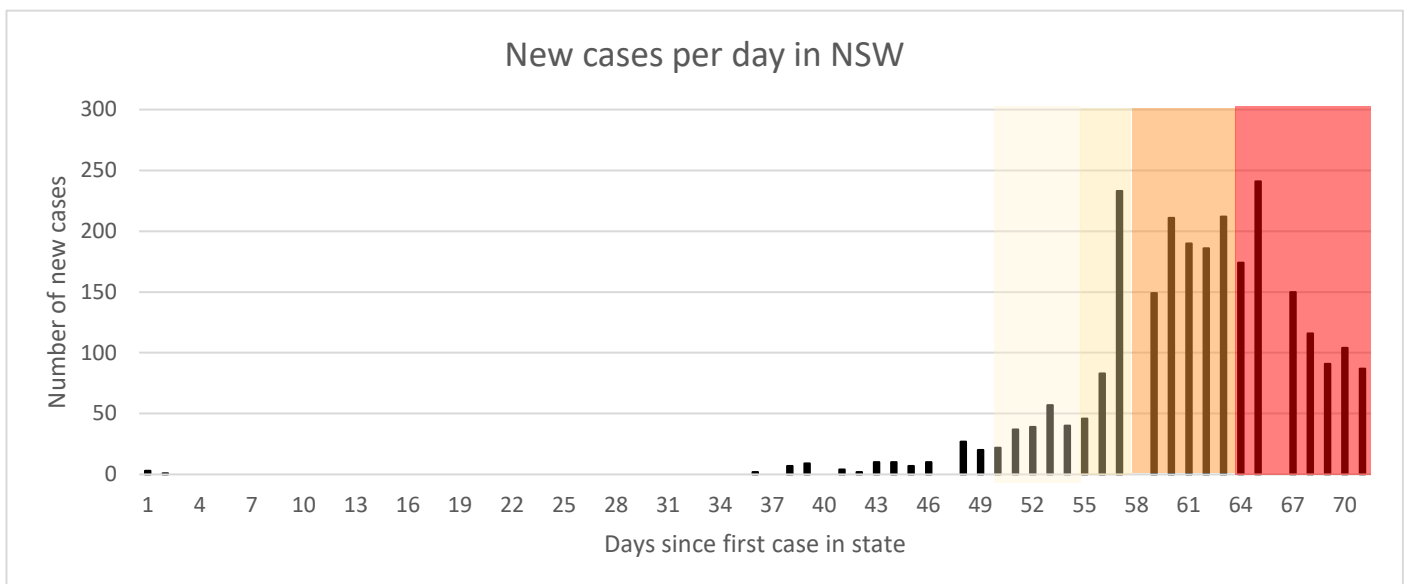
Testing data from Covid Live: <https://www.covidlive.com.au/> (only available from 29 March, supplemented with Guardian Australia data where available)

Also see: <https://www.covid19data.com.au/>

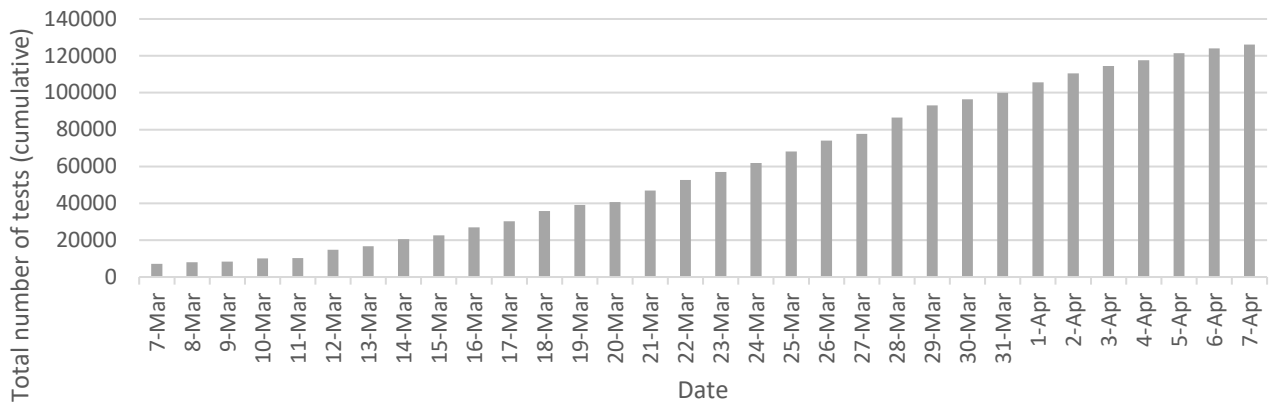
New South Wales (NSW)

Population	7.5 million
Cases (total)	2580
Tests (total)	124,038
Deaths (total)	16

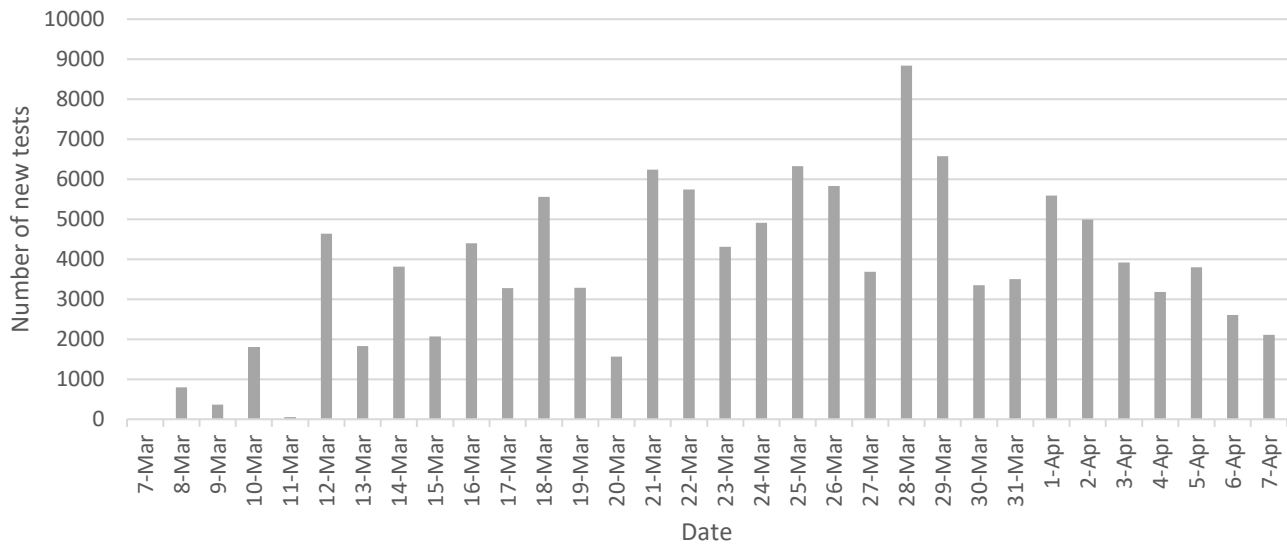
- 15 March:** gatherings >500 cancelled; international travellers arriving/returning must self-isolate for 14 days
- 20 March:** Aus borders closed to all non-residents/non-citizens; minimum of 4sqm per person required for indoor gatherings
- 23 March:** all pubs, bars, nightclubs, cinemas, casinos, indoor sporting venues, entertainment venues, places of worship close; cafes & restaurants delivery only
- 29 March:** federal government limits gatherings to max. two people; state adopts this policy and issues [public health restrictions](#) beginning 31 March



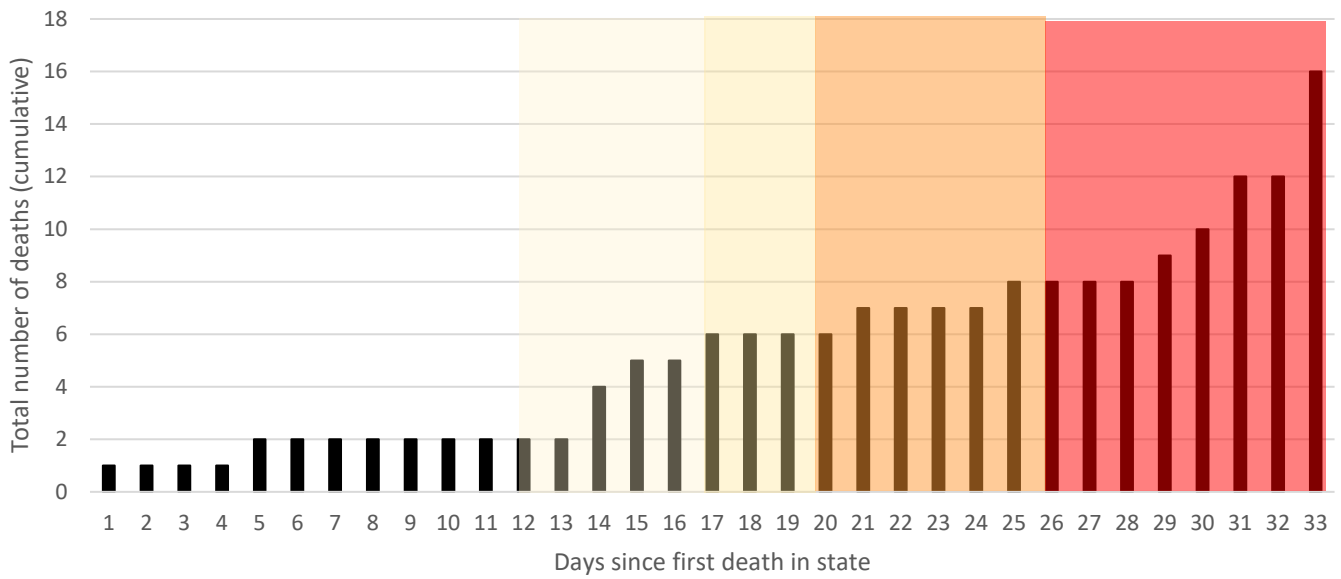
Total tests conducted over time in NSW



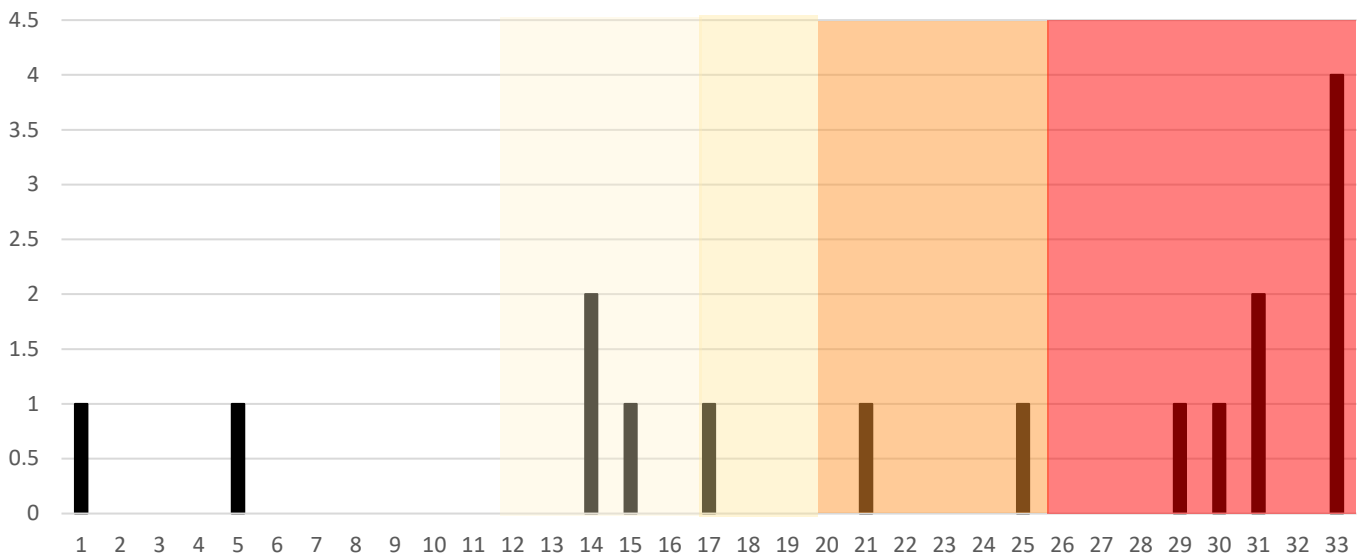
Number of new tests conducted per day in NSW



Total deaths over time in NSW



Number of deaths over time in NSW



15 March: gatherings >500 cancelled; international travellers arriving/returning must self-isolate for 14 days

20 March: Aus borders closed to all non-residents/non-citizens; minimum of 4sqm per person required for indoor gatherings

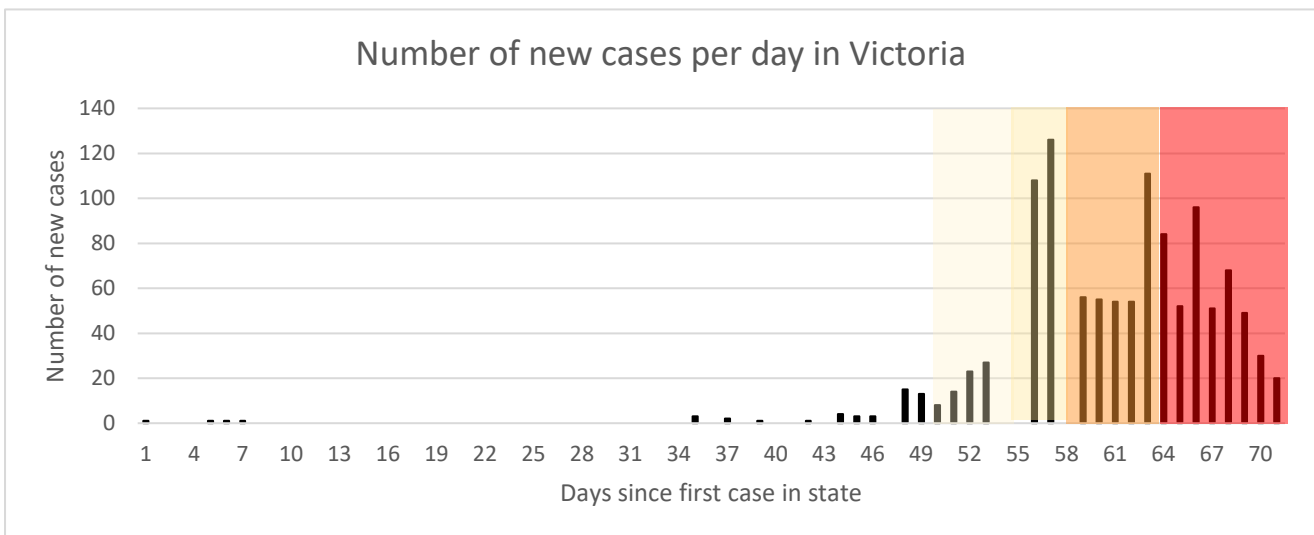
23 March: all pubs, bars, nightclubs, cinemas, casinos, indoor sporting venues, entertainment venues, places of worship close; cafes & restaurants delivery only

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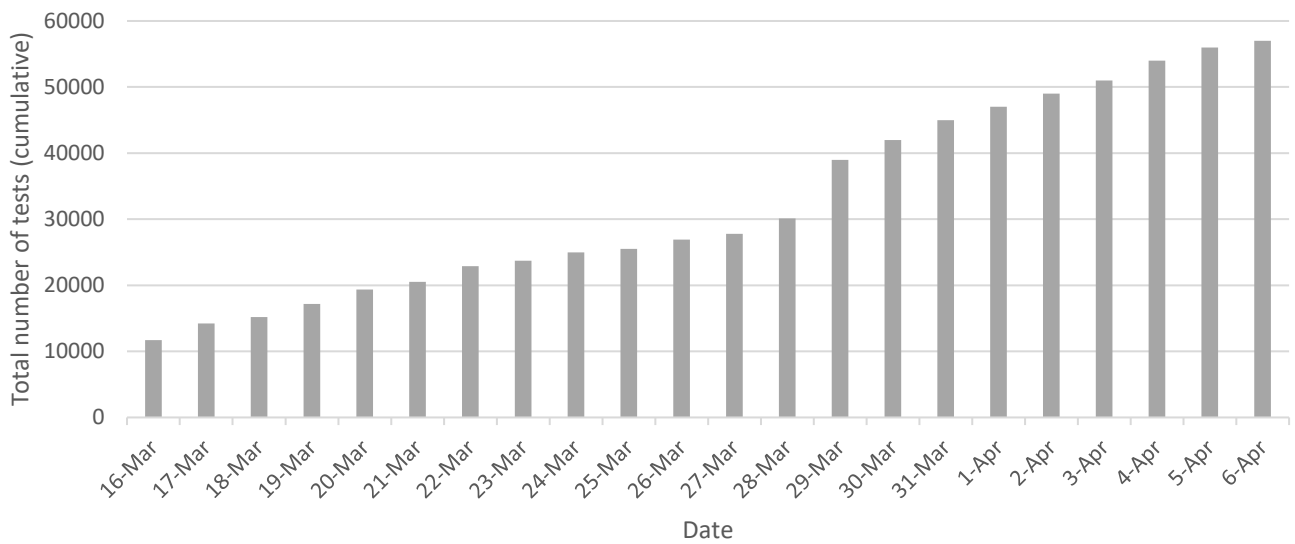
Victoria (VIC)

Population	6.4 million
Cases (total)	1135
Tests (total)	57,000
Deaths (total)	8

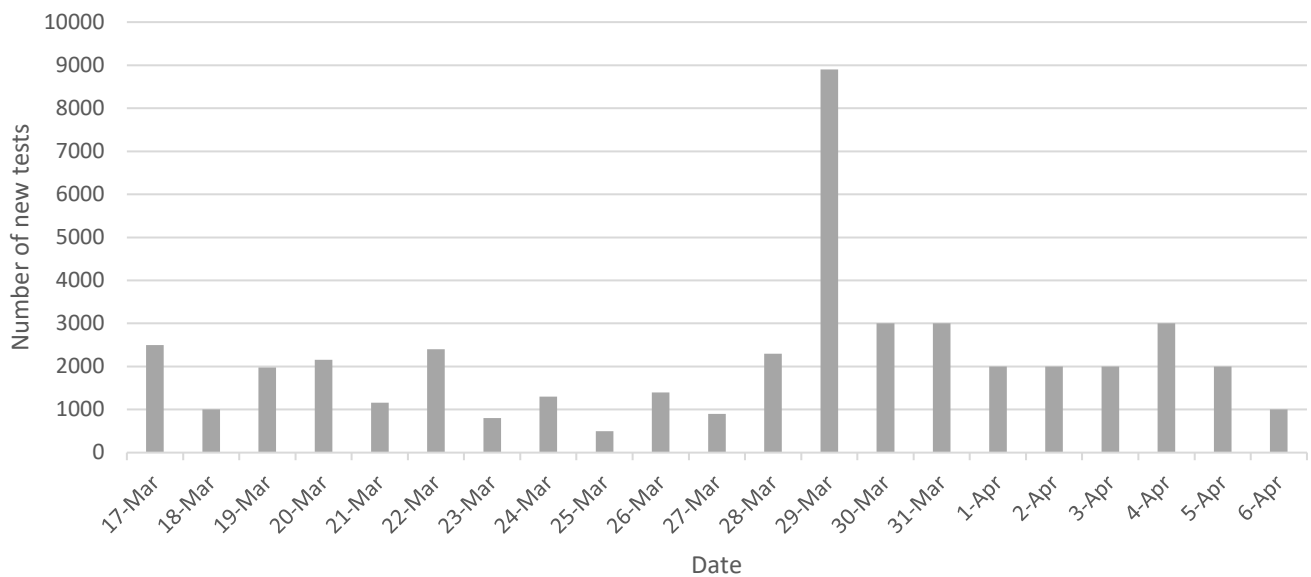
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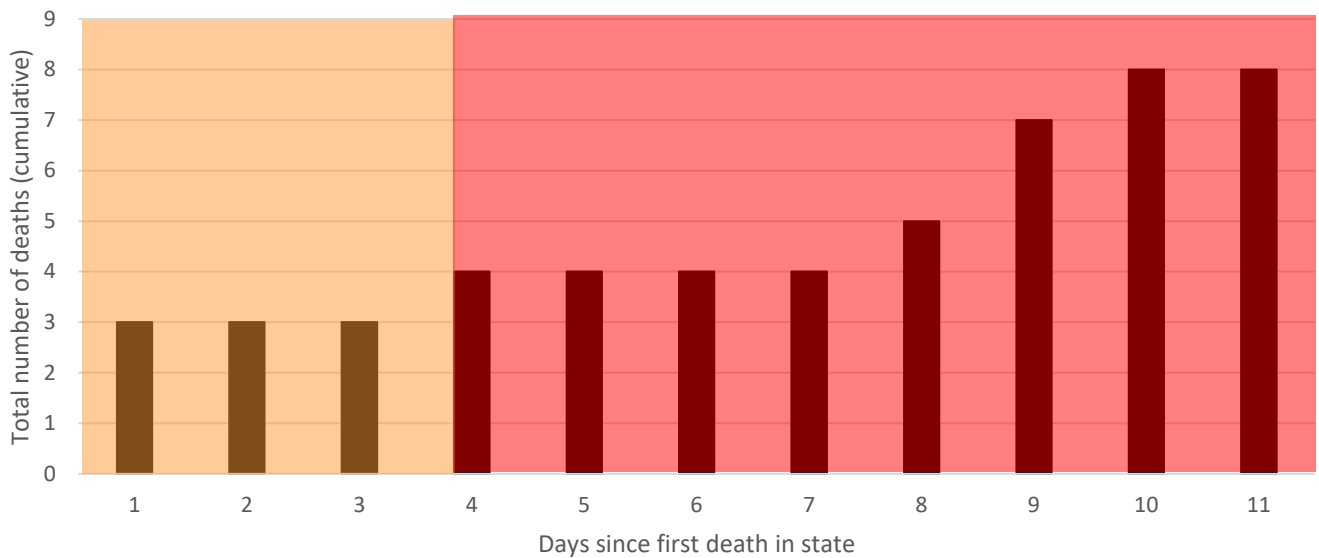
Total number of tests conducted in Victoria over time (approximate)



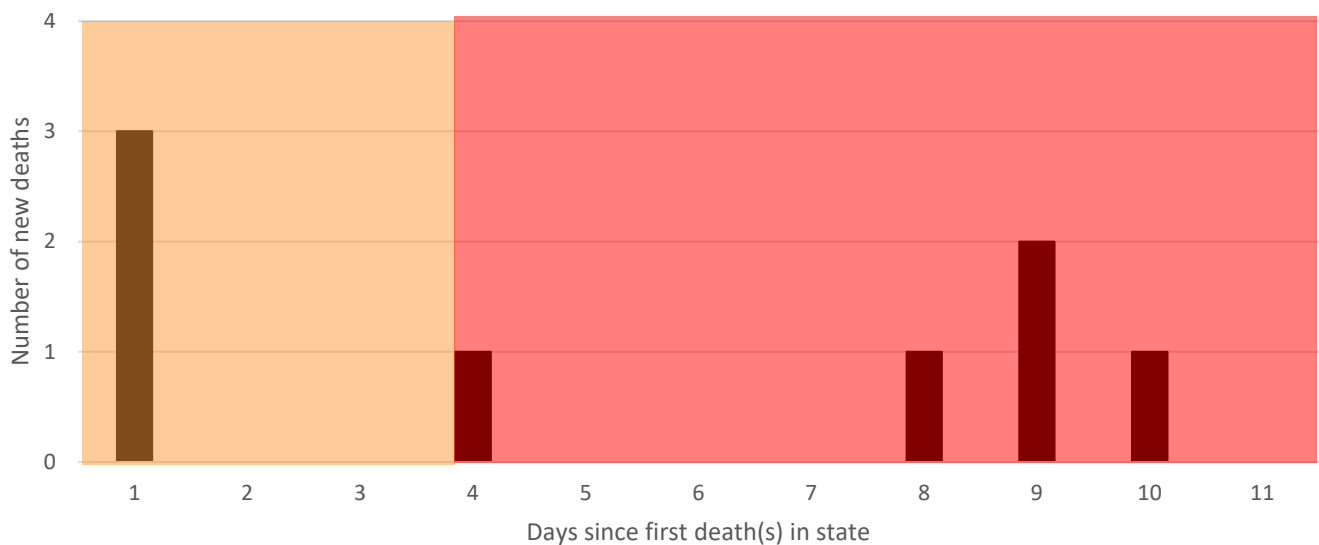
Number of new tests per day conducted in Victoria (approximate)



Total deaths over time in Victoria



Number of deaths per day in Victoria

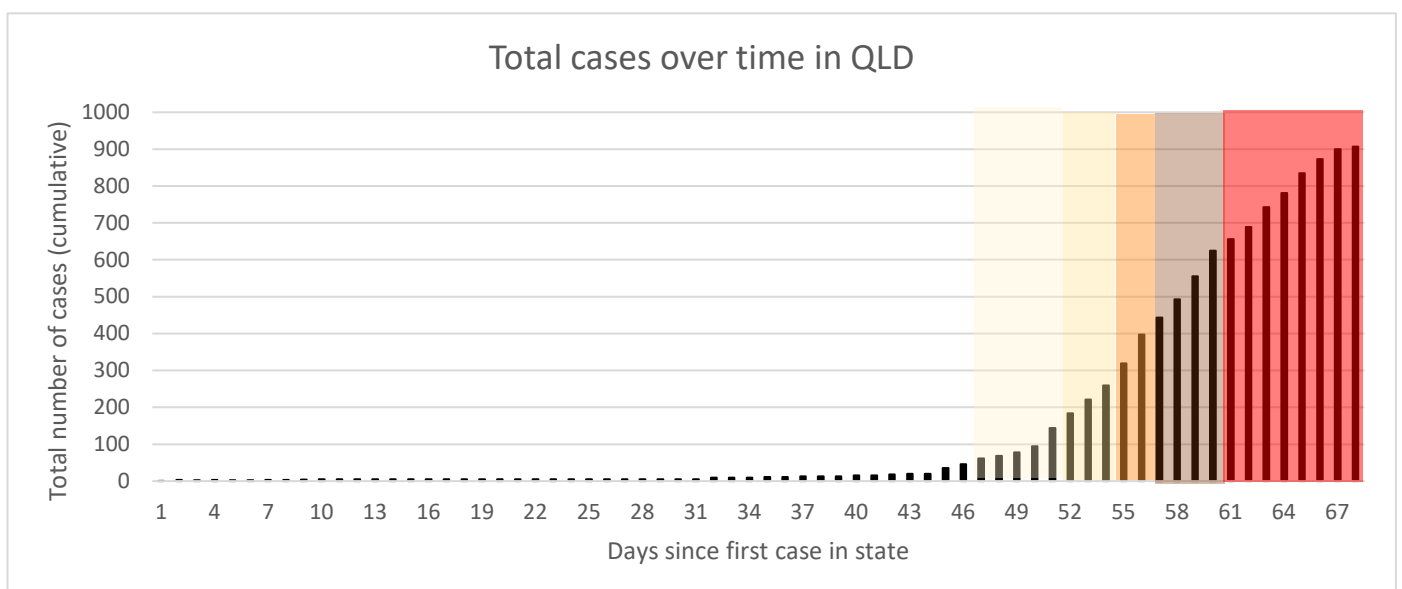
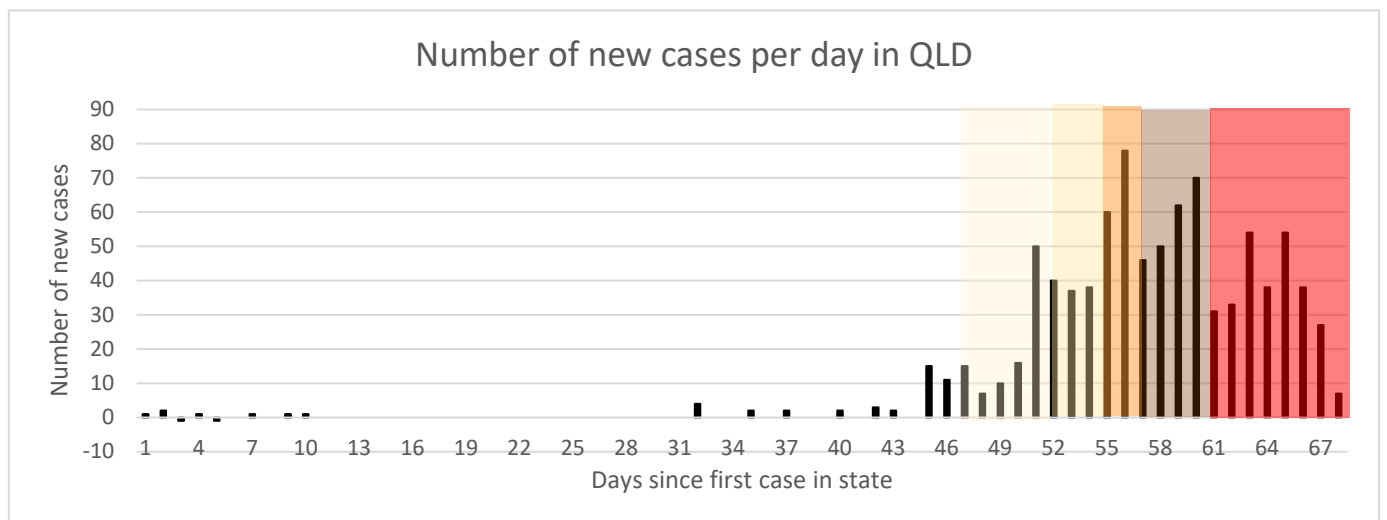


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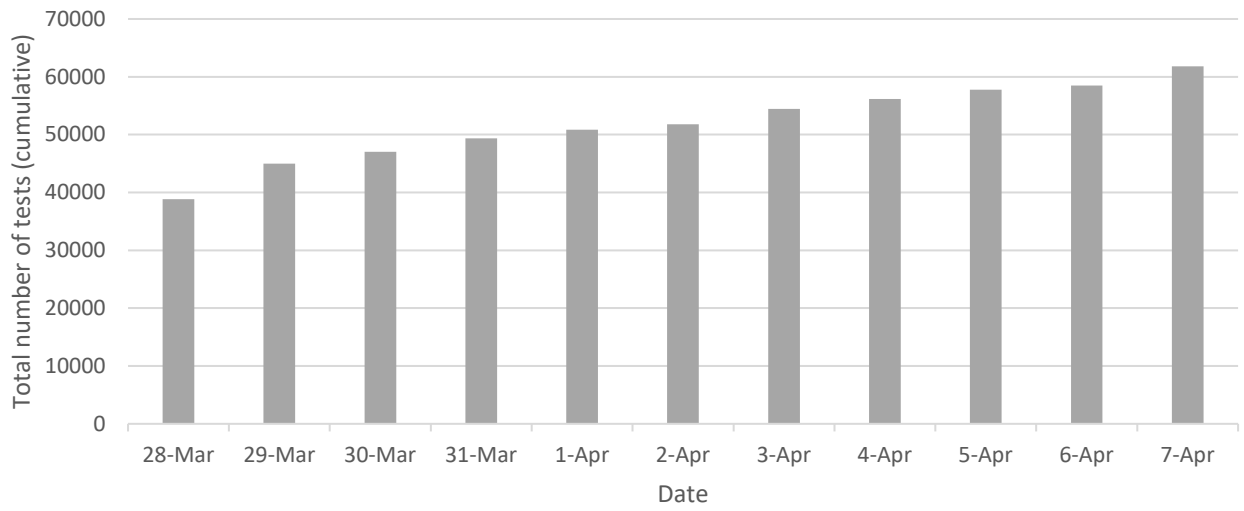
Queensland (QLD)

Population	5 million
Cases (total)	907
Tests (total)	61,834
Deaths (total)	4

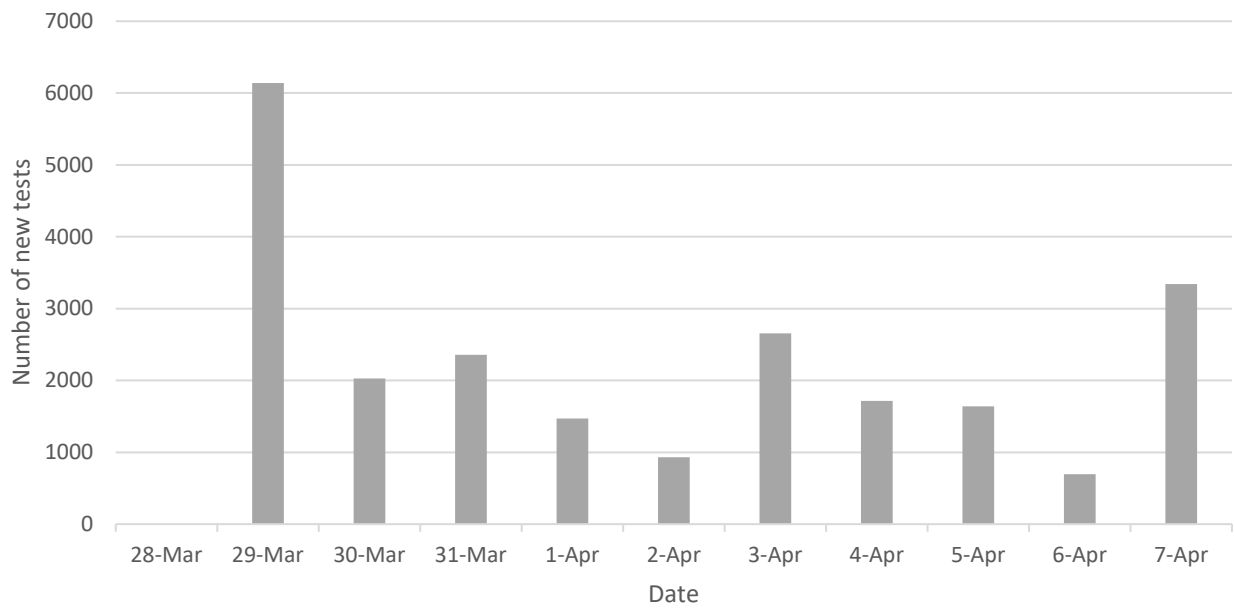
- 15 March:** gatherings >500 cancelled; international travellers arriving/returning must self-isolate for 14 days
- 20 March:** Aus borders closed to all non-residents/non-citizens; minimum of 4sqm per person required for indoor gatherings
- 23 March:** all non-essential businesses close; cafes & restaurants delivery only
- 25 March:** Queensland borders close to all non-residents
- 29 March:** federal government limits gatherings to max. two people; state adopts this policy and issues [home confinement, movement and gathering public](#)



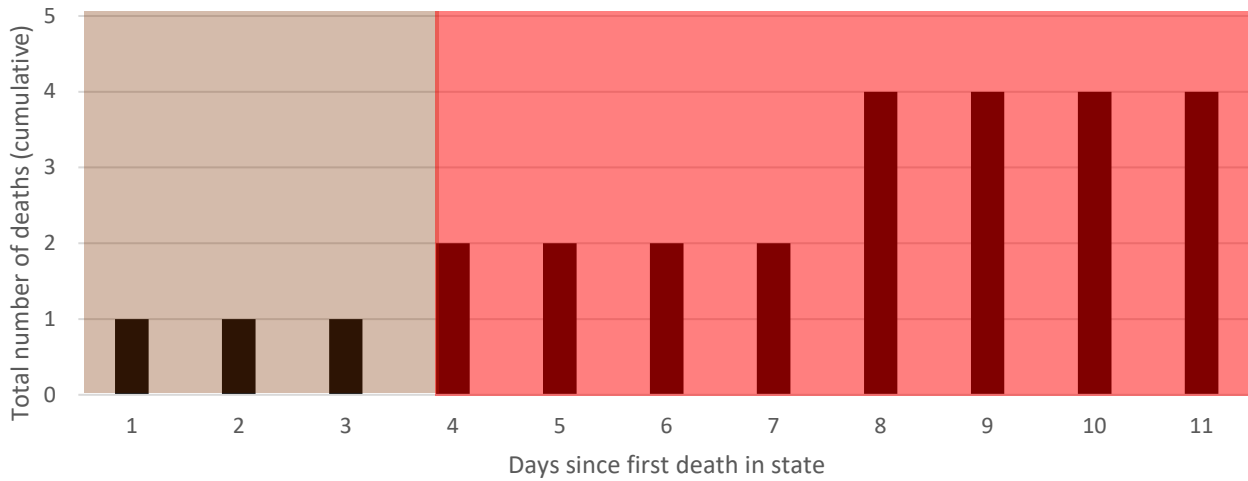
Total tests conducted in QLD over time



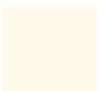
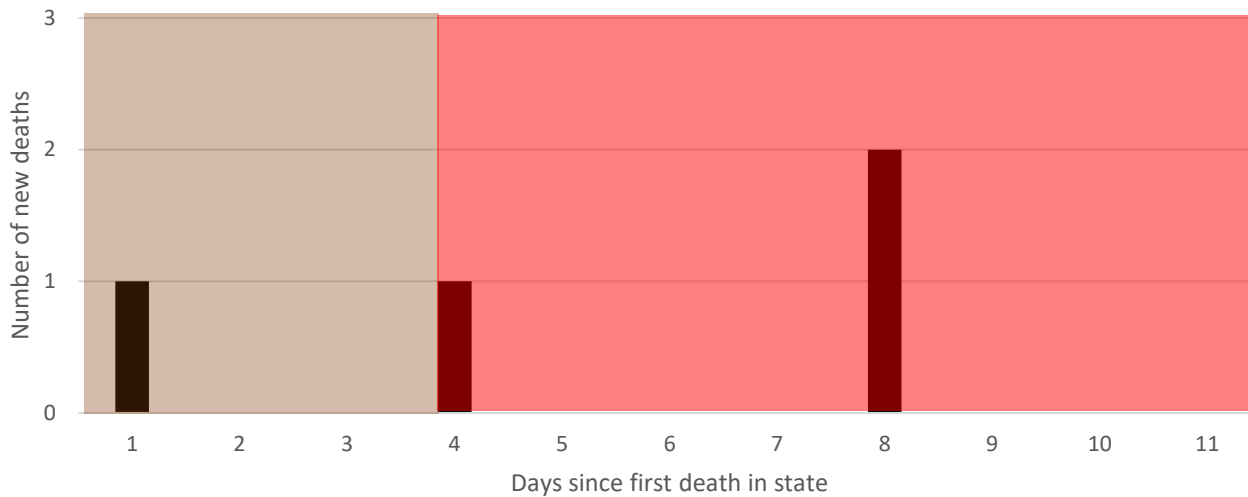
Number of new tests conducted in QLD per day



Total deaths over time in Queensland



Number of deaths per day in Queensland



15 March: gatherings >500 cancelled; international travellers arriving/returning must self-isolate for 14 days



20 March: Aus borders closed to all non-residents/non-citizens; minimum of 4sqm per person required for indoor gatherings



23 March: all non-essential businesses close; cafes & restaurants delivery only



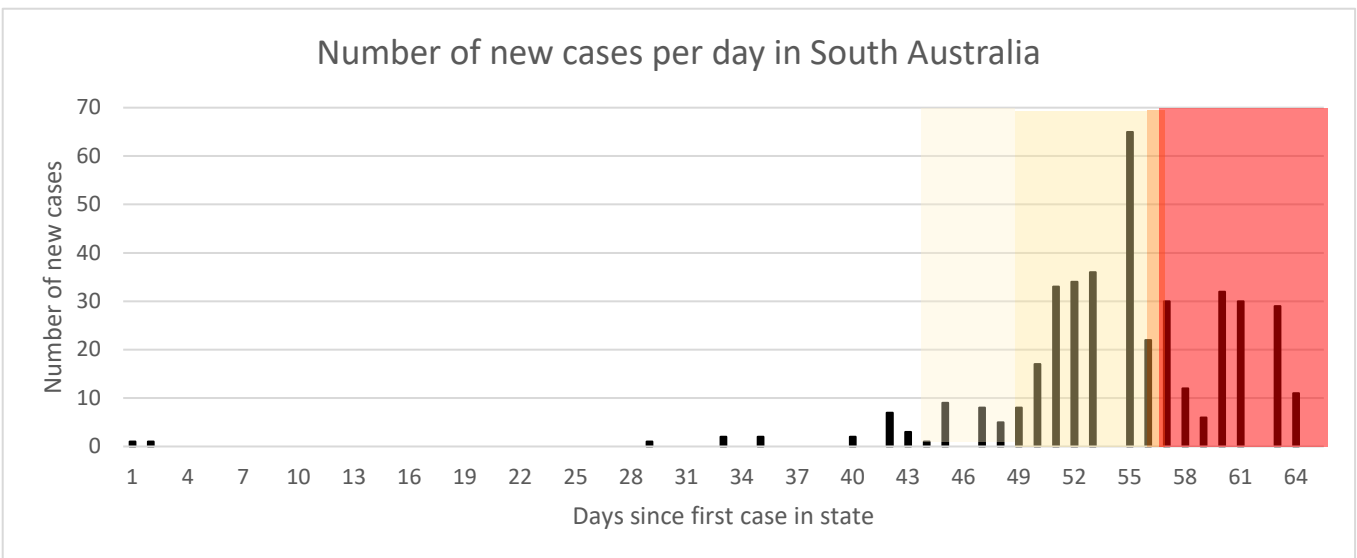
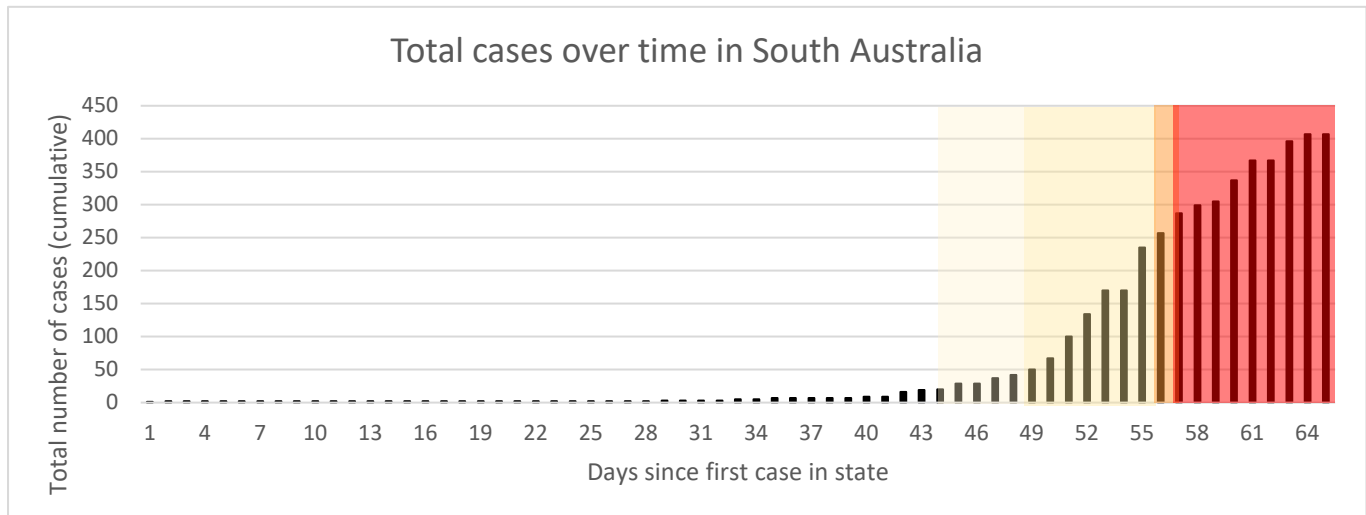
25 March: Queensland borders close to all non-residents



29 March: federal government limits gatherings to max. two people; state adopts this policy and issues [home confinement, movement and gathering public](#)

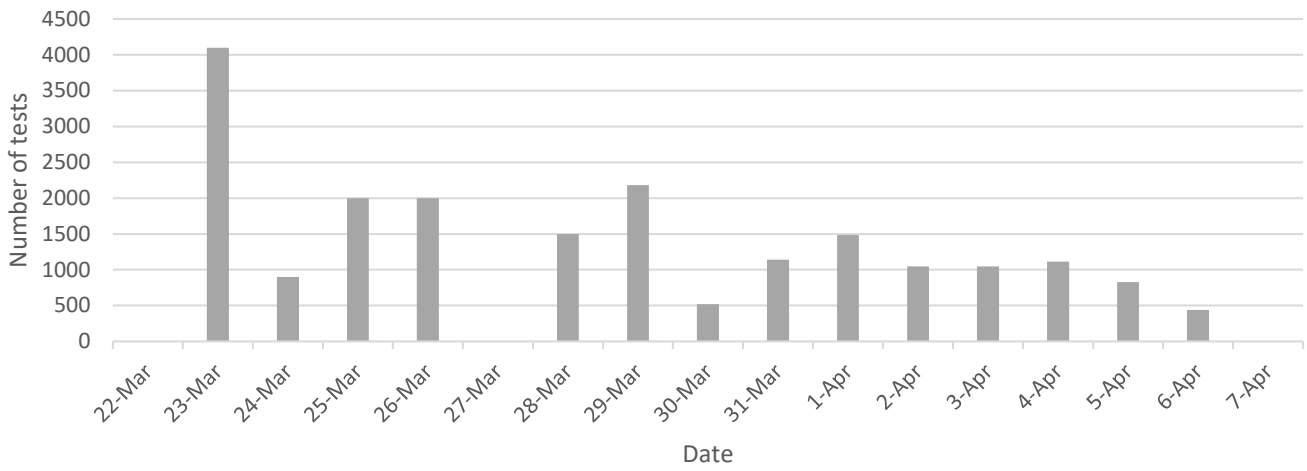
South Australia (SA)

Population	1.7 million
Cases (total)	407
Tests (total)	33,303
Deaths (total)	0

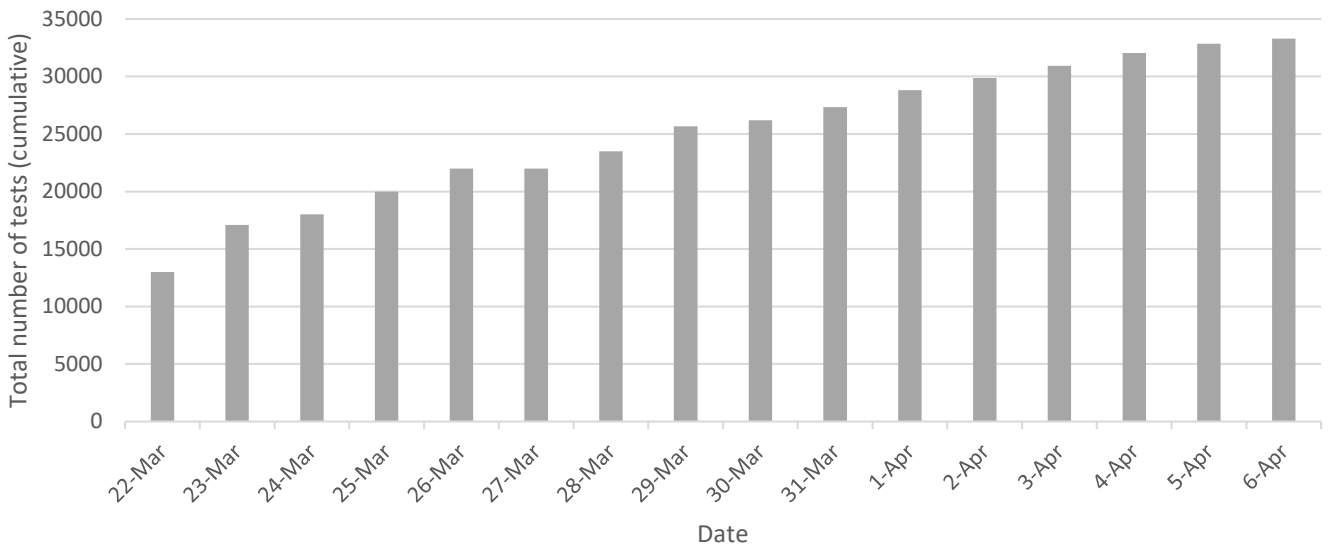


- 15 March:** gatherings >500 cancelled; international travellers arriving/returning must self-isolate for 14 days
- 20 March:** Aus borders closed to all non-residents/non-citizens
- 27 March:** non-essential businesses close in SA; gatherings limited to 10 people with the 4sqm density rule
- 28 March:** all people entering SA must self-isolate (whether from overseas or from another state/territory)

Number of new tests conducted per day in SA



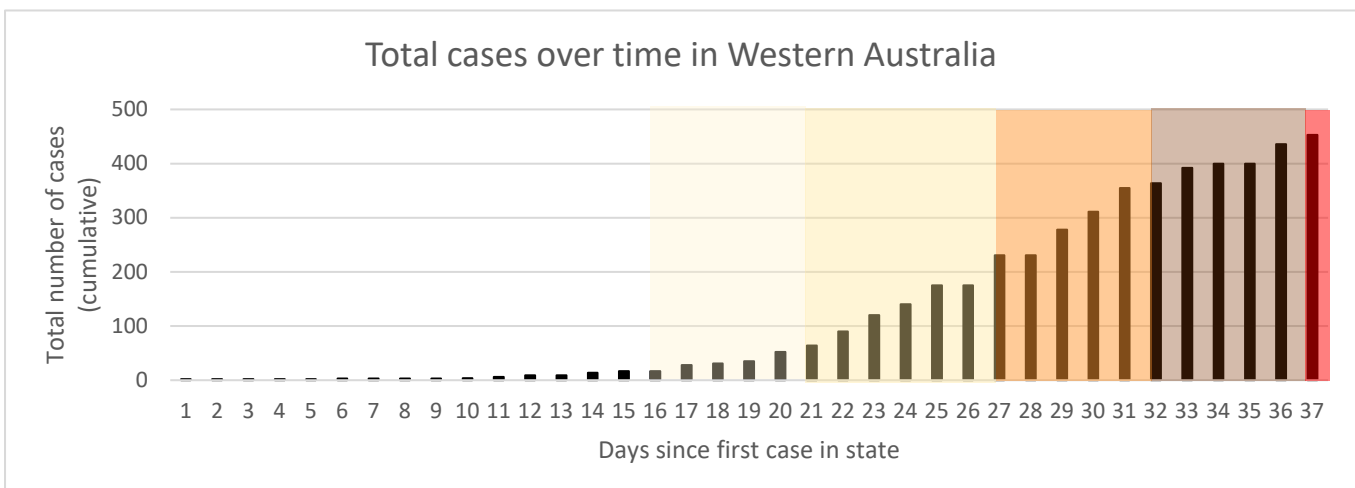
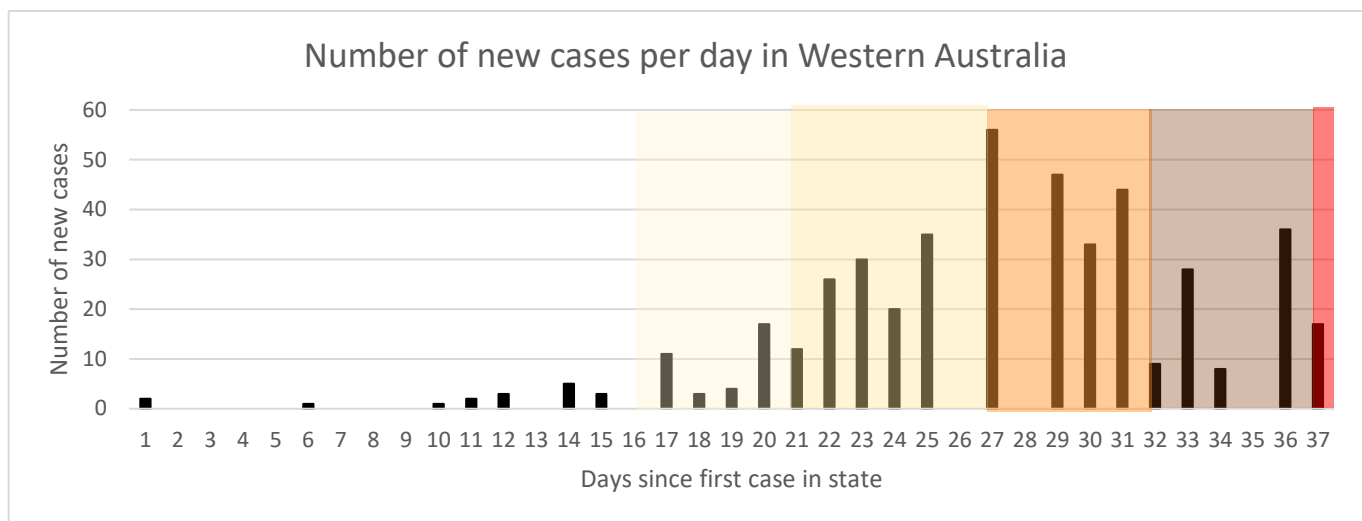
Total number of tests conducted over time in SA



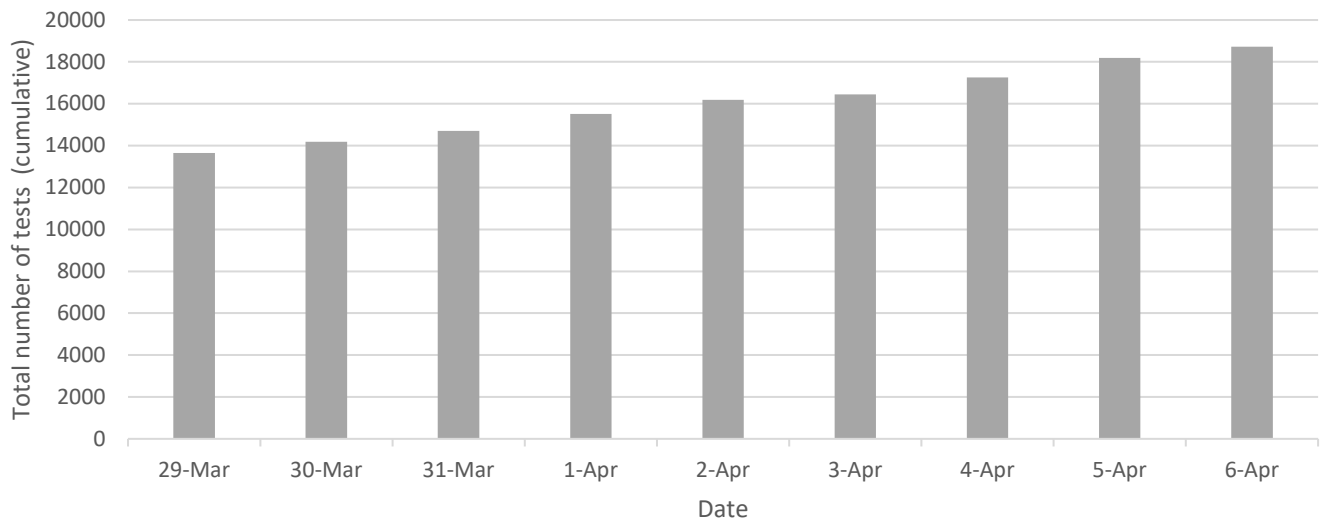
Western Australia (WA)

Population	2.6 million
Cases (total)	453
Tests (total)	18,726
Deaths (total)	3

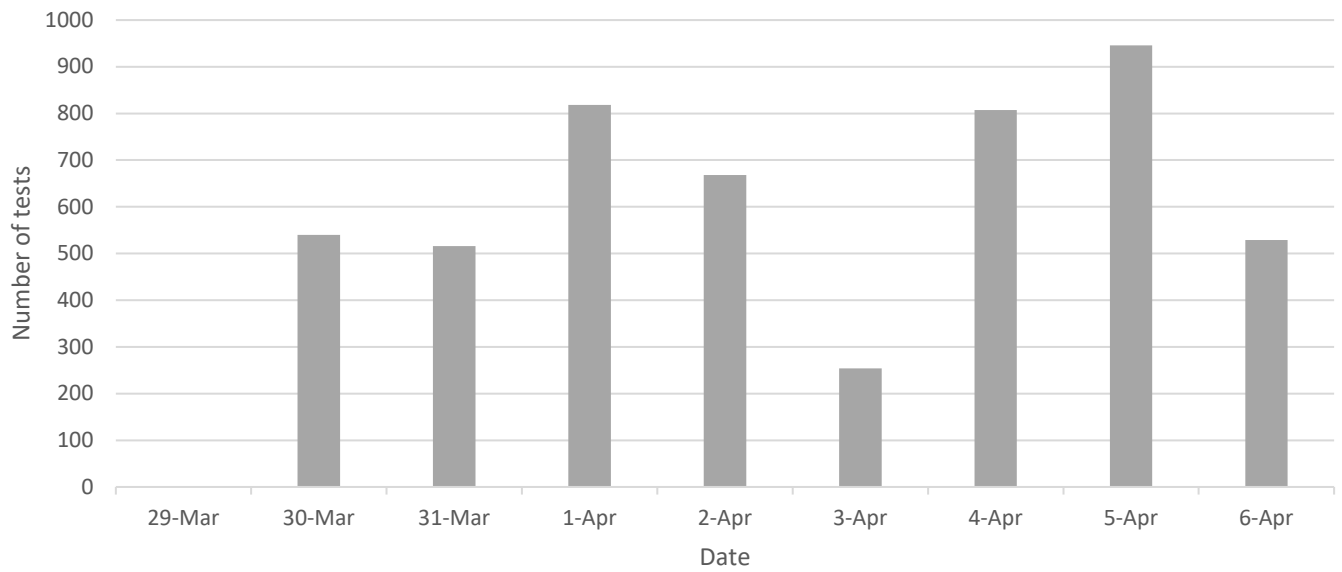
- 15 March:** gatherings >500 cancelled; international travellers arriving/returning must self-isolate for 14 days
- 20 March:** Aus borders closed to all non-residents/non-citizens; minimum of 4sqm per person required for indoor gatherings
- 26 March:** all non-essential businesses close; cafes & restaurants delivery only
- 31 March:** WA divided into nine regions and travel restricted between each region; two-person gathering limit (with some exceptions)
- 5 April:** WA closes state borders to non-residents

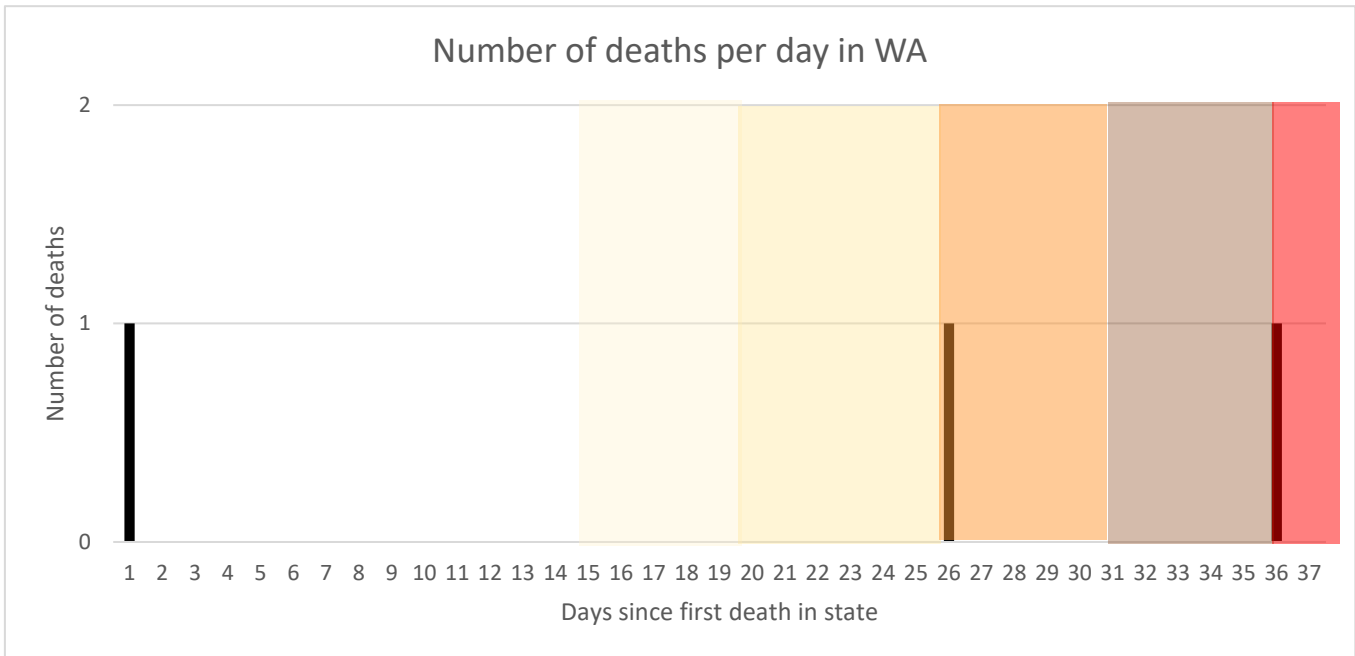
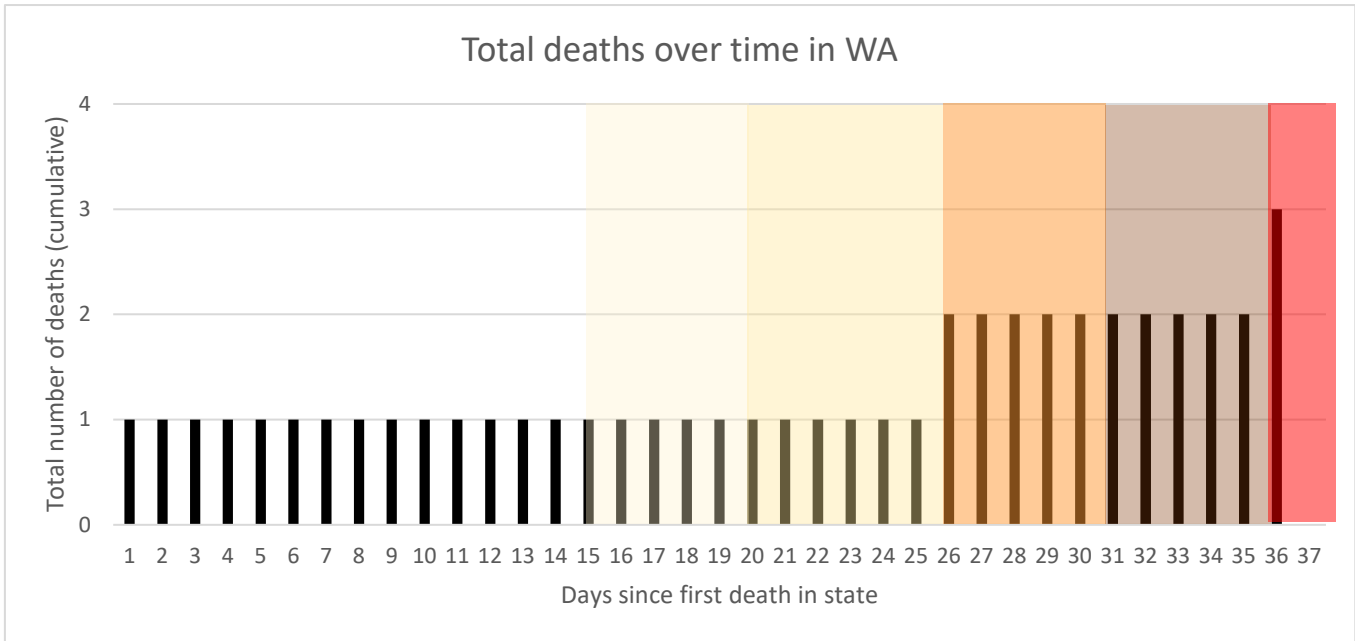


Total tests conducted over time in WA



Number of new tests conducted per day in WA



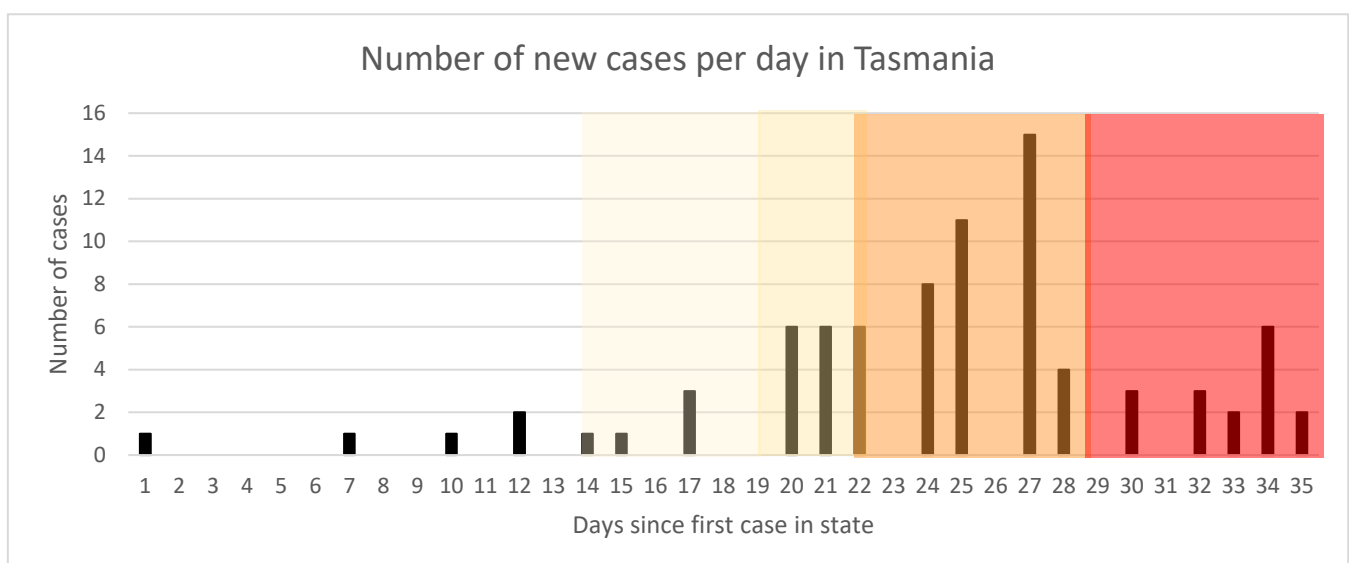
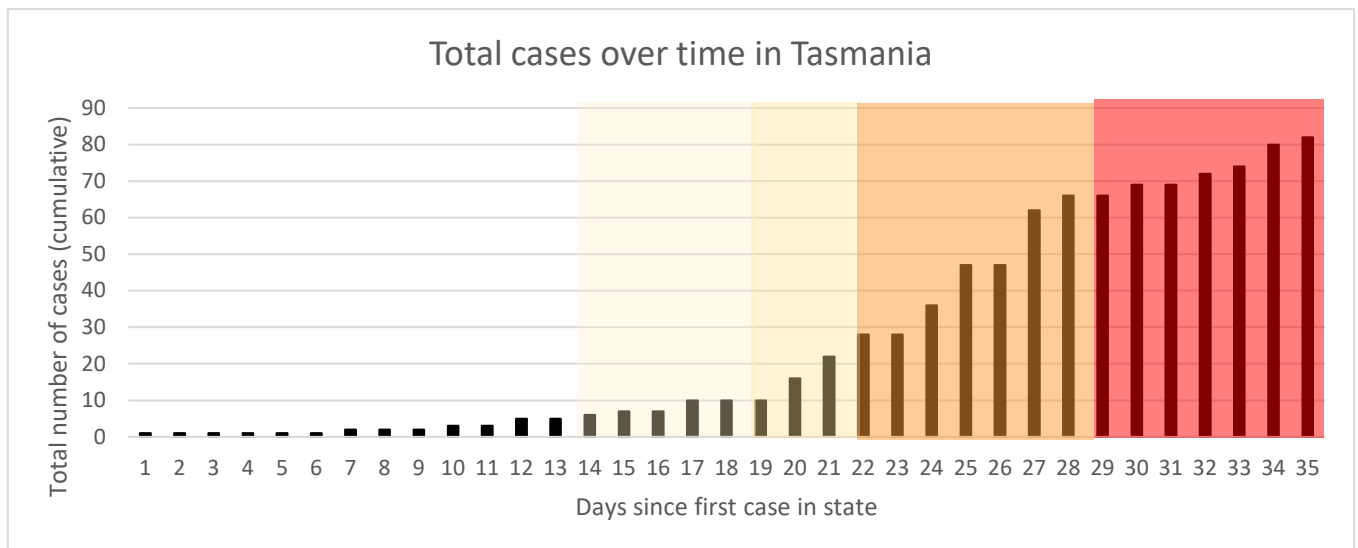


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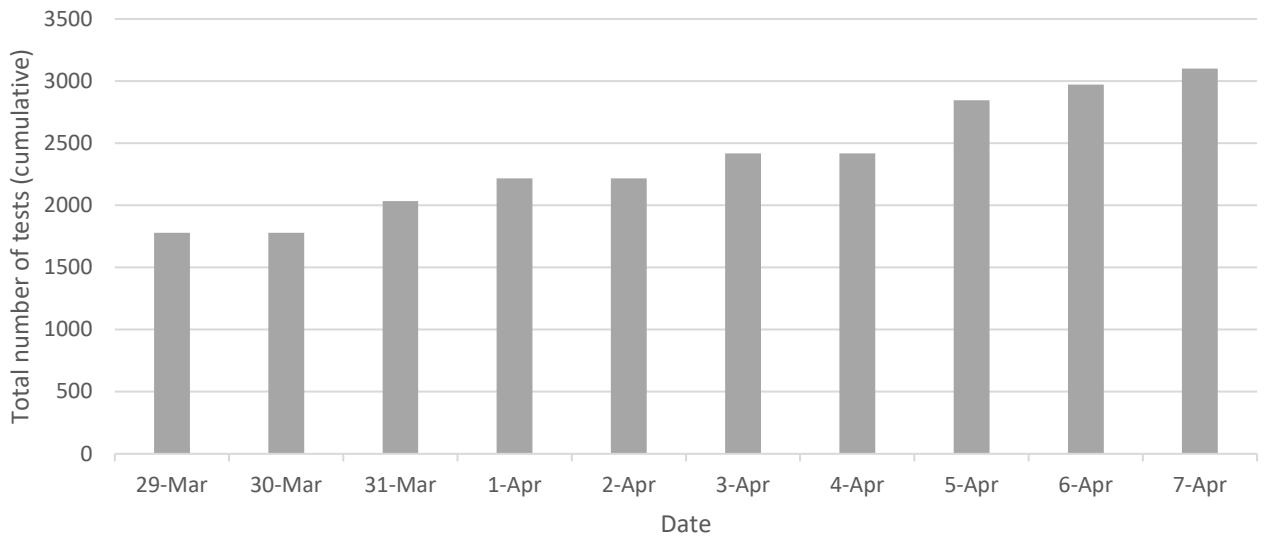
Tasmania (TAS)

Population	515,000
Cases (total)	82
Tests (total)	3100
Deaths (total)	2

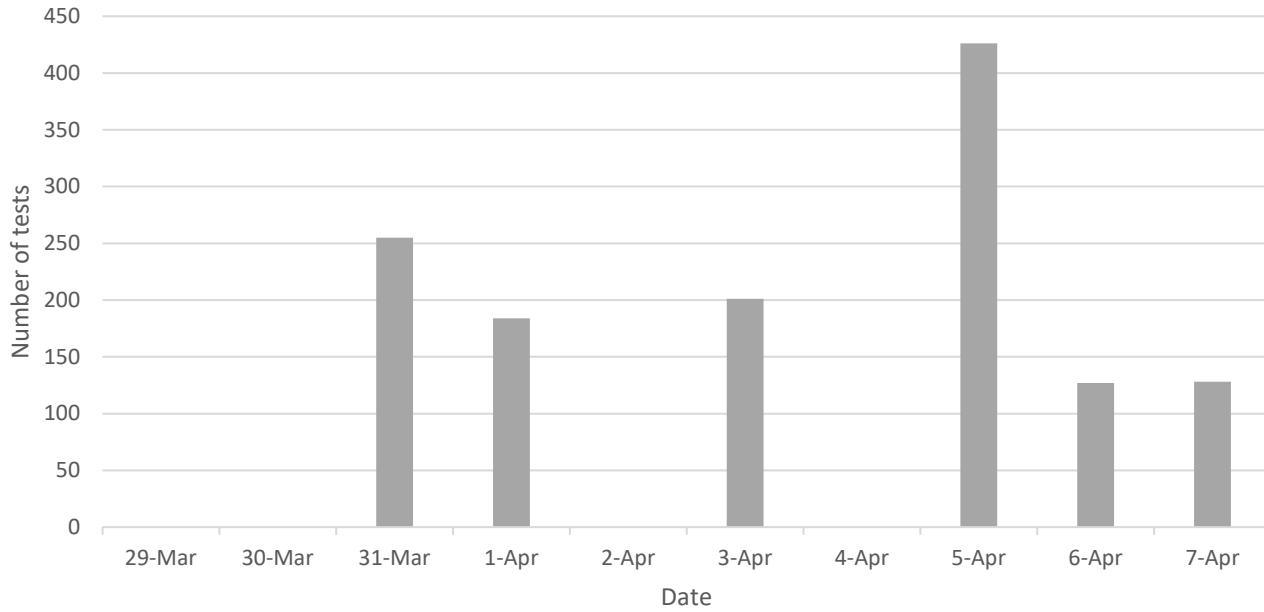
- 15 March:** gatherings >500 cancelled; international travellers arriving/returning must self-isolate for 14 days
- 20 March:** Aus borders closed to all non-residents/non-citizens; Tasmania requires all people entering to self-isolate for 14 days in government-provided
- 23 March:** non-essential businesses in Tasmania begin to close; the list becomes more restricted over time
- 30 March:** stay at home order issued

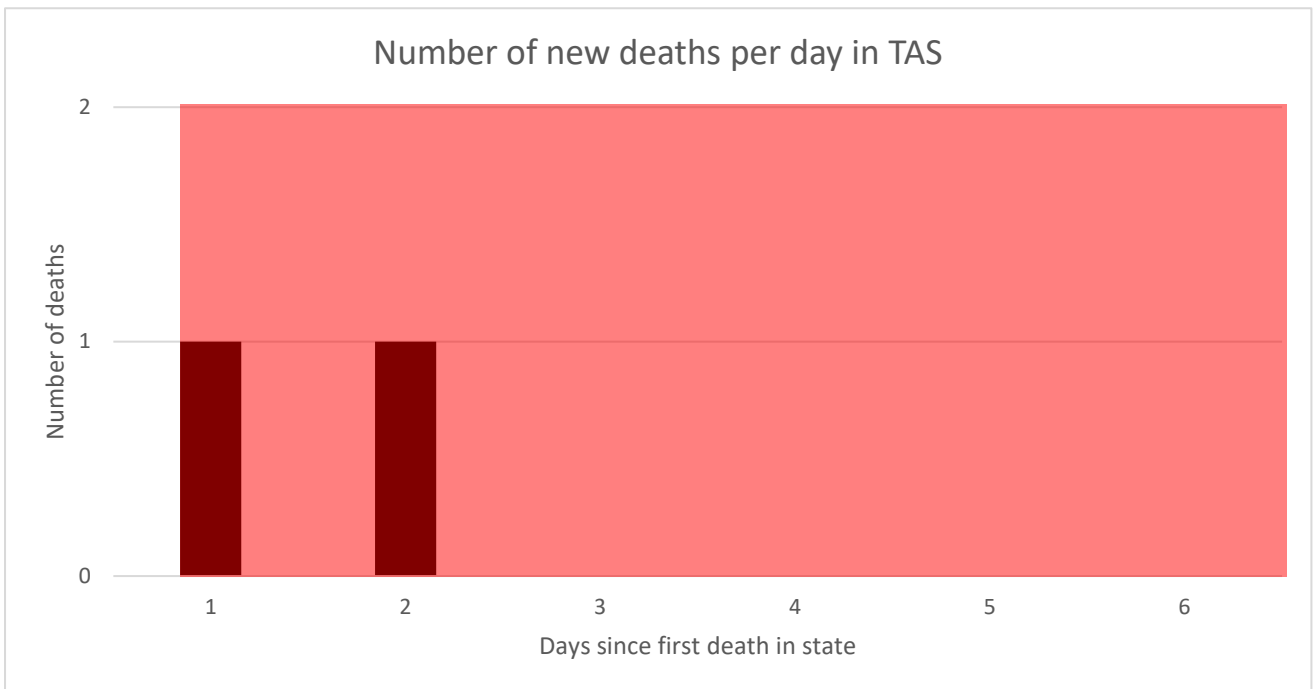
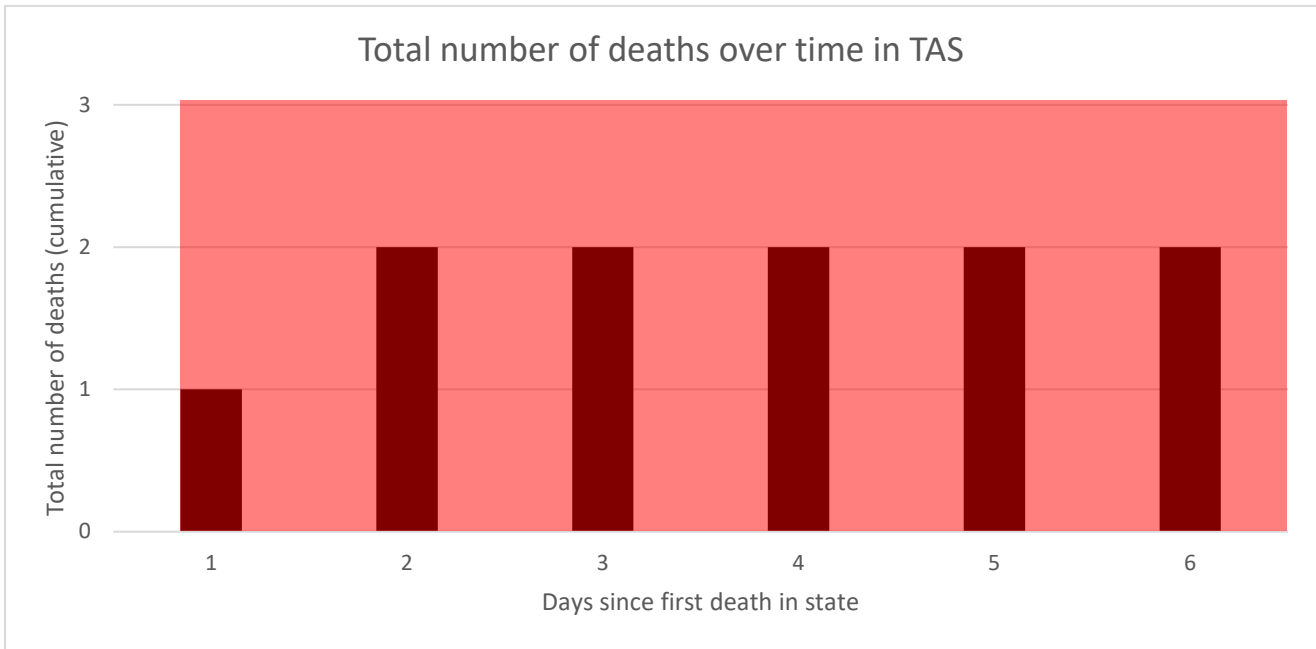


Total number of tests conducted over time in TAS



Number of new tests conducted per day in TAS

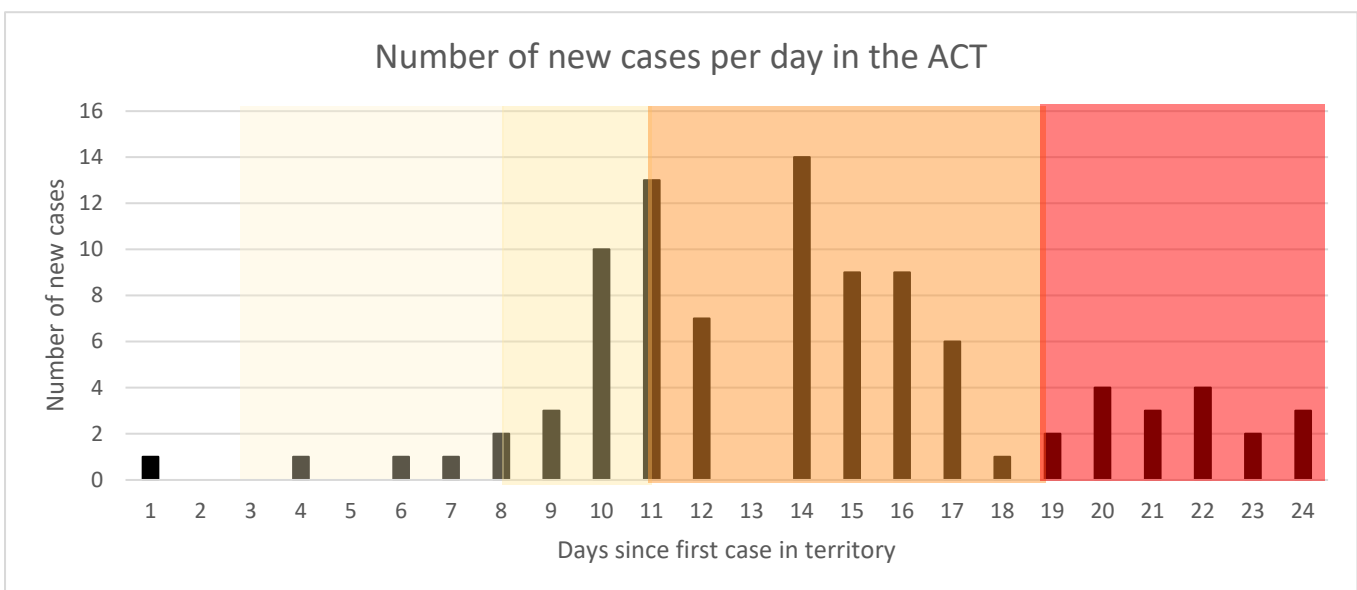
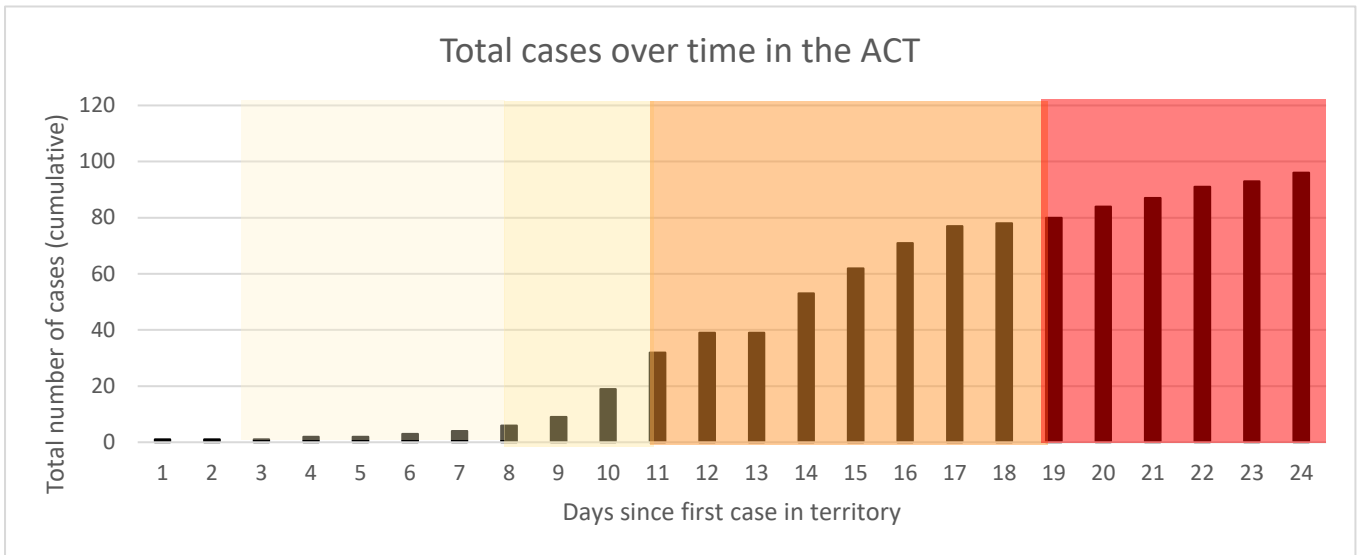




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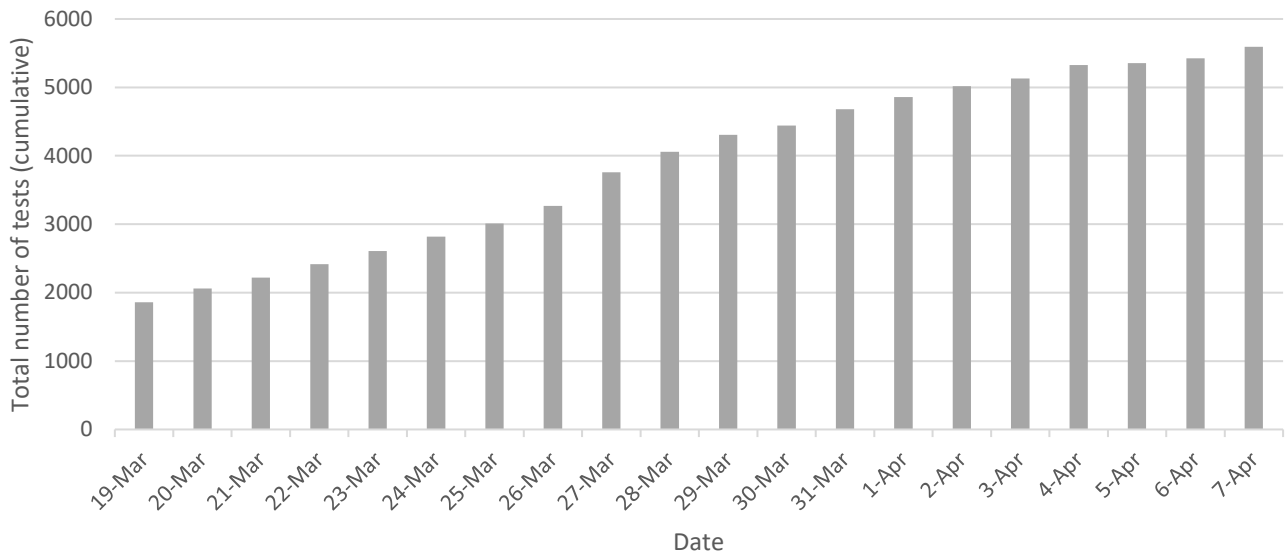
Australian Capital Territory (ACT)

Population	428,000
Cases (total)	96
Tests (total)	5594
Deaths (total)	2

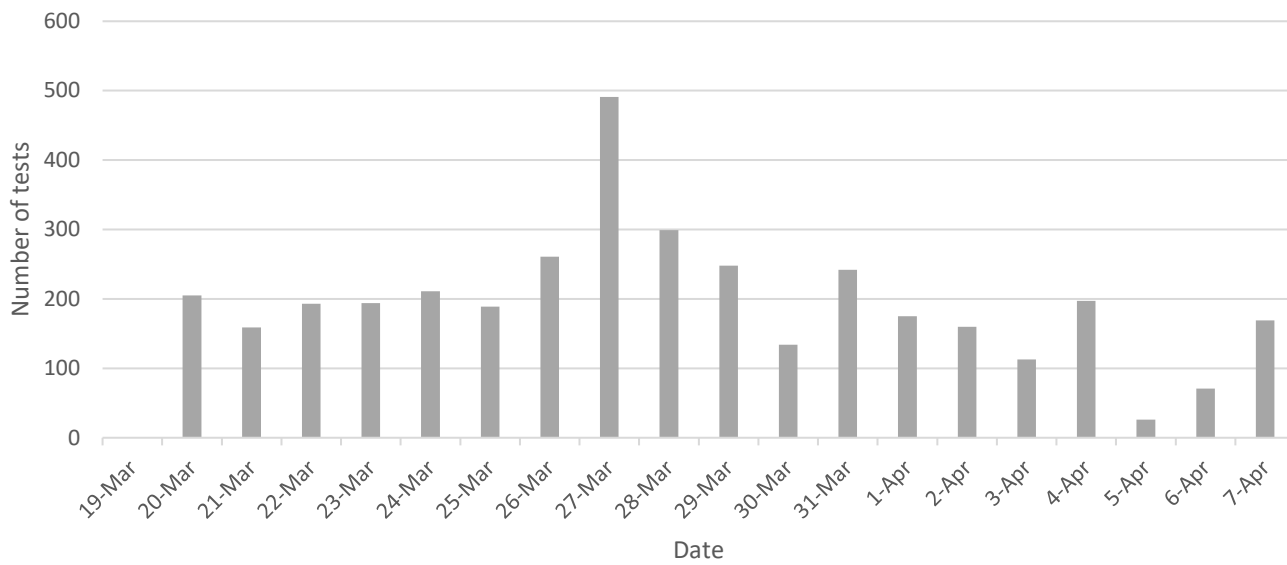


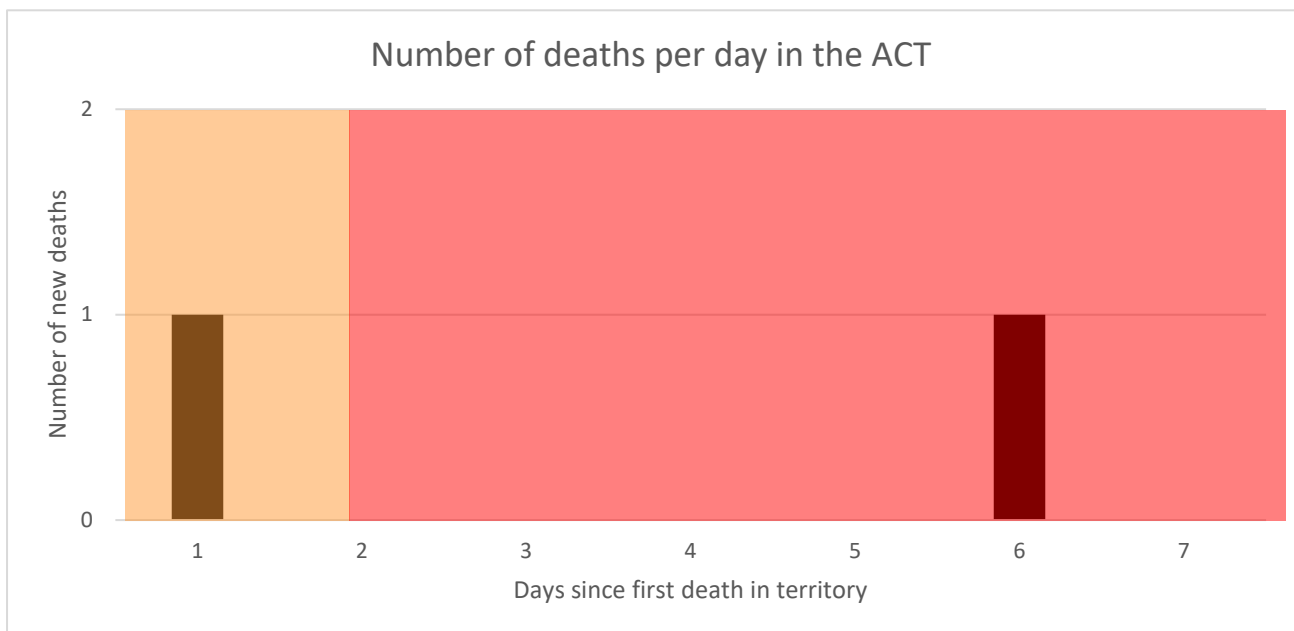
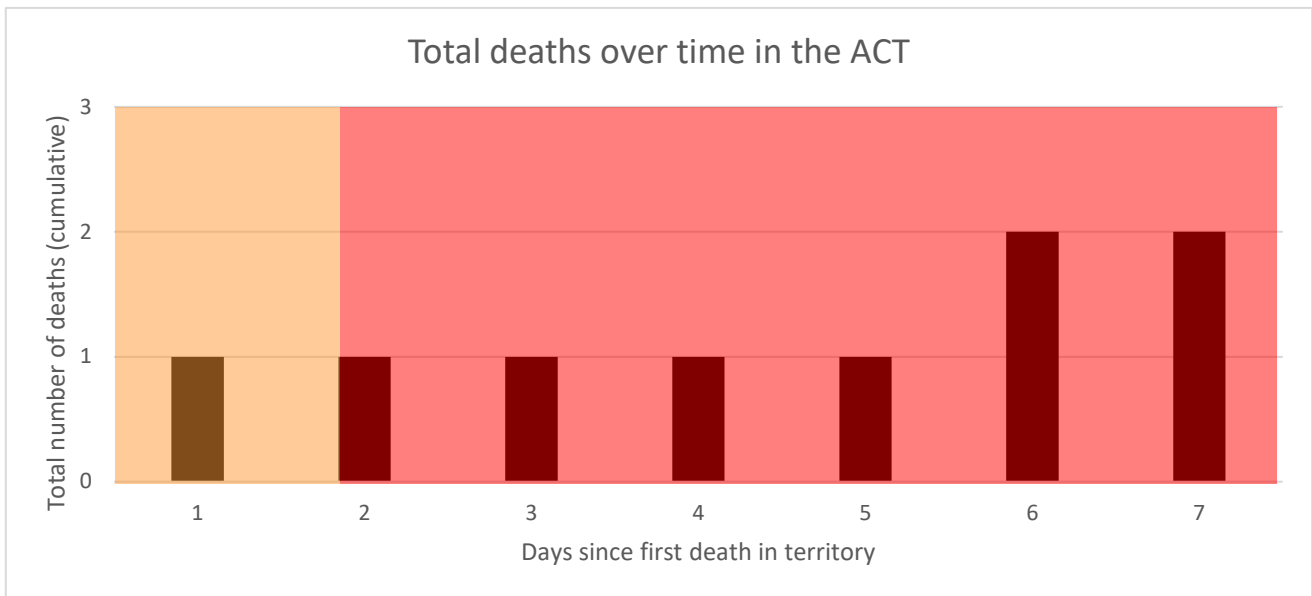
- 15 March:** gatherings >500 cancelled; international travellers arriving/returning must self-isolate for 14 days
- 20 March:** Aus borders closed to all non-residents/non-citizens
- 23 March:** non-essential businesses in ACT begin to close; the list becomes more restricted over time
- 31 March:** stay at home order issued; gatherings limited to two people

Total number of tests over time in the ACT



Number of tests conducted per day in the ACT



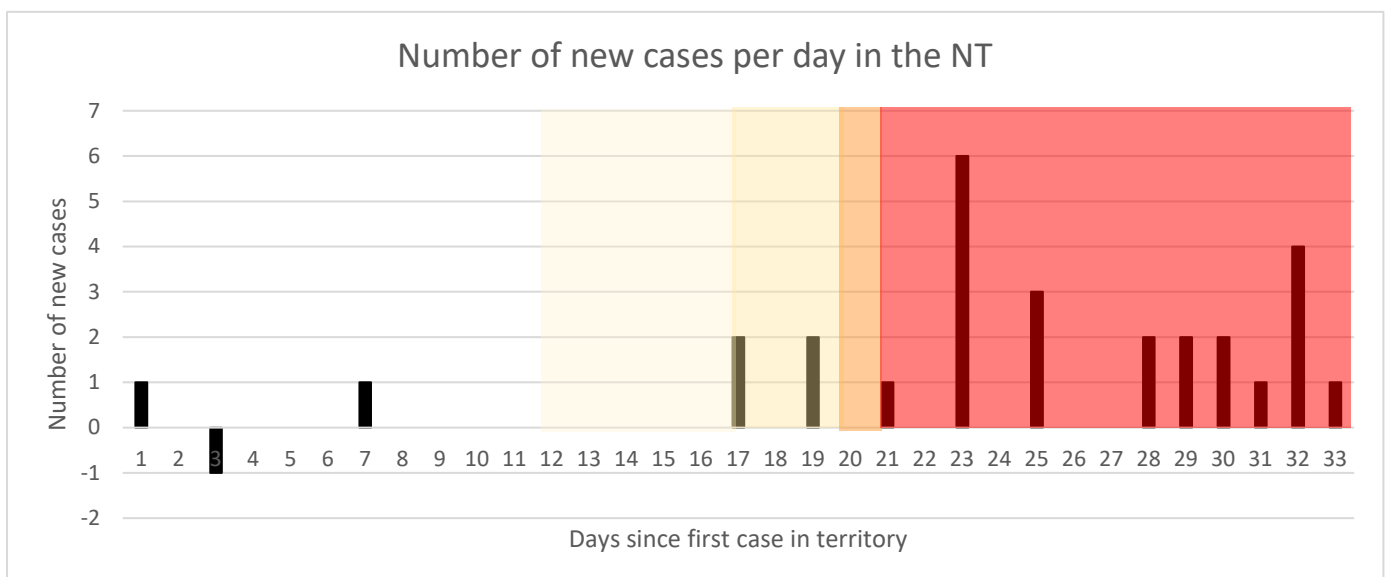
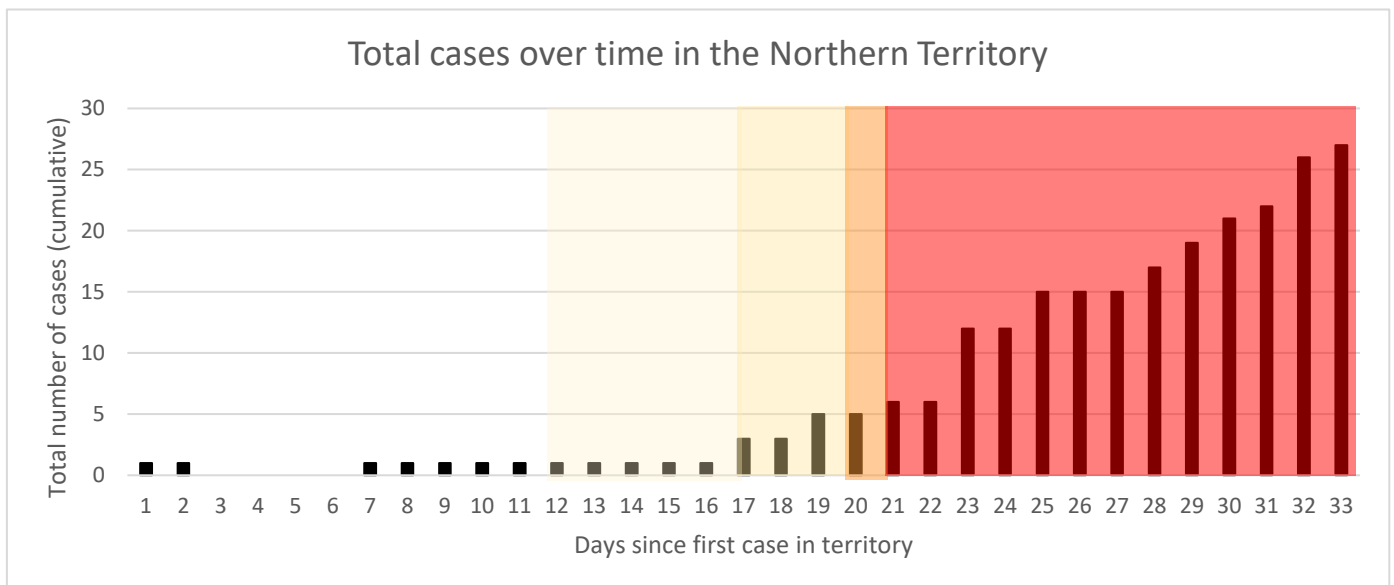


- 15 March:** gatherings >500 cancelled; international travellers arriving/returning must self-isolate for 14 days
- 20 March:** Aus borders closed to all non-residents/non-citizens
- 23 March:** non-essential businesses in ACT begin to close; the list becomes more restricted over time
- 31 March:** stay at home order issued; gatherings limited to two people

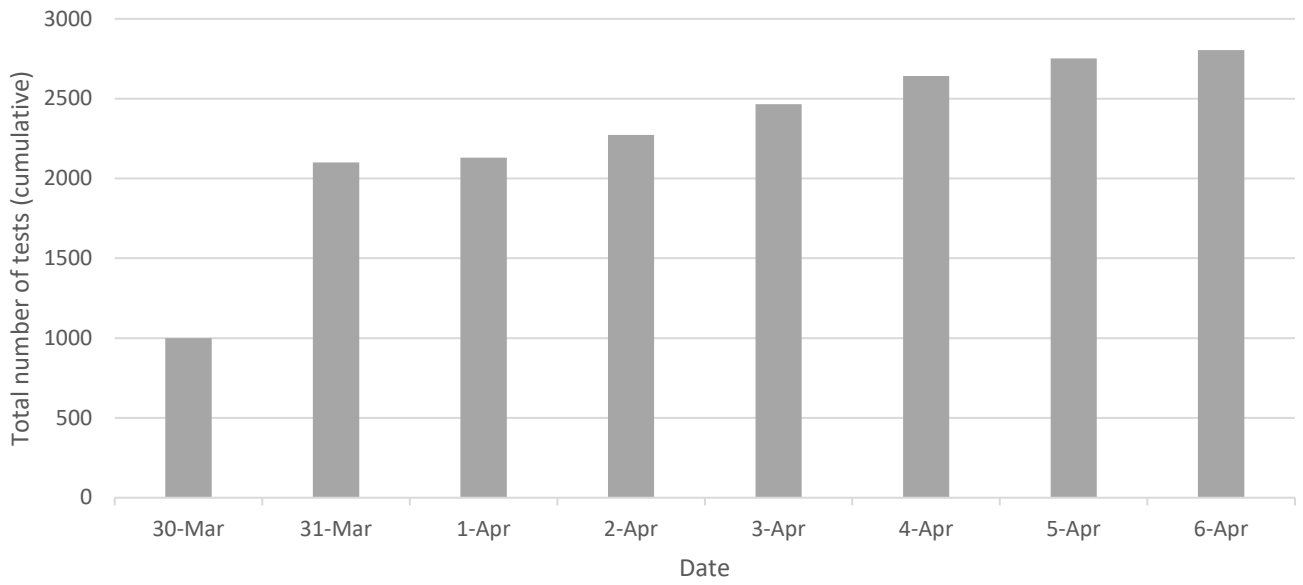
Northern Territory (NT)

Population	212,000
Cases (total)	27
Tests (total)	2805
Deaths (total)	0

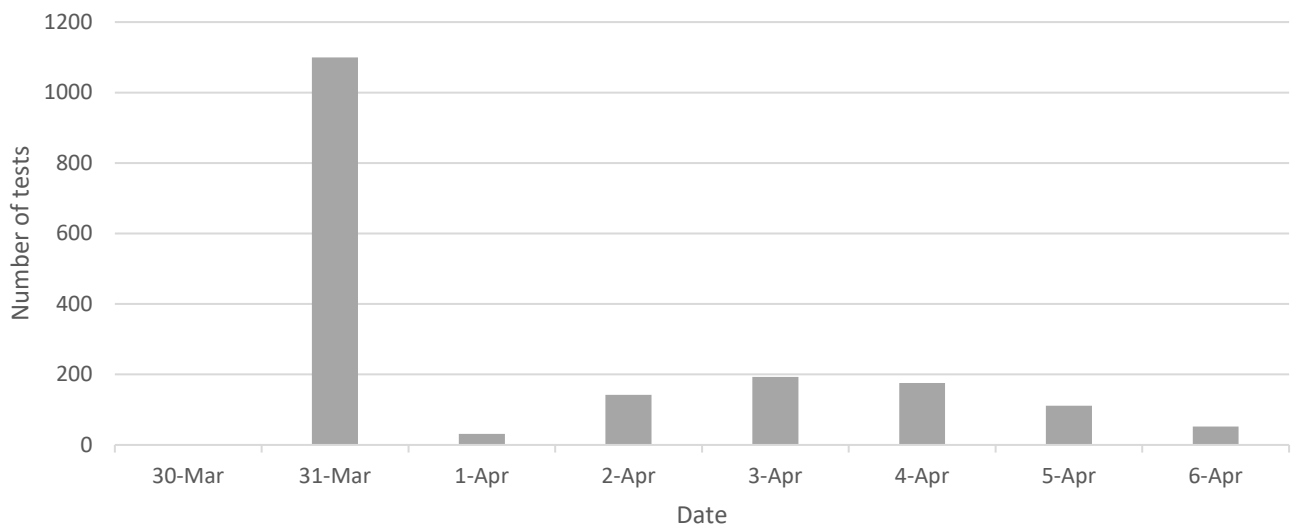
- 15 March:** gatherings >500 cancelled; international travellers arriving/returning must self-isolate for 14 days
- 20 March:** Aus borders closed to all non-residents/non-citizens
- 23 March:** non-essential businesses in NT close; gatherings limited
- 24 March:** all people entering NT must undergo forced quarantine for 14 days



Total tests conducted over time in the NT



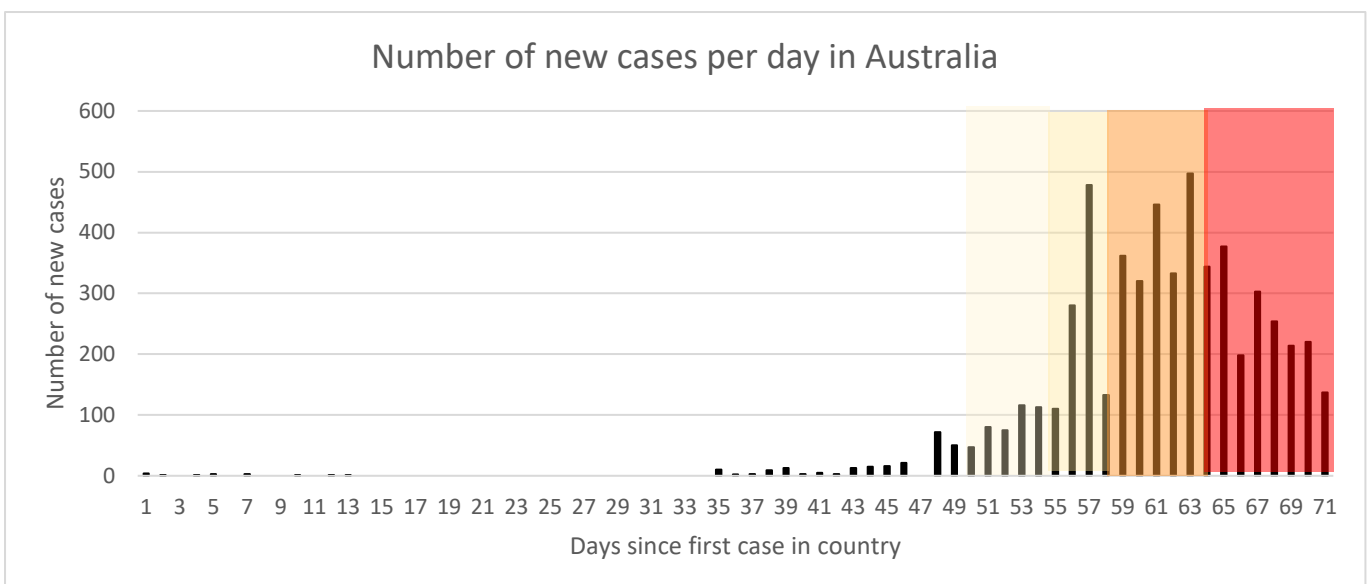
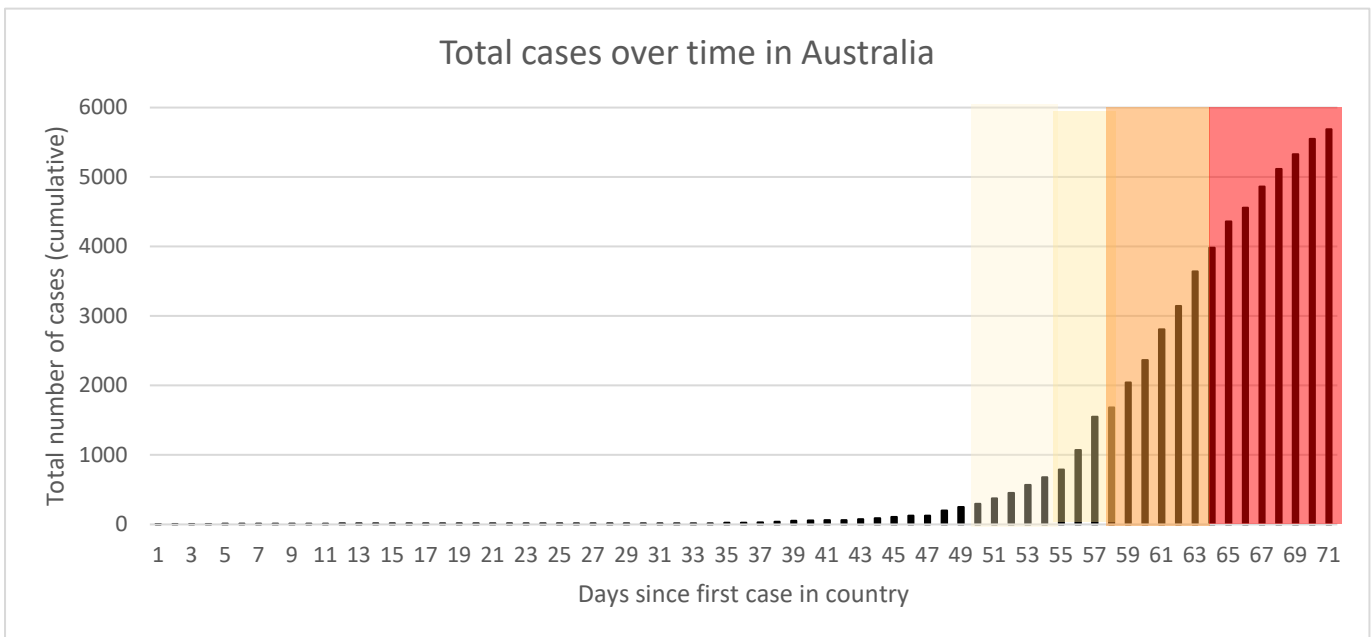
Number of tests conducted per day in the NT



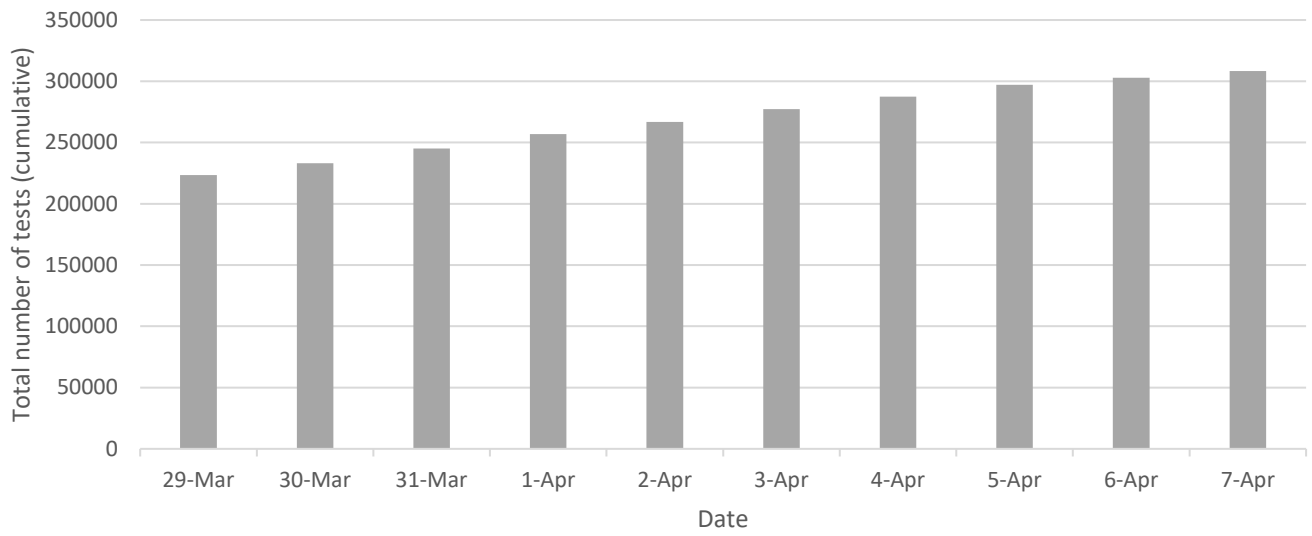
Australia (overall)

Population	24.6 million
Cases (total)	5687
Tests (total)	308,339
Deaths (total)	35

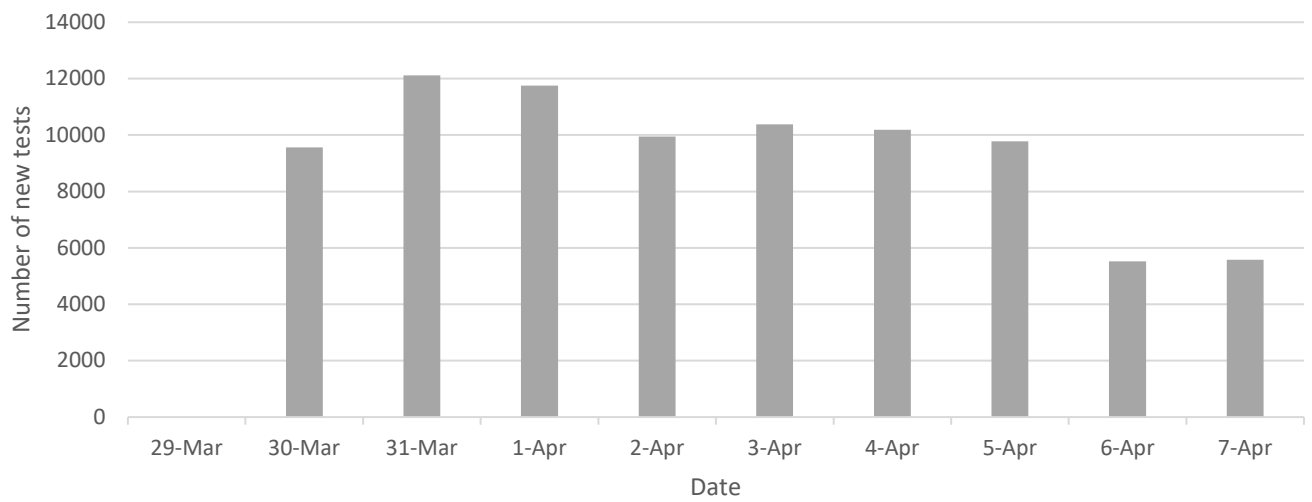
- 15 March:** gatherings >500 cancelled; travellers arriving/returning must self-isolate for 14 days
- 20 March:** borders closed to all non-residents/non-citizens; minimum of 4sqm per person required for indoor gatherings
- 23 March:** all pubs, bars, nightclubs, cinemas, casinos, indoor sporting venues, entertainment venues, places of worship close; cafes & restaurants delivery only
- 29 March:** federal government limits gatherings to max. two people; some states adopt this policy.



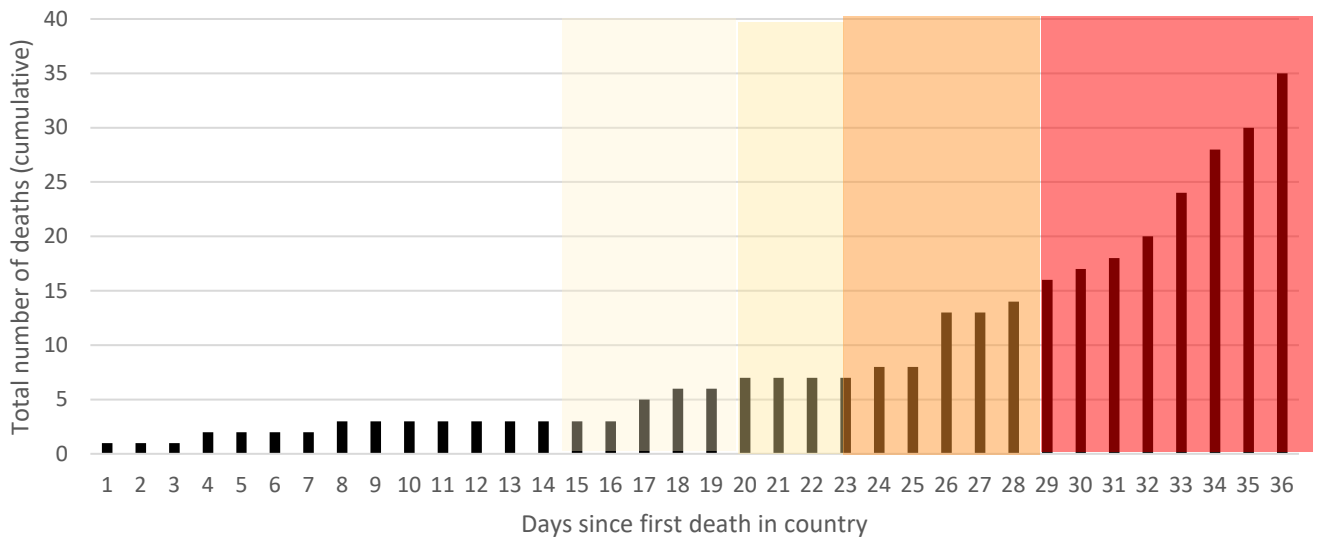
Total tests over time conducted in Australia



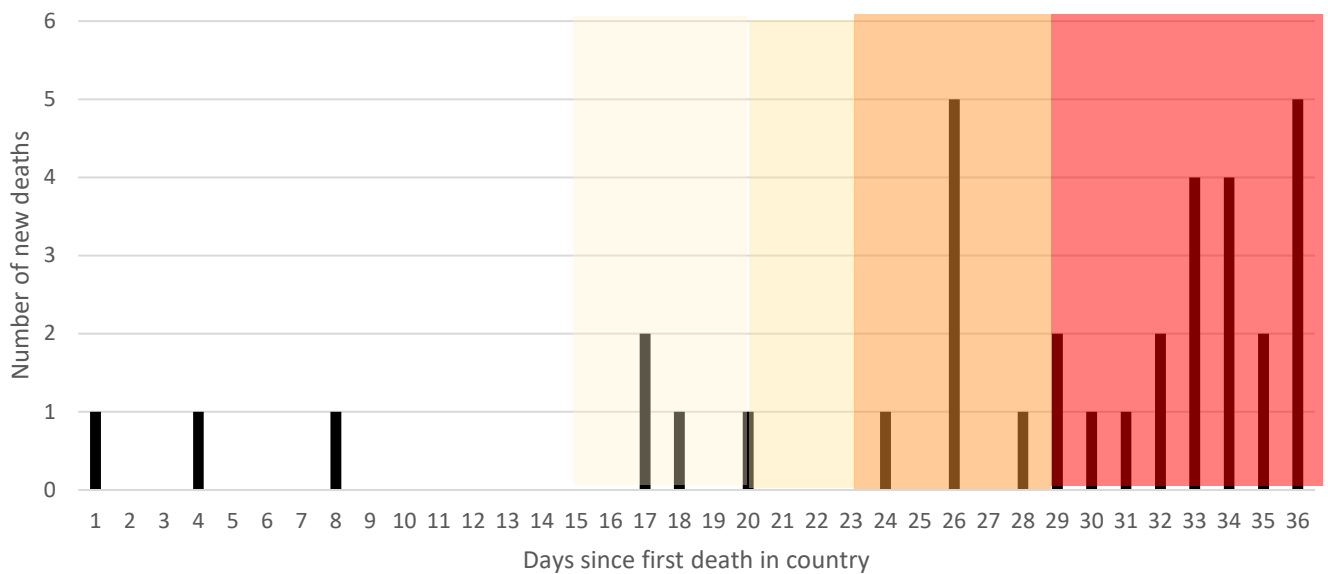
Number of tests conducted per day in Australia



Total deaths over time in Australia



Number of deaths per day in Australia

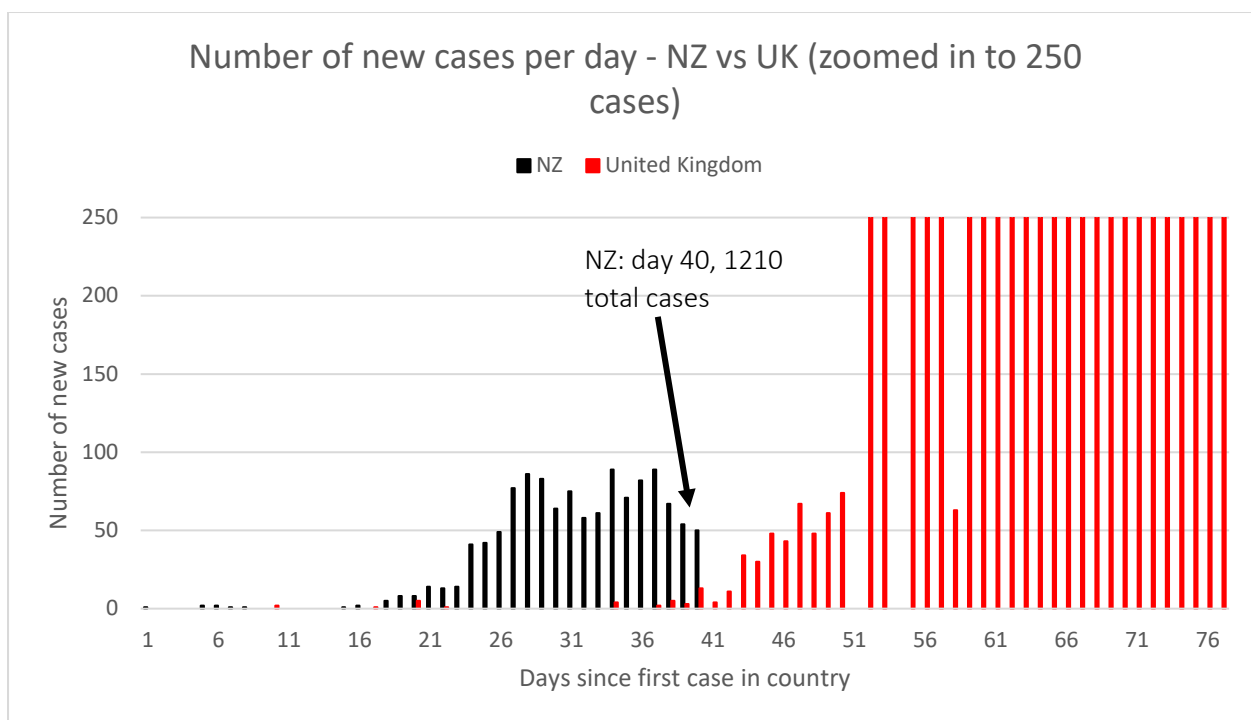
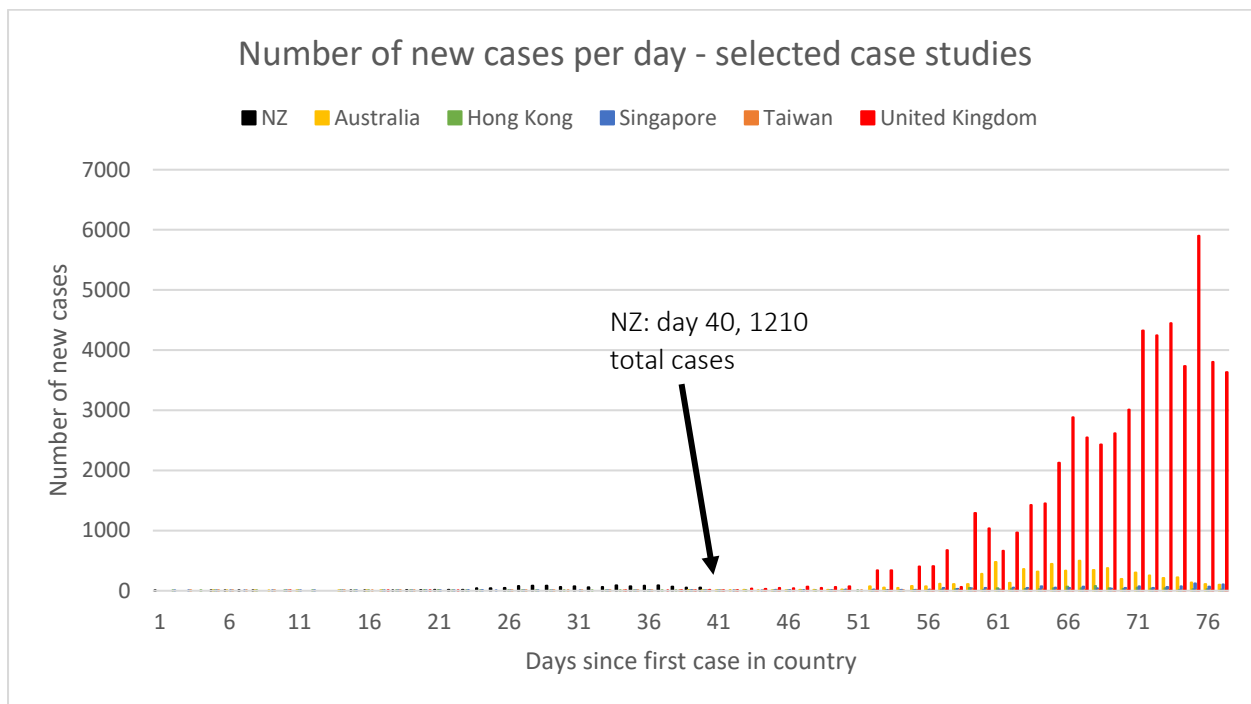


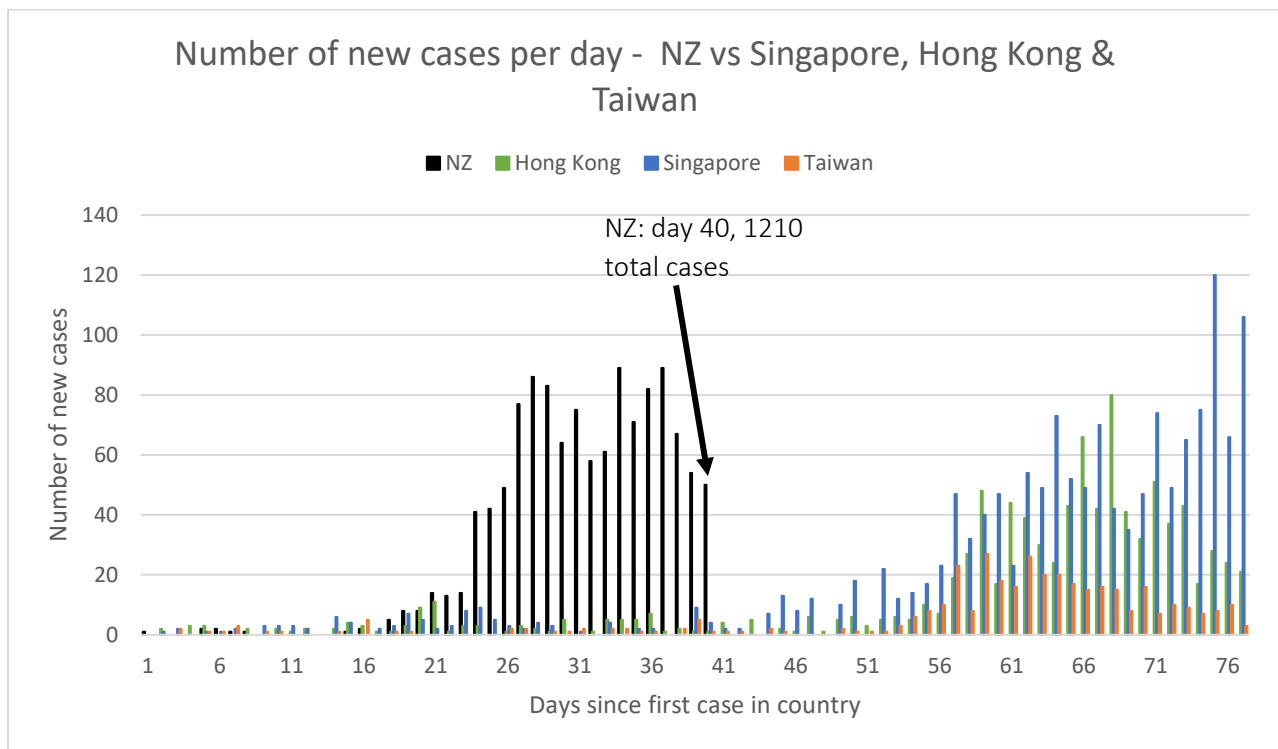
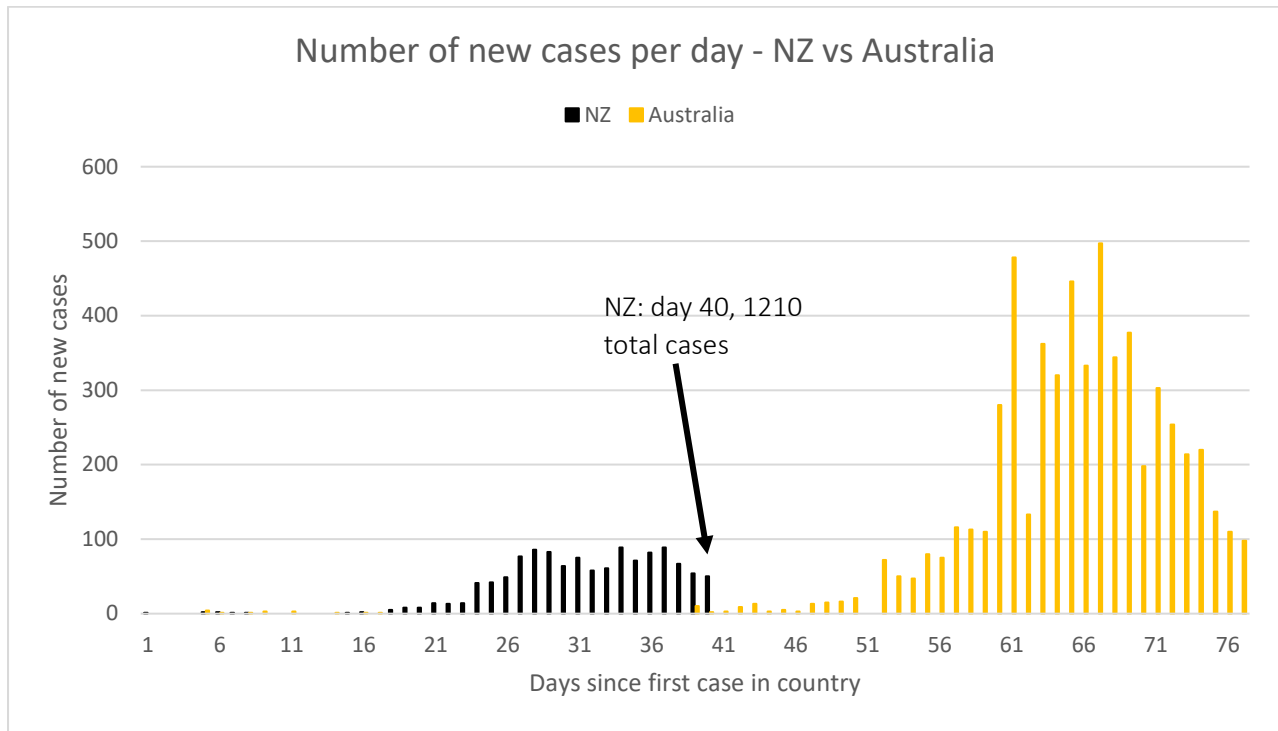
15 March: gatherings >500 cancelled; travellers arriving/returning must self-isolate for 14 days

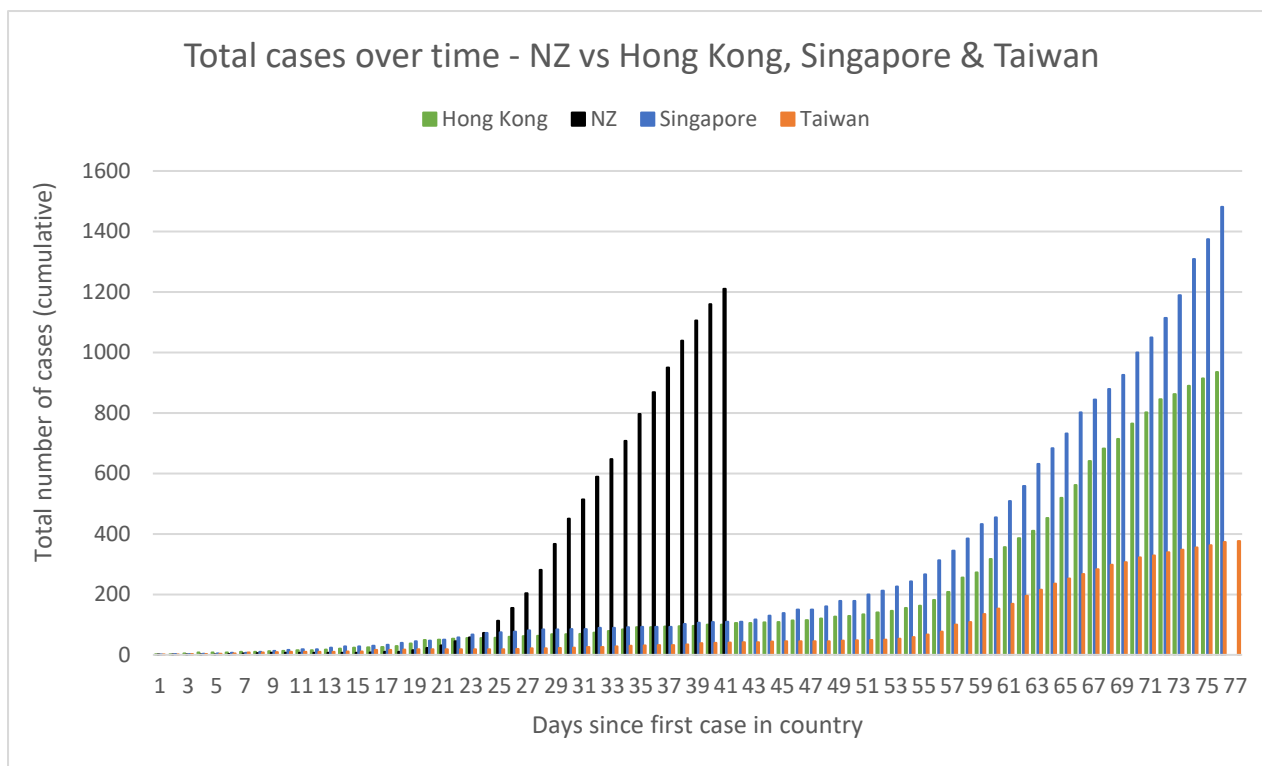
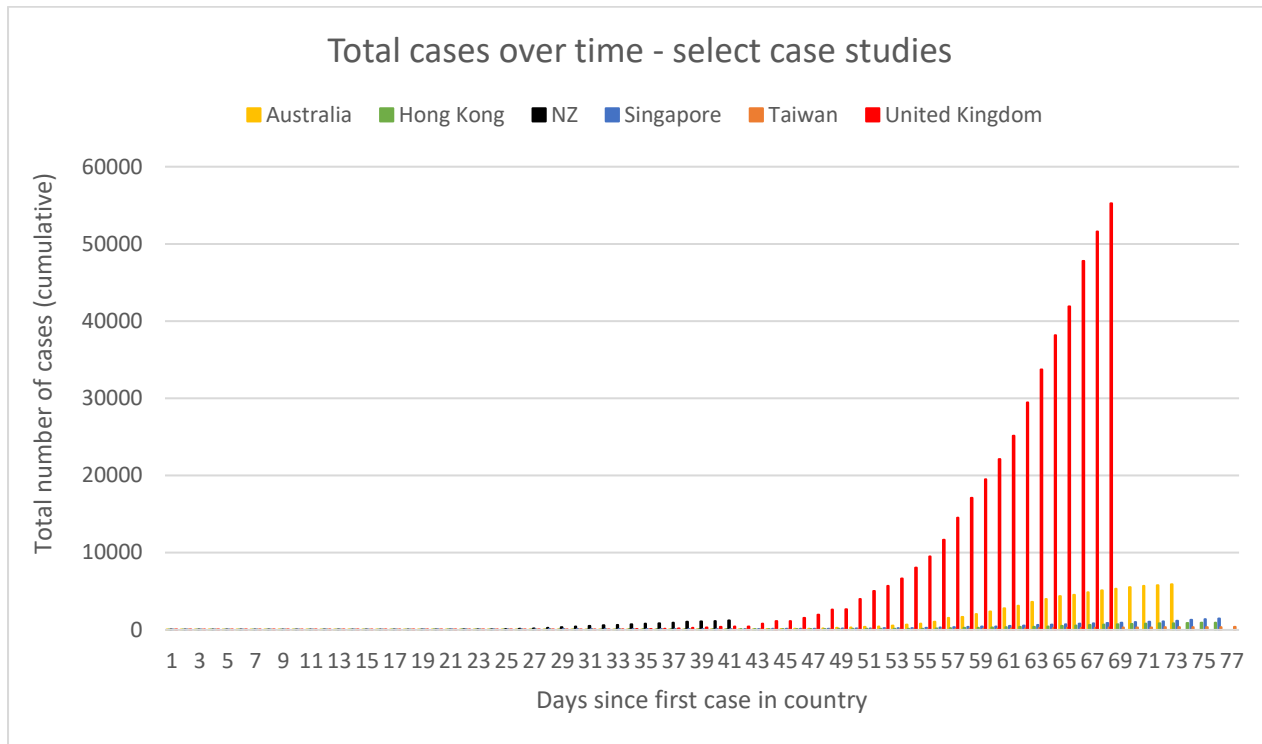
20 March: borders closed to all non-residents/non-citizens; minimum of 4sqm per person required for indoor gatherings

23 March: all pubs, bars, nightclubs, cinemas, casinos, indoor sporting venues, entertainment venues, places of worship close; cafes & restaurants delivery only

29 March: federal government limits gatherings to max. two people; some states adopt this policy.







Singapore: 1481 confirmed cases, 6 deaths
 (population 5.8 million)

Taiwan: 376 confirmed cases, 5 deaths
 (population 23.8 million)

Hong Kong: 935 confirmed cases, 4 deaths
 (population 7.5 million)

Australia: 5895 confirmed cases, 35 deaths
 (population 25.5 million)

UK: 55242 confirmed cases, 2921 deaths
 (population 67.8 million)

NZ: 1210 confirmed cases, 1 death
 (population 4.8 million)

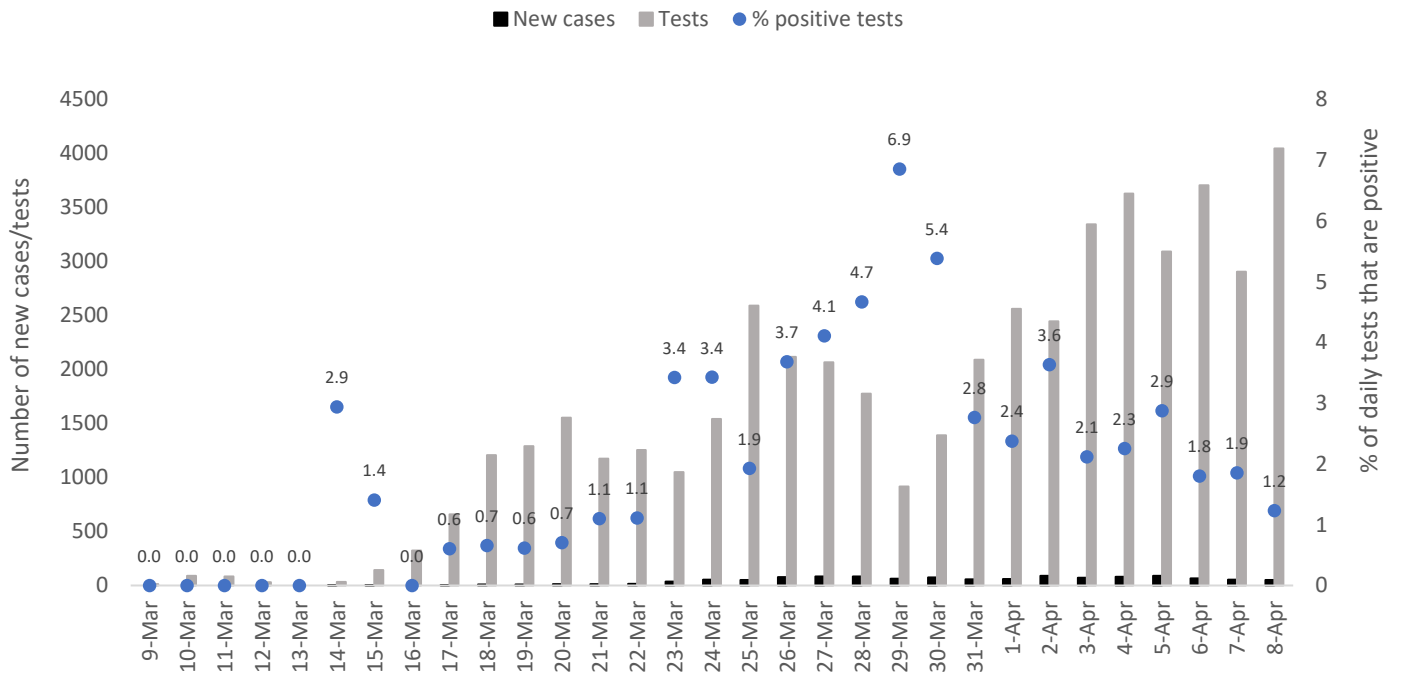
Data up to 6 April 2020 from Johns Hopkins University (<https://github.com/CSSEGISandData/COVID-19>)

NZ data to 8 April from Ministry of Health

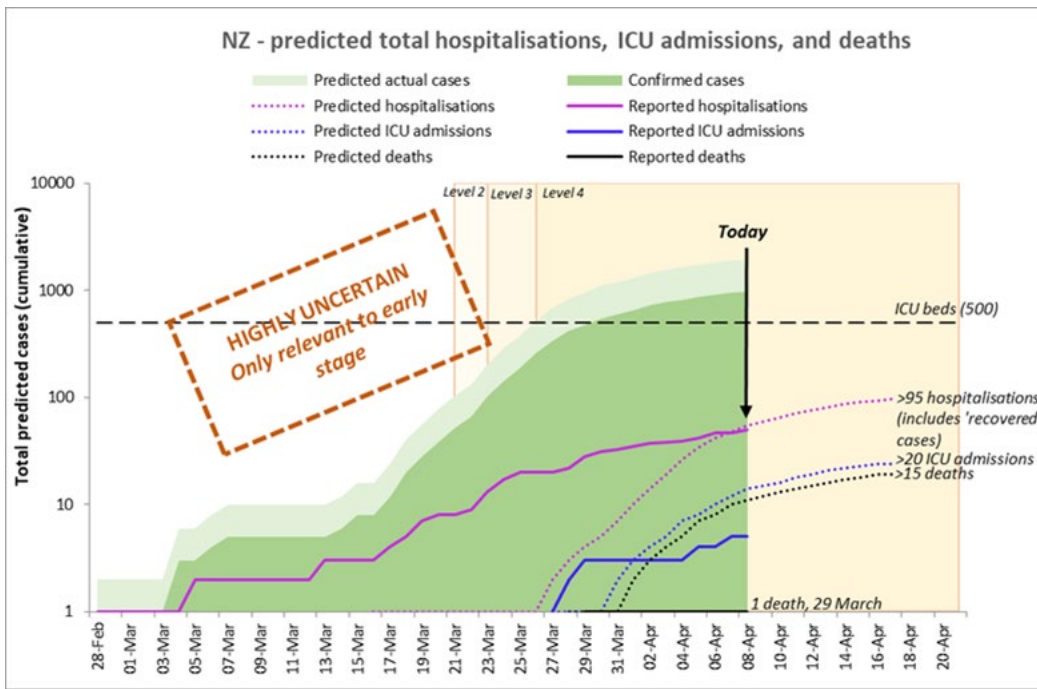
Interventions:

- United Kingdom in lockdown from Monday 23 March
- Australia: 15 March: gatherings >500 cancelled; international travellers arriving/returning must self-isolate for 14 days; 20 March: Aus borders closed to all non-residents/non-citizens; minimum of 4sqm per person required for indoor gatherings; 23 March: most states closed all pubs, bars, nightclubs, cinemas, casinos, indoor sporting venues, entertainment venues, places of worship close; cafes & restaurants delivery only; 29 March: federal government limits gatherings to max. two people; state adopts this policy and issues stay at home directions beginning 31 March
- Singapore currently at Dorscon 'orange' level; stepped up restrictions from midnight Thursday 26 March; from 20 March, all returning residents and short-term visitors has to isolate at home for 14 days
- Hong Kong restricting non-resident entry from Wednesday 25 March; was in partial lockdown for three weeks in January/February but lifted restrictions on 2 March, leading to an influx of imported cases; 1 April, the Hong Kong government announced the temporary closure of karaoke lounges, nightclubs and mahjong premises; 3 April all pubs and bars across the territory were ordered to close for 14 days.
- New Zealand in alert level four (lockdown) from midnight Wednesday 25 March

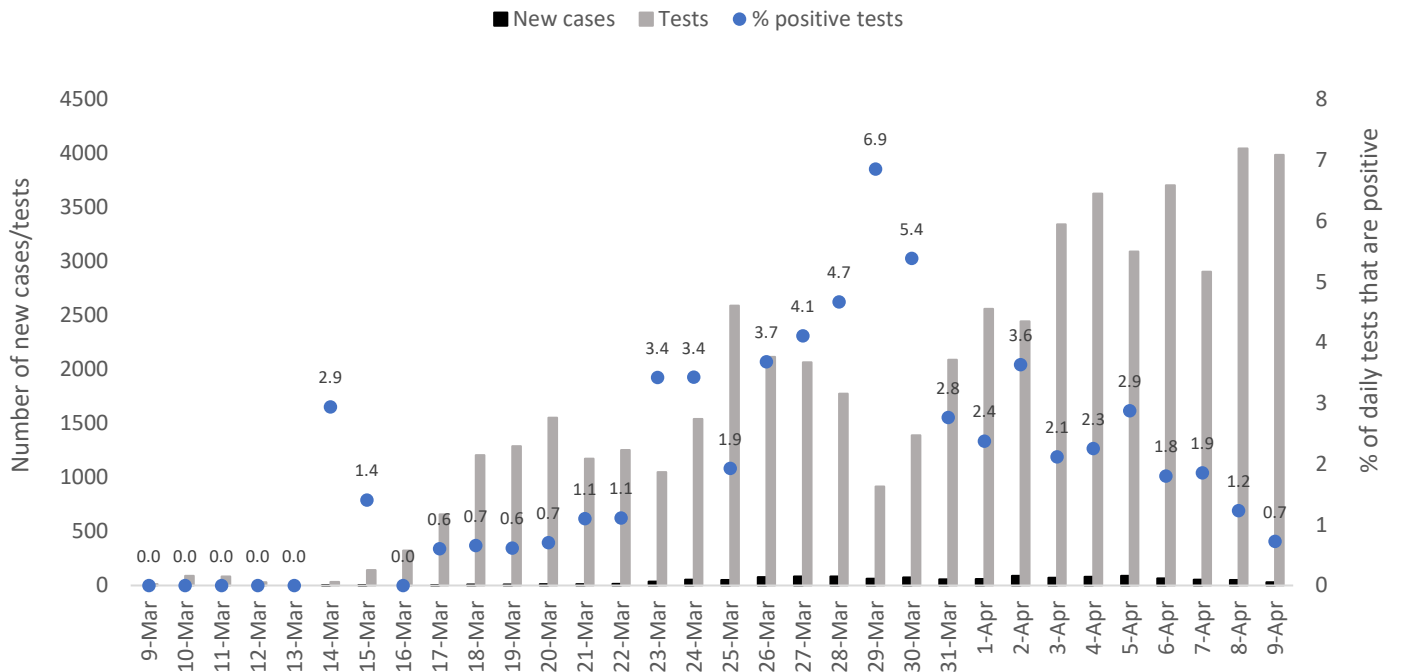
Daily new COVID-19 cases and number of tests performed in NZ



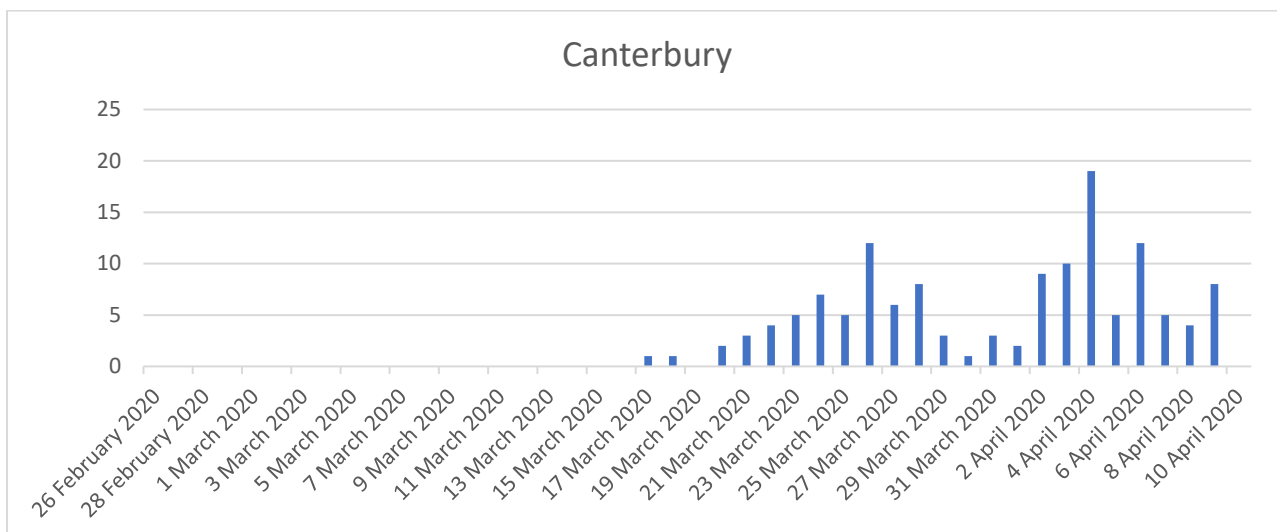
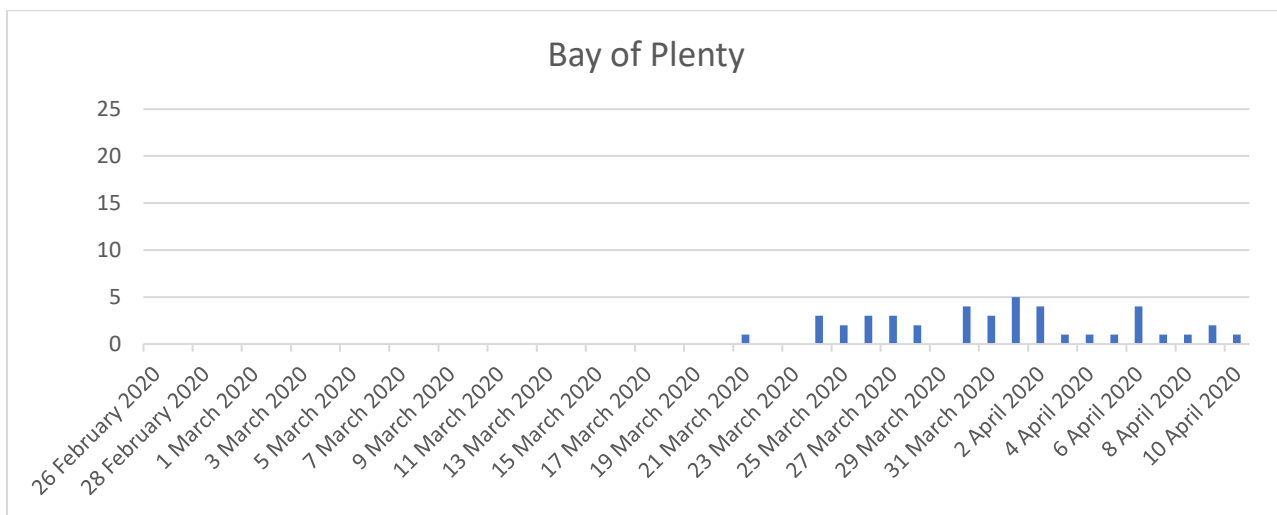
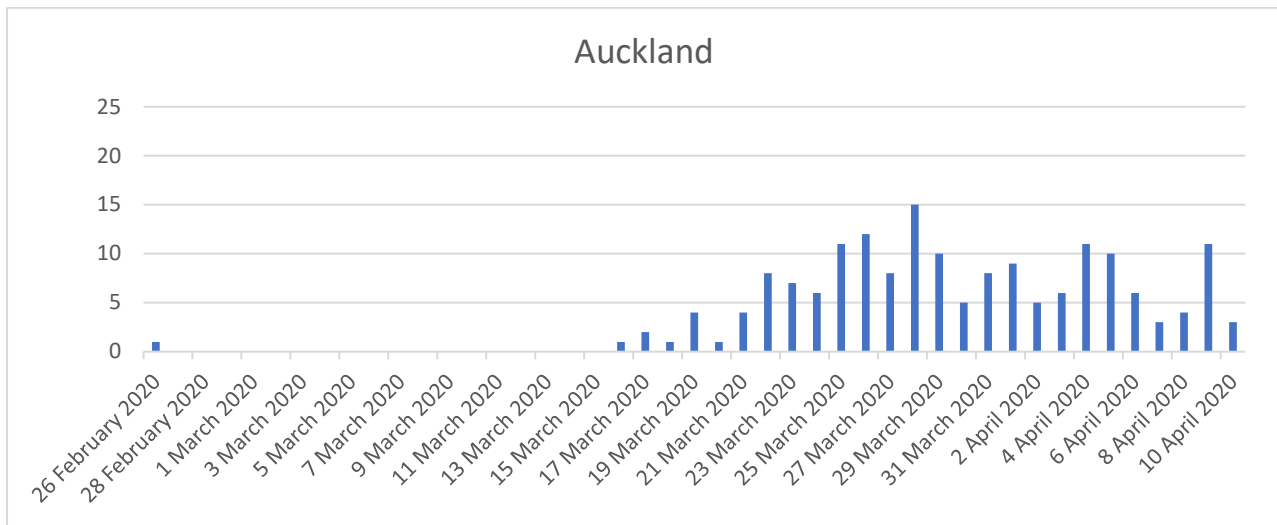
8/04/2020



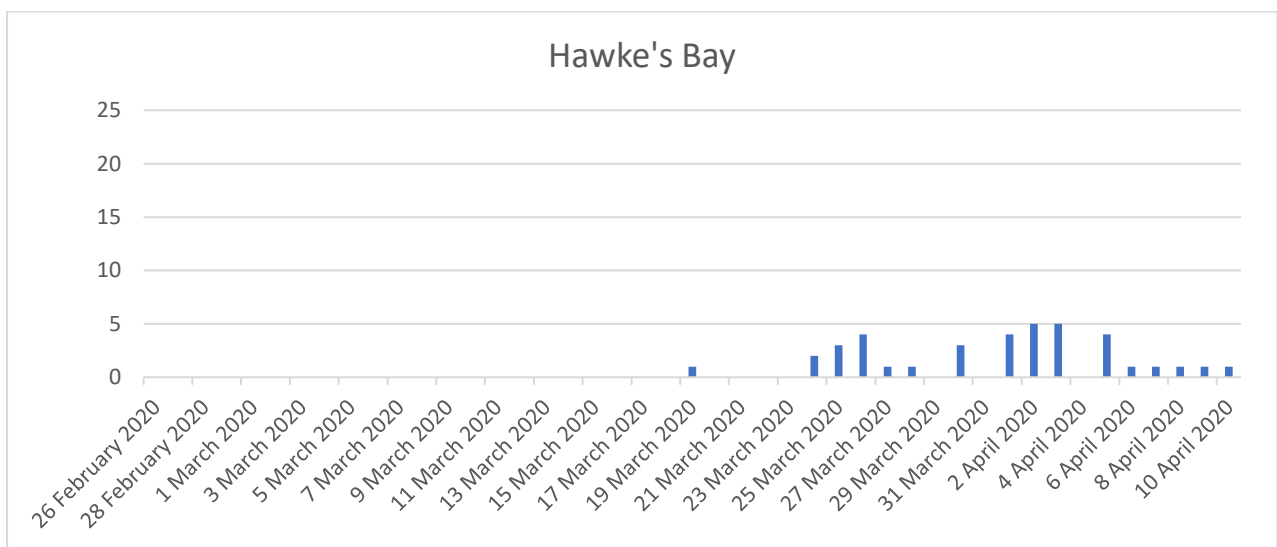
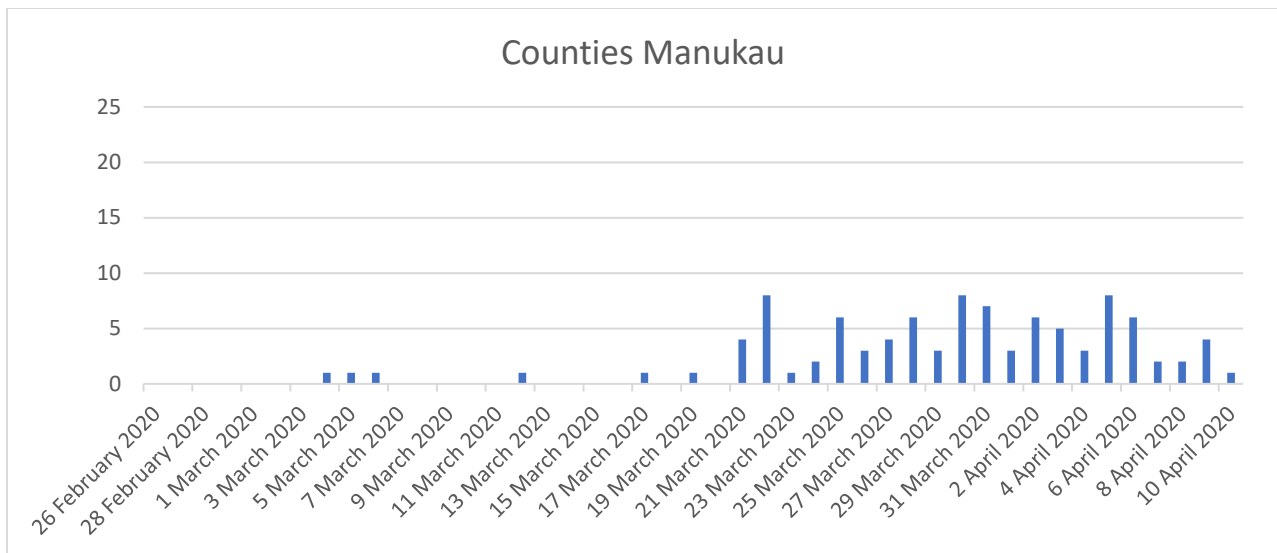
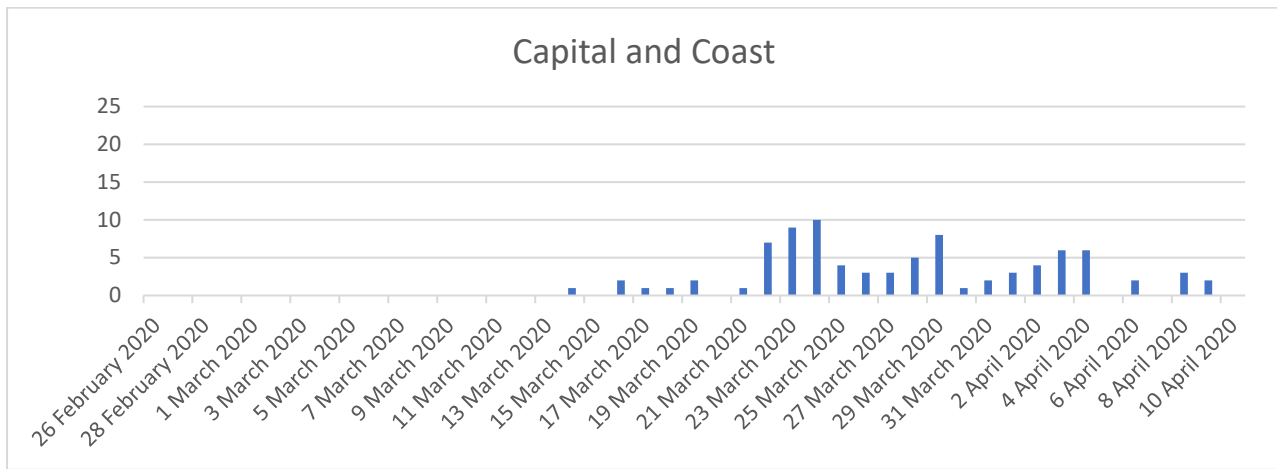
Daily new COVID-19 cases and number of tests performed in NZ



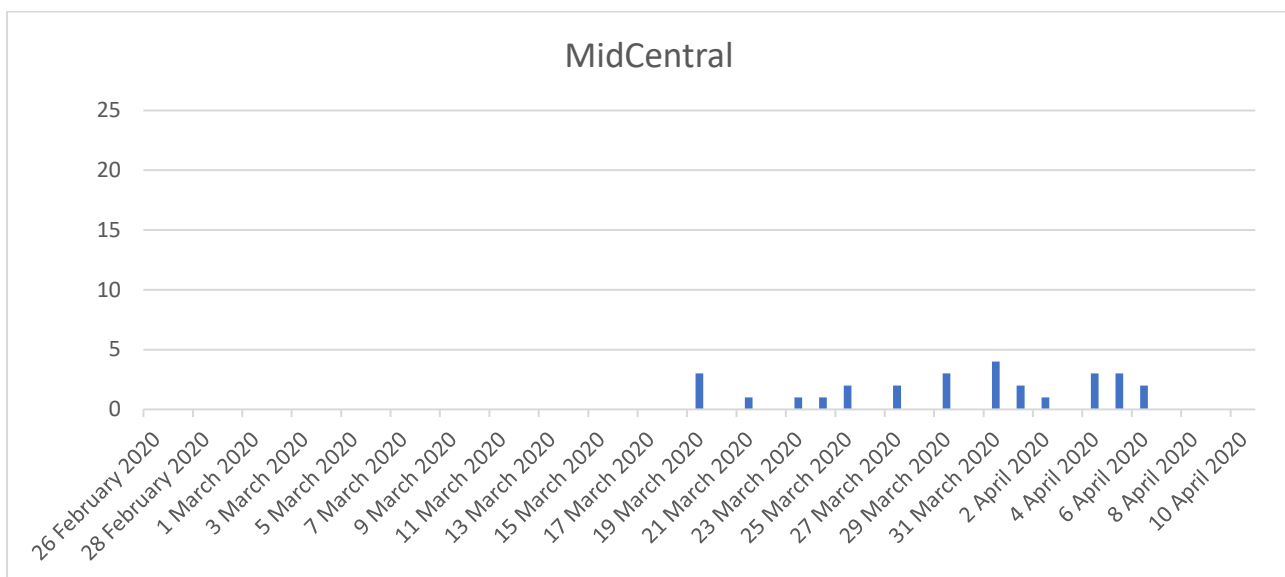
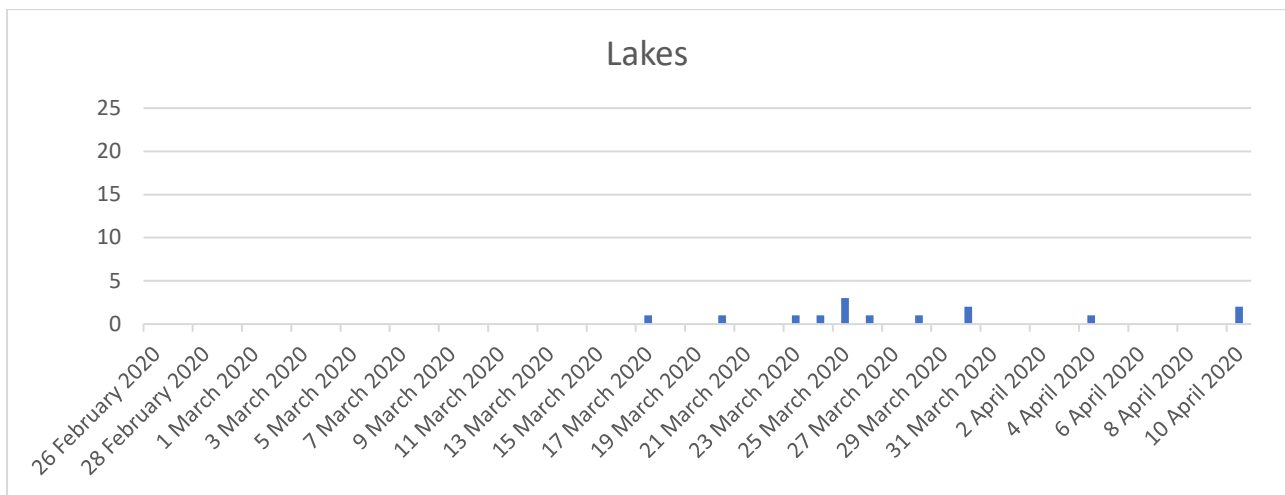
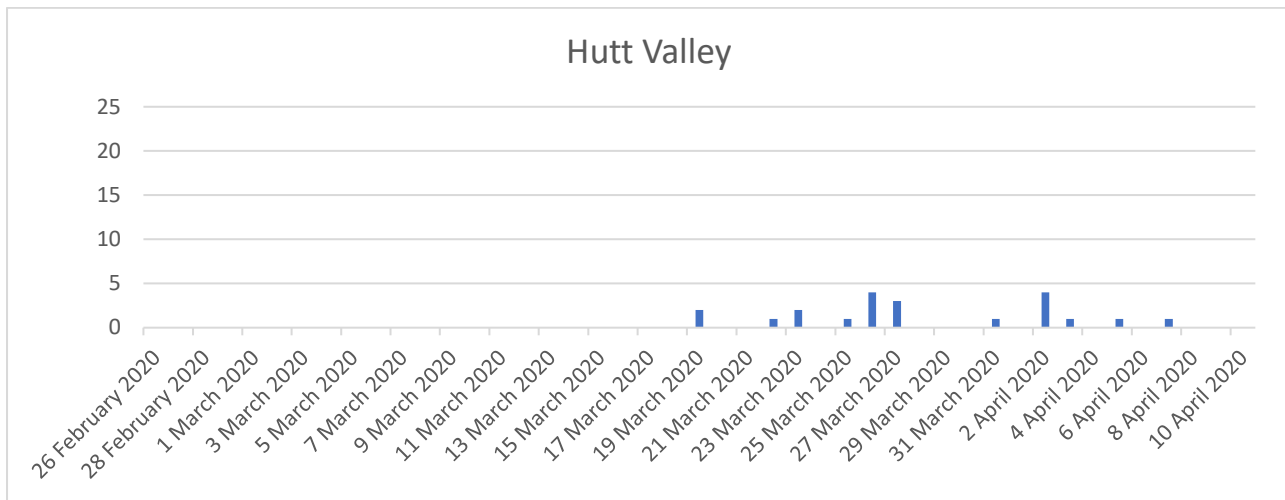
New Cases (confirmed and probable) by day per DHB (by day of report)



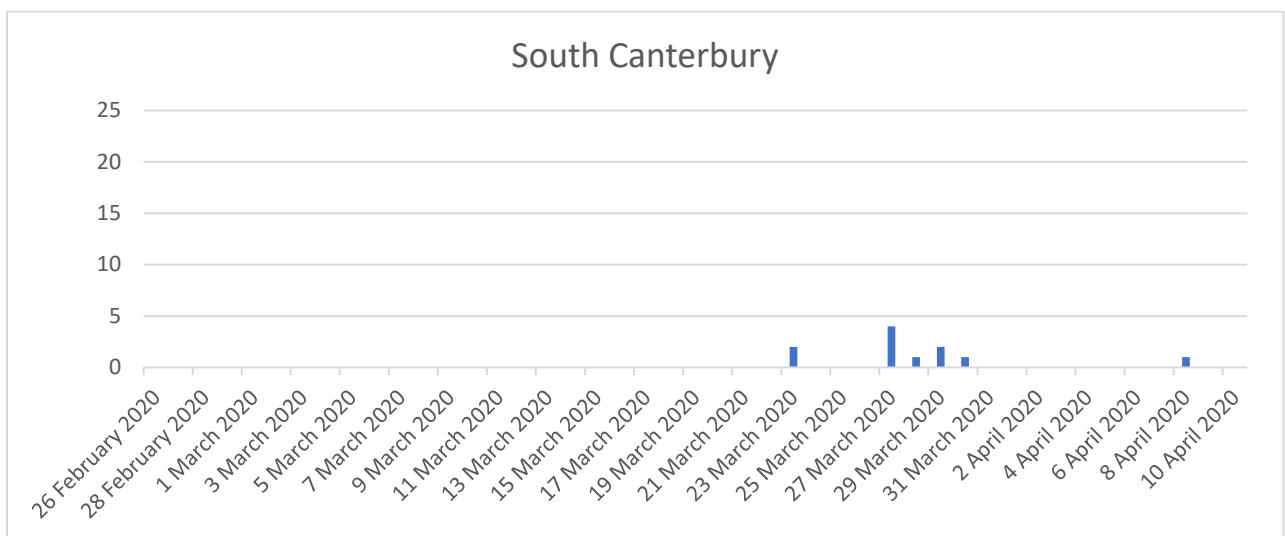
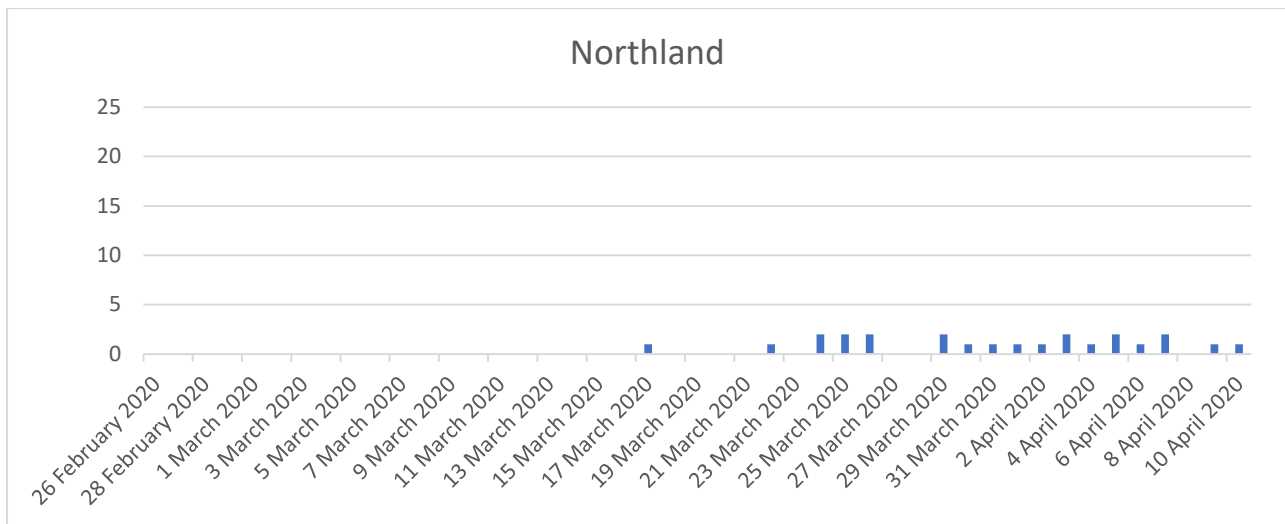
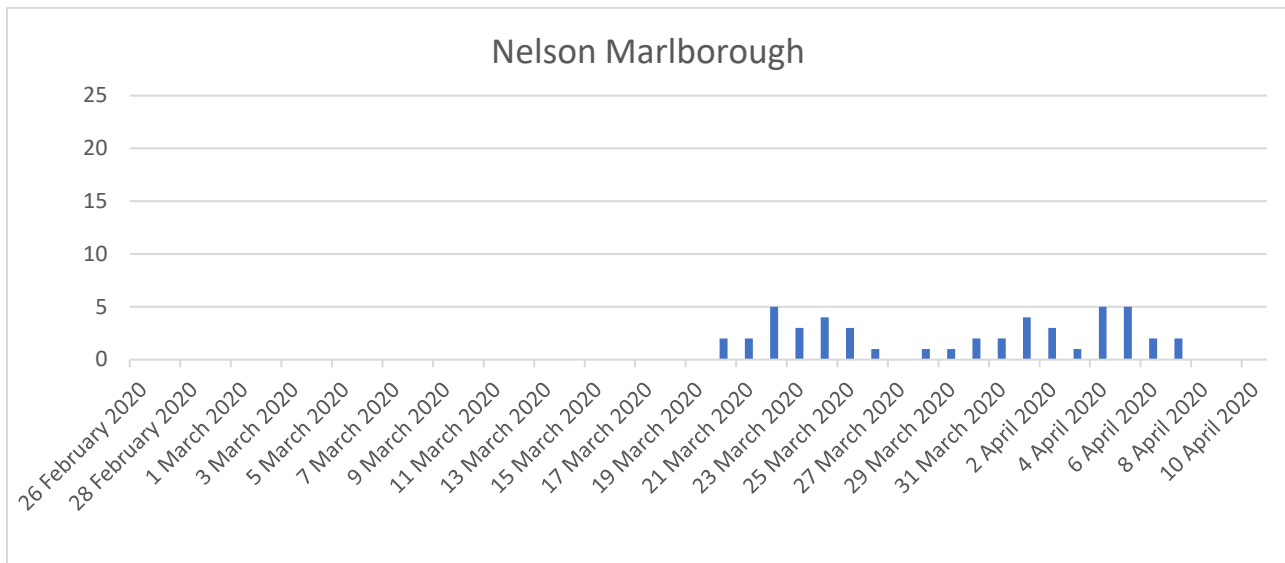
New Cases (confirmed and probable) by day per DHB (by day of report)



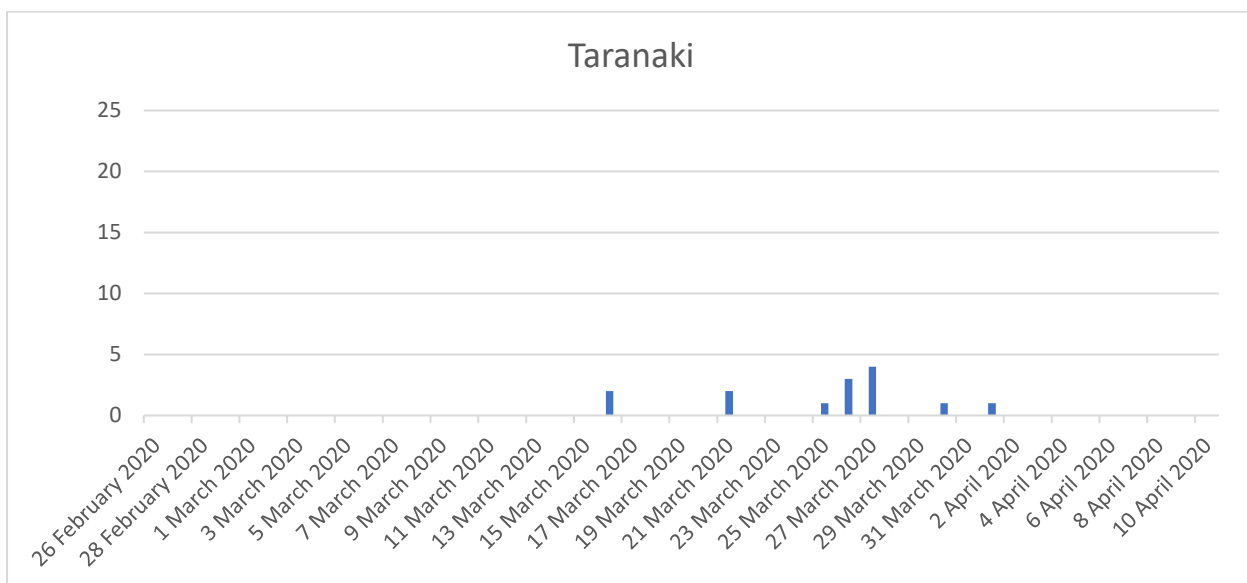
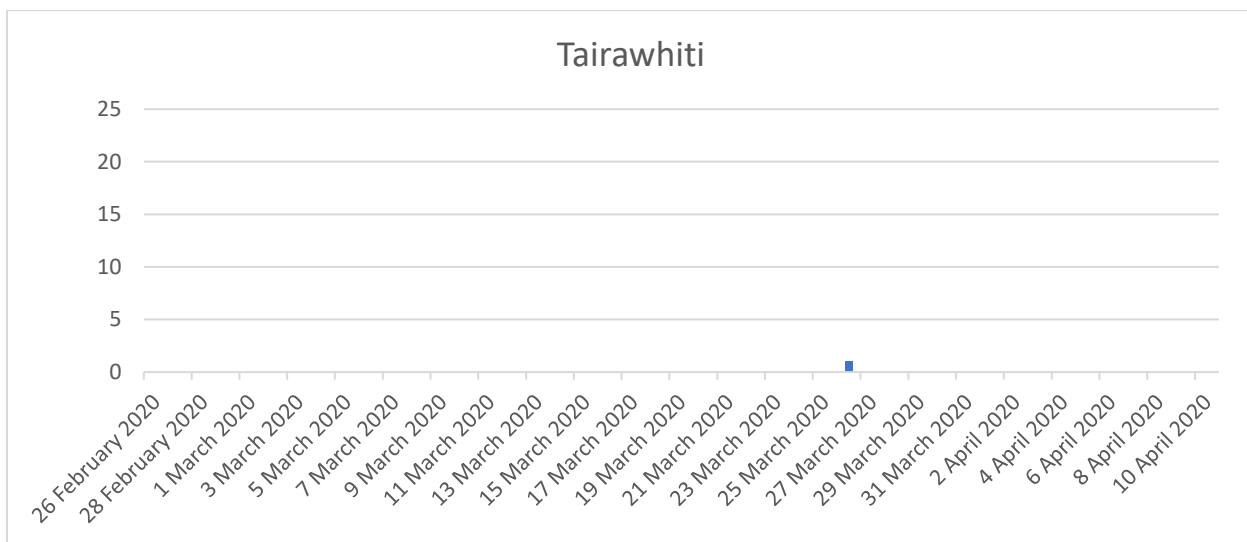
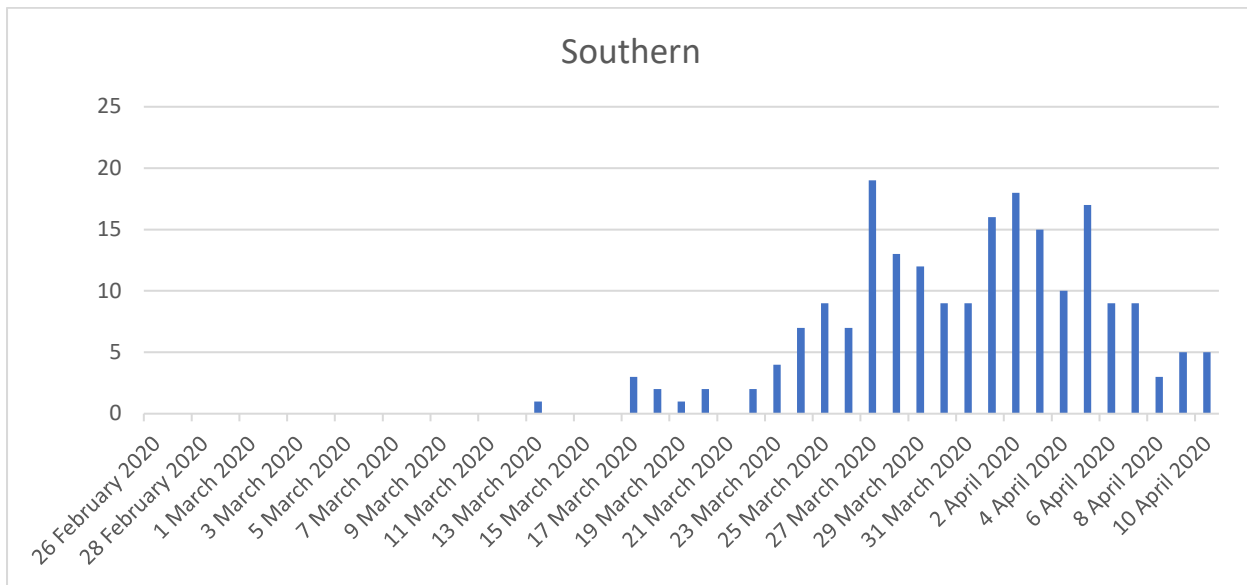
New Cases (confirmed and probable) by day per DHB (by day of report)



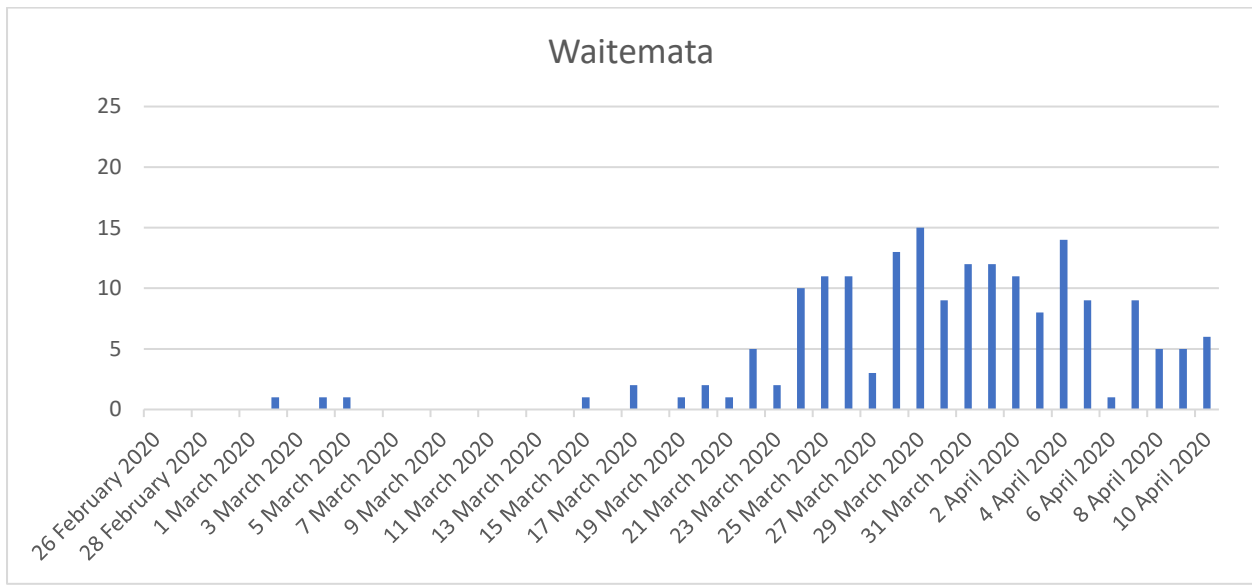
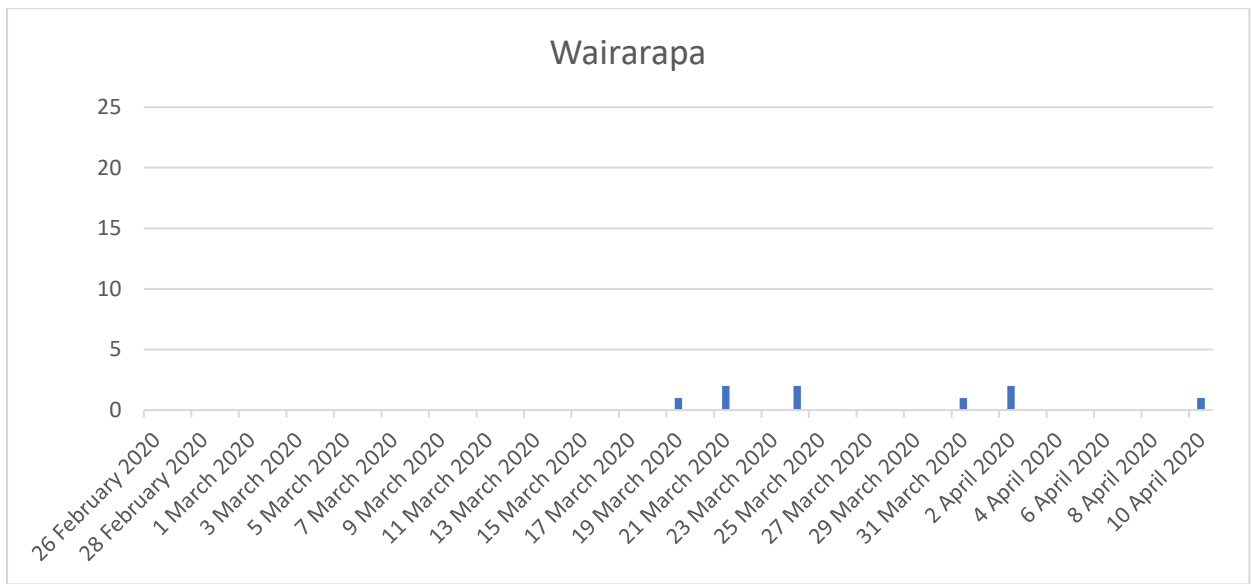
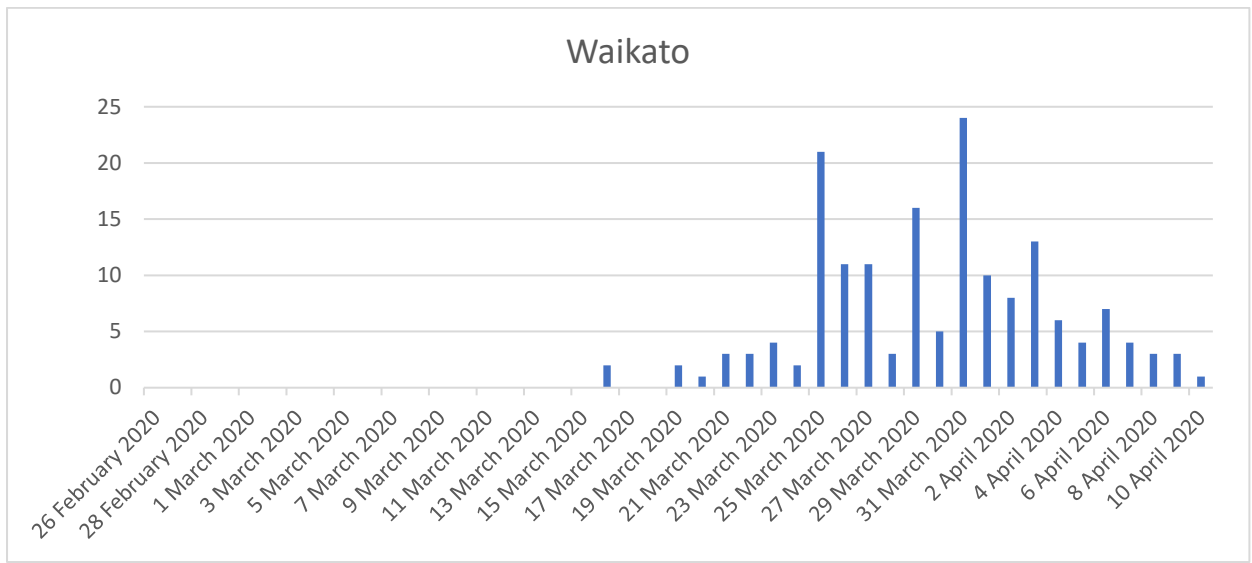
New Cases (confirmed and probable) by day per DHB (by day of report)



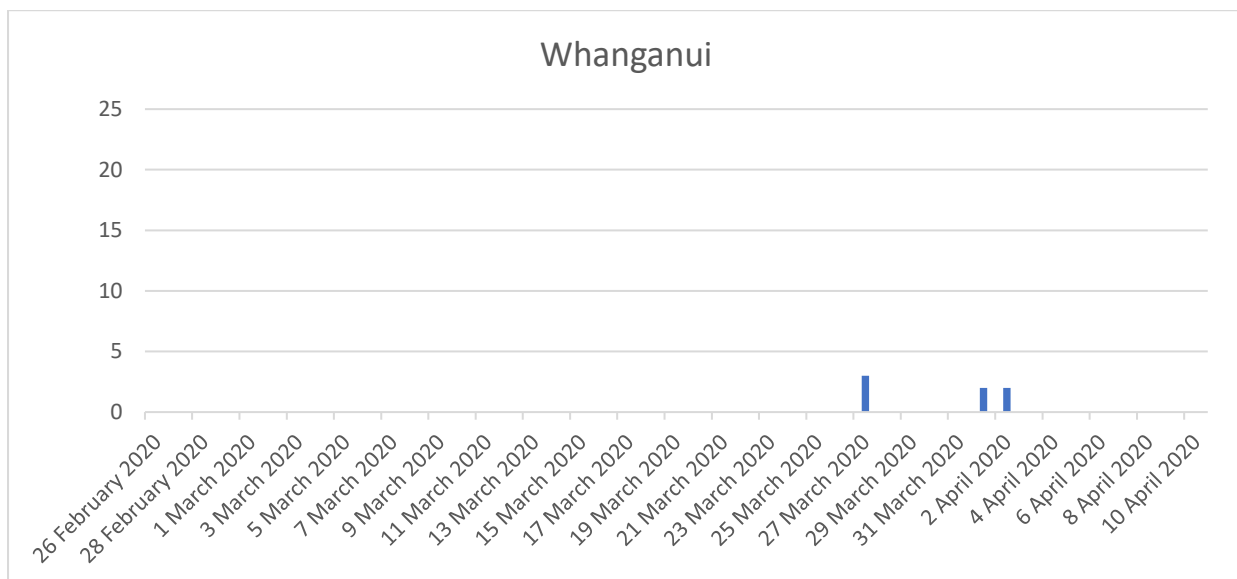
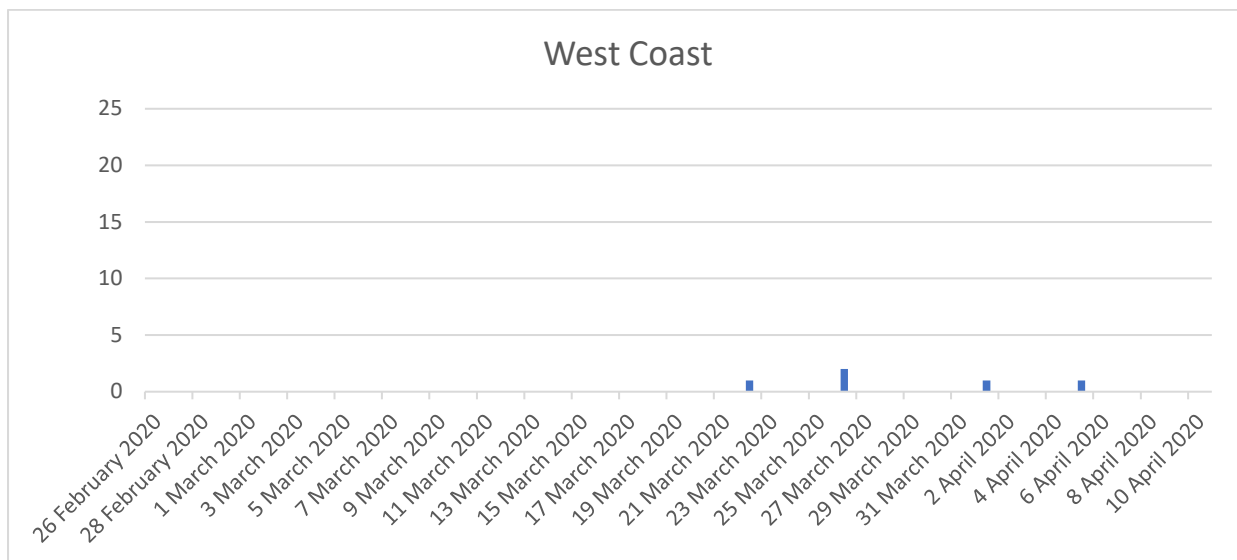
New Cases (confirmed and probable) by day per DHB (by day of report)

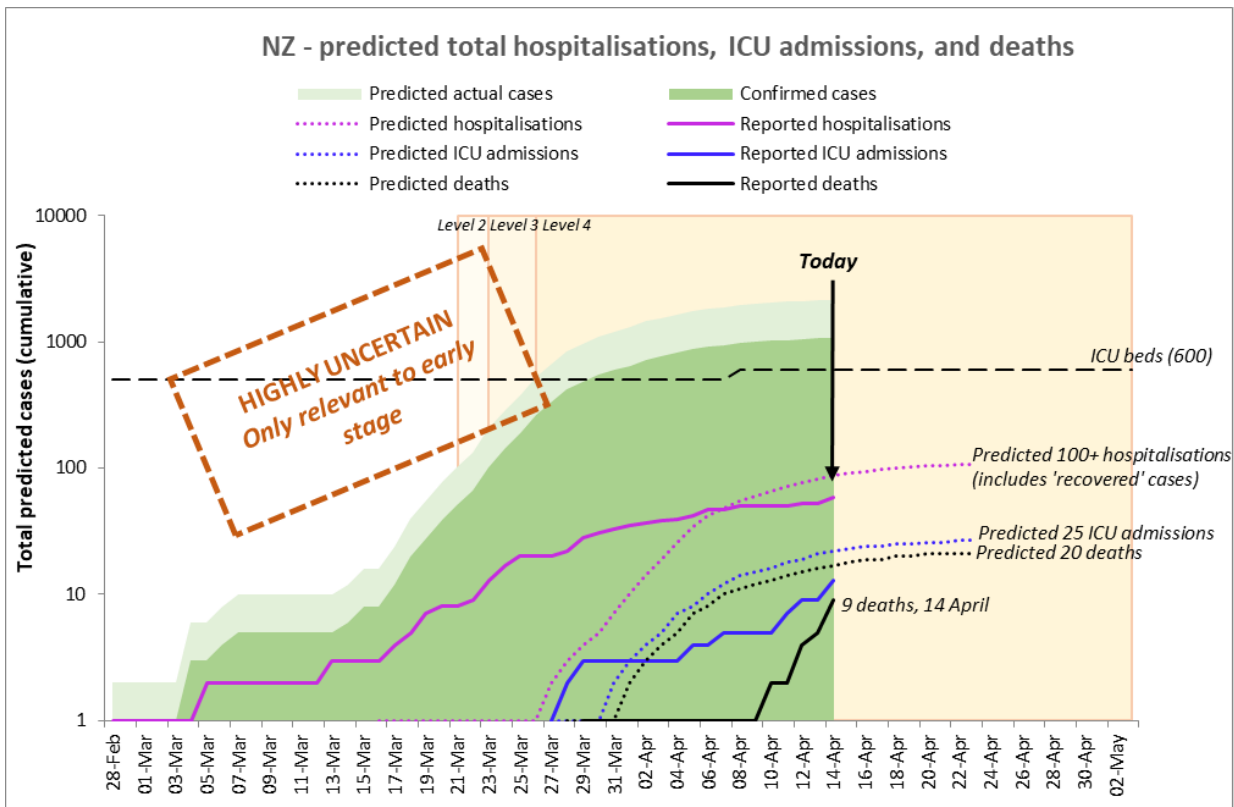


New Cases (confirmed and probable) by day per DHB (by day of report)



New Cases (confirmed and probable) by day per DHB (by day of report)





Median time from onset of symptoms to ICU admission has been reported as approximately ten days.¹² This time has been applied to confirmed NZ cases¹³ with an assumption that 50% of actual cases have been missed¹⁴, at a rate of 5% for hospitalisations, 1.25% for ICU admissions¹⁵ and 1% for deaths¹⁶.

Reported hospitalisations are from Ministry of Health data.¹⁷ The hospitalisations are cumulative and have not allowed for those leaving hospital, so the graph is only relevant to the early stage of the response.

¹² See [https://www.thelancet.com/journals/laninf/article/PIIS1473-3099\(20\)30195-X/fulltext](https://www.thelancet.com/journals/laninf/article/PIIS1473-3099(20)30195-X/fulltext) and <https://www.nejm.org/doi/full/10.1056/NEJMe2002387>

¹³ Only **confirmed** cases included here.

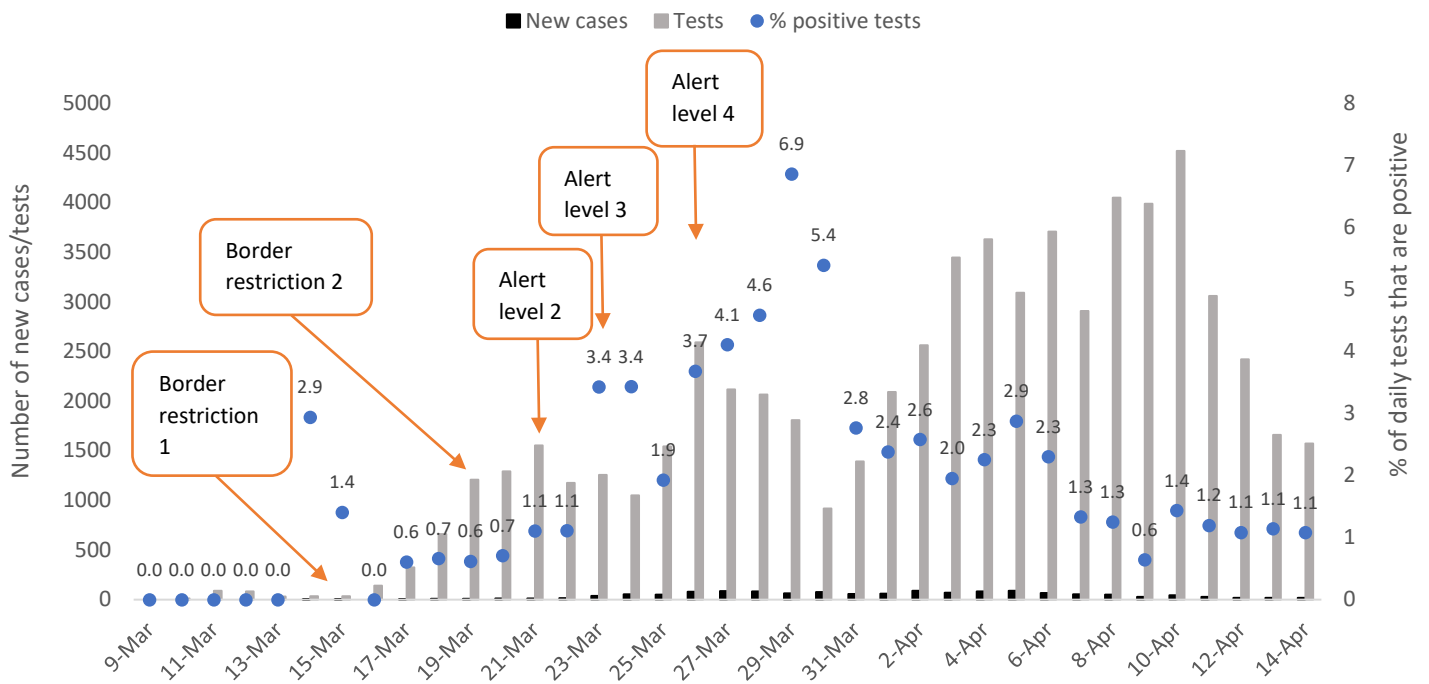
¹⁴ We have assumed only 50% of actual cases in NZ have been identified and confirmed.

¹⁵ ICU data is approximate – official data not accessed.

¹⁶ Figures taken from model assumptions under ‘realistic’ scenario from ‘COVID-19 Modelling Update’, 26 March 20, produced by Te Punaha Matatini with support from Orion Health, Contact Shaun Hendy.

¹⁷ Hospitalisation date may not align with actual admission date.

Daily new COVID-19 cases and number of tests performed in NZ



14/04/2020

Data up to 12 April from Johns Hopkins University <https://github.com/CSSEGISandData/COVID-19>

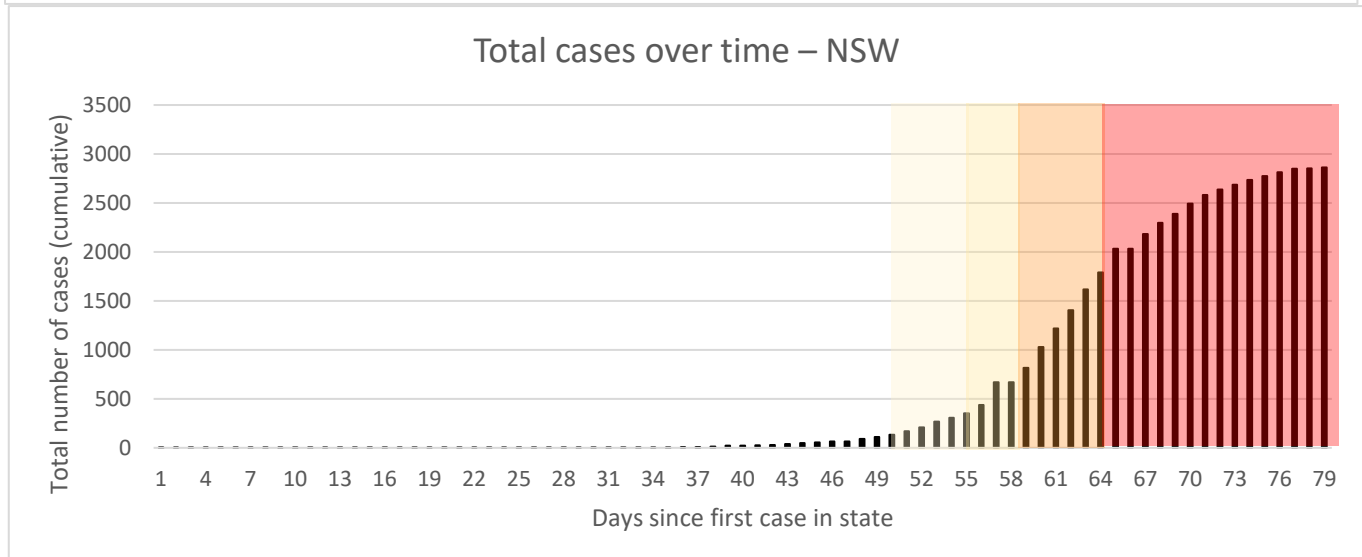
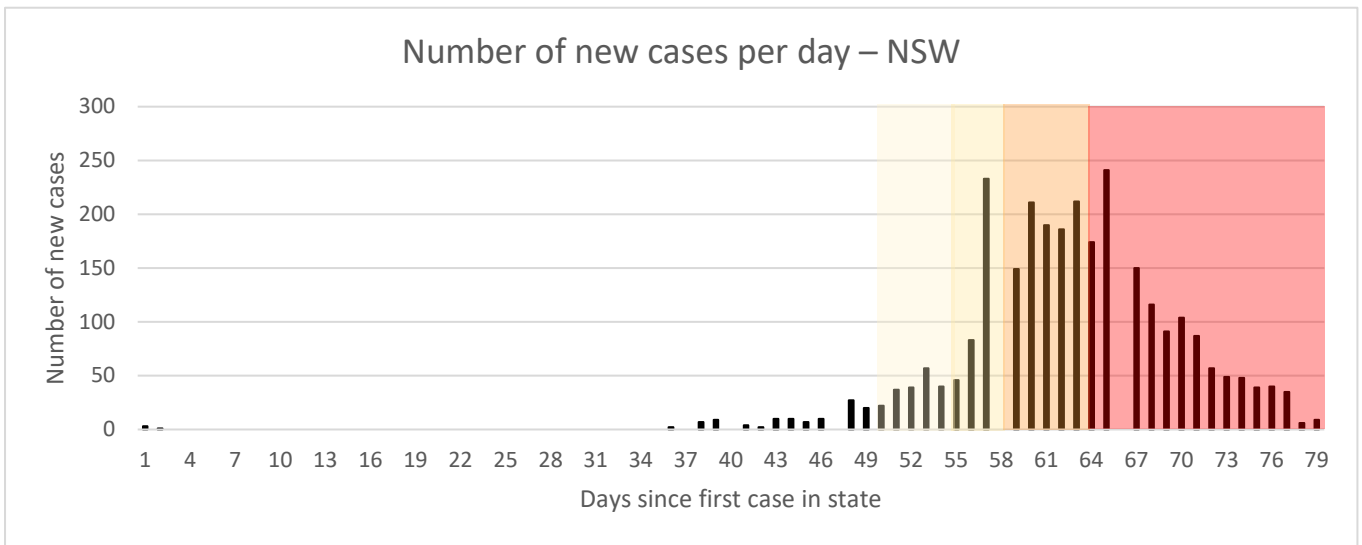
Testing data to 13 April from Covid Live: <https://www.covidlive.com.au/> (variable dates available)

Also see: <https://www.covid19data.com.au/>

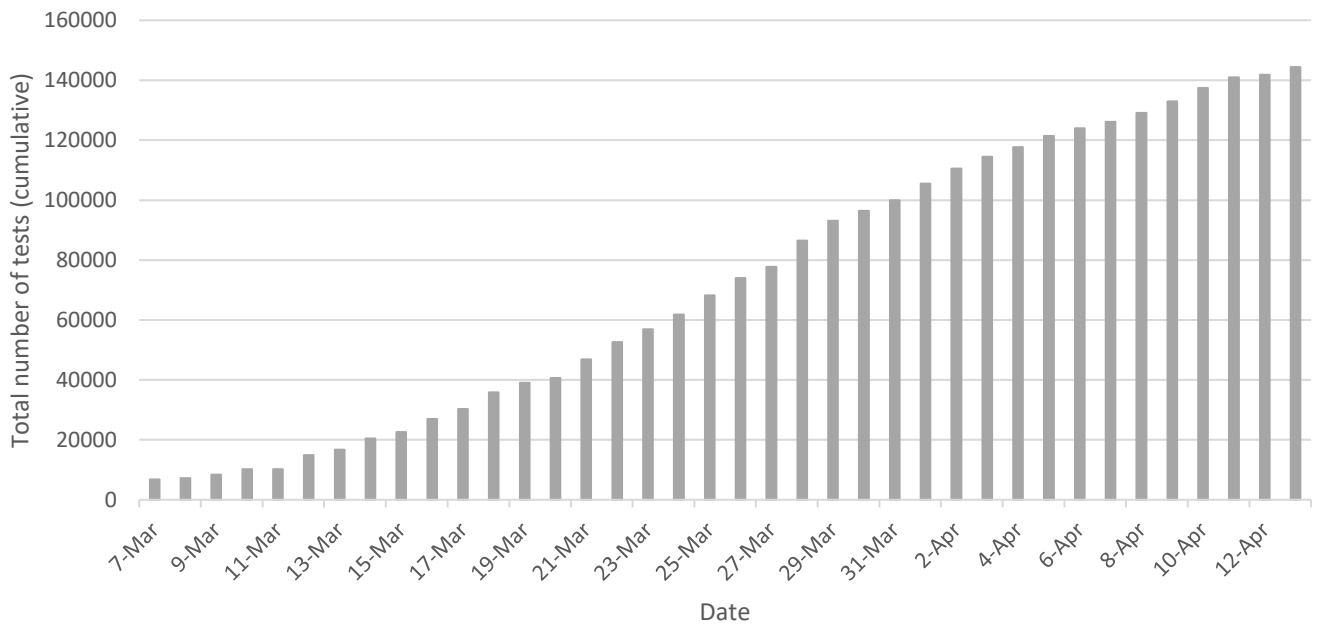
New South Wales (NSW)

Population	7.5 million
Cases (total)	2863
Tests (total)	144,380
Deaths (total)	24

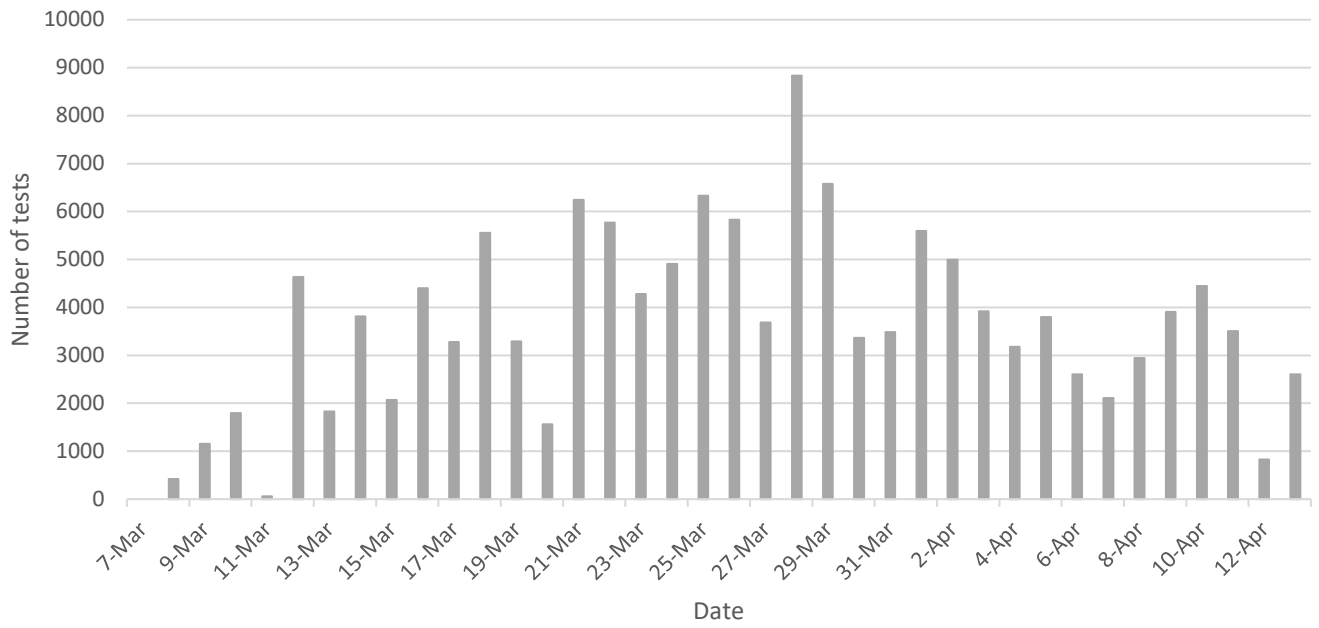
- 15 March:** gatherings >500 cancelled; international travellers arriving/returning must self-isolate for 14 days
- 20 March:** Aus borders closed to all non-residents/non-citizens; minimum of 4sqm per person required for indoor gatherings
- 23 March:** all pubs, bars, nightclubs, cinemas, casinos, indoor sporting venues, entertainment venues, places of worship close; cafes & restaurants delivery only
- 31 March:** federal government recommends limiting gatherings to max. two people on 29 March; state adopts this policy and issues [public health restrictions](#)

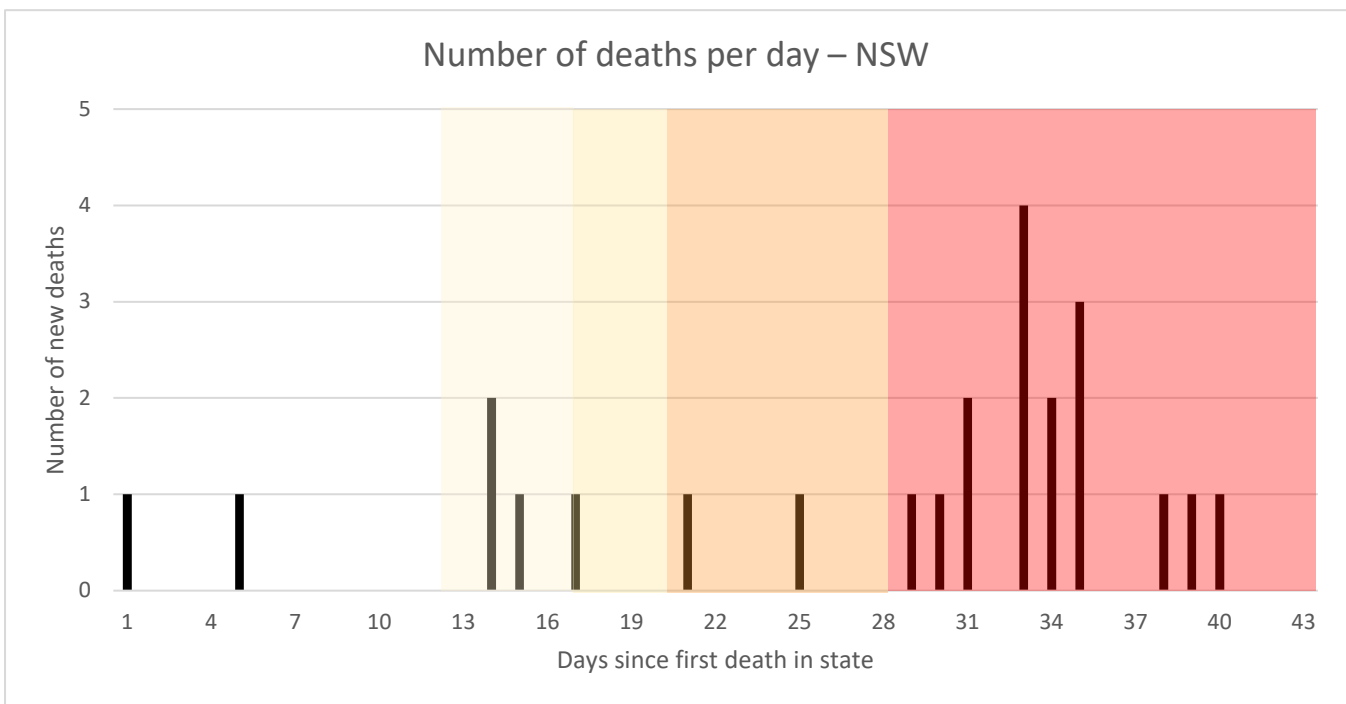
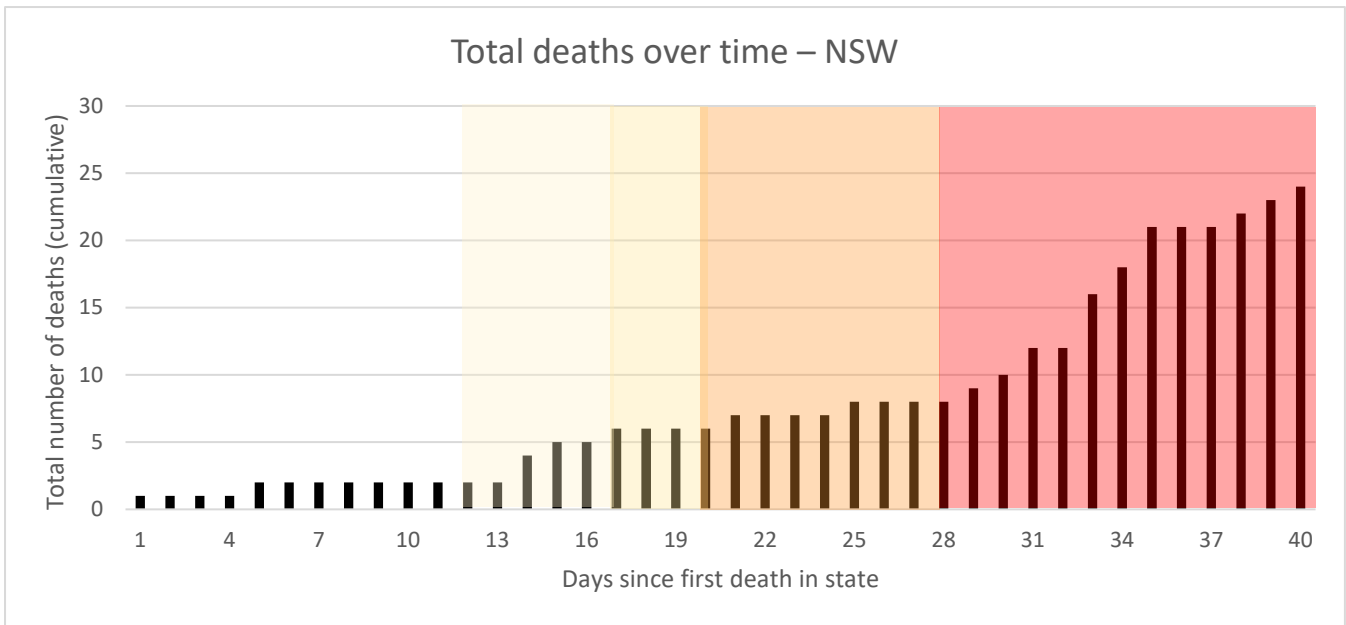


Total tests over time – NSW



Number of new tests per day – NSW



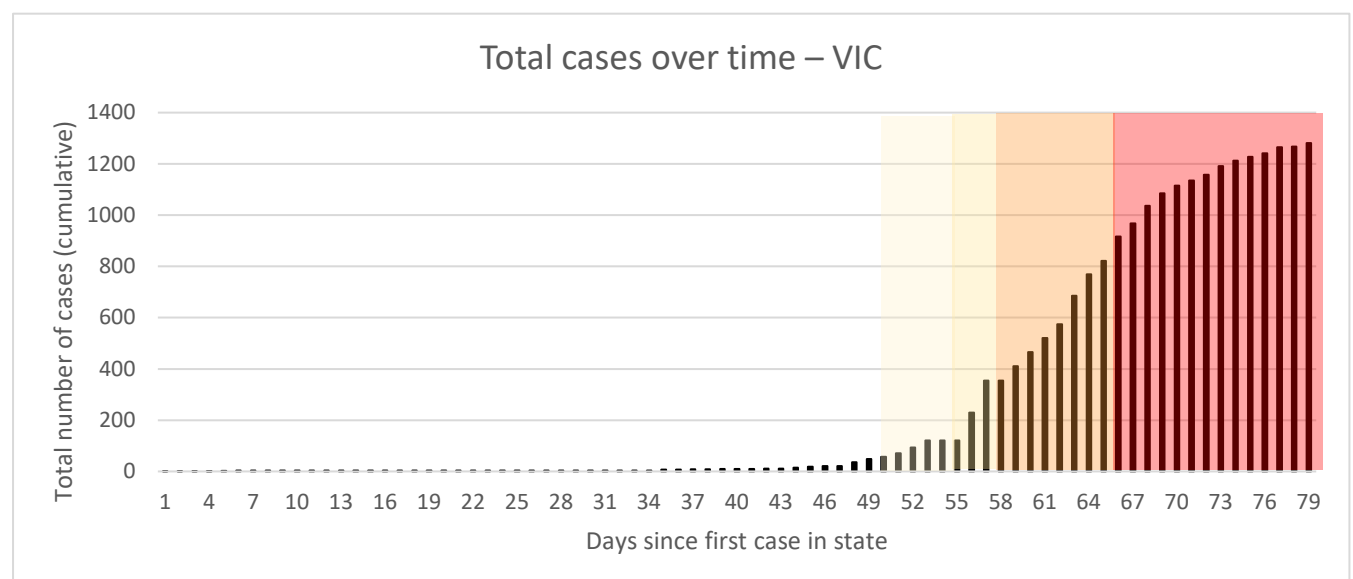
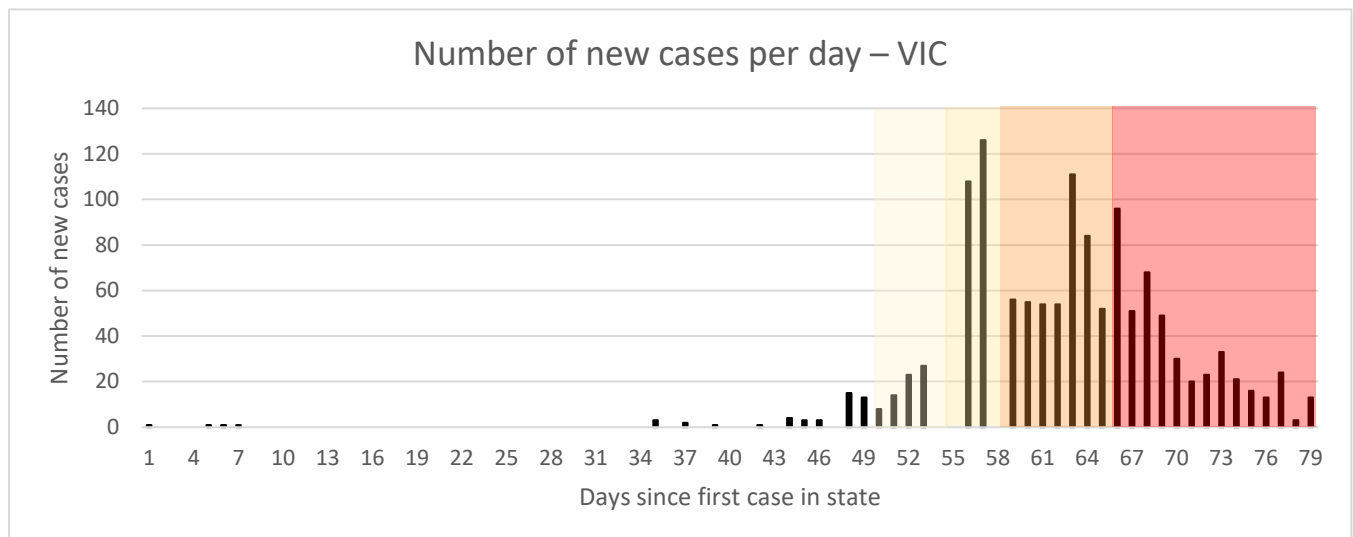


- 15 March:** gatherings >500 cancelled; international travellers arriving/returning must self-isolate for 14 days
- 20 March:** Aus borders closed to all non-residents/non-citizens; minimum of 4sqm per person required for indoor gatherings
- 23 March:** all pubs, bars, nightclubs, cinemas, casinos, indoor sporting venues, entertainment venues, places of worship close; cafes & restaurants delivery only
- 31 March:** federal government recommends limiting gatherings to max. two people on 29 March; state adopts this policy and issues [public health restrictions](#)

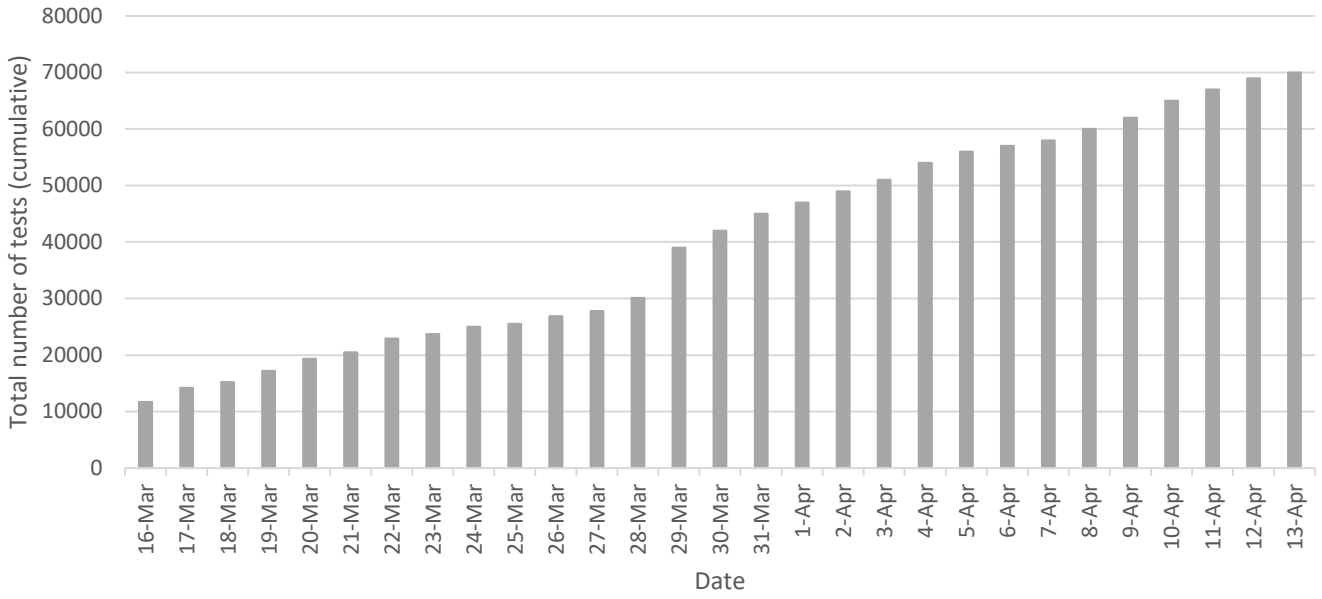
Victoria (VIC)

Population	6.4 million
Cases (total)	1281
Tests (total)	70,000 (approx.)
Deaths (total)	14

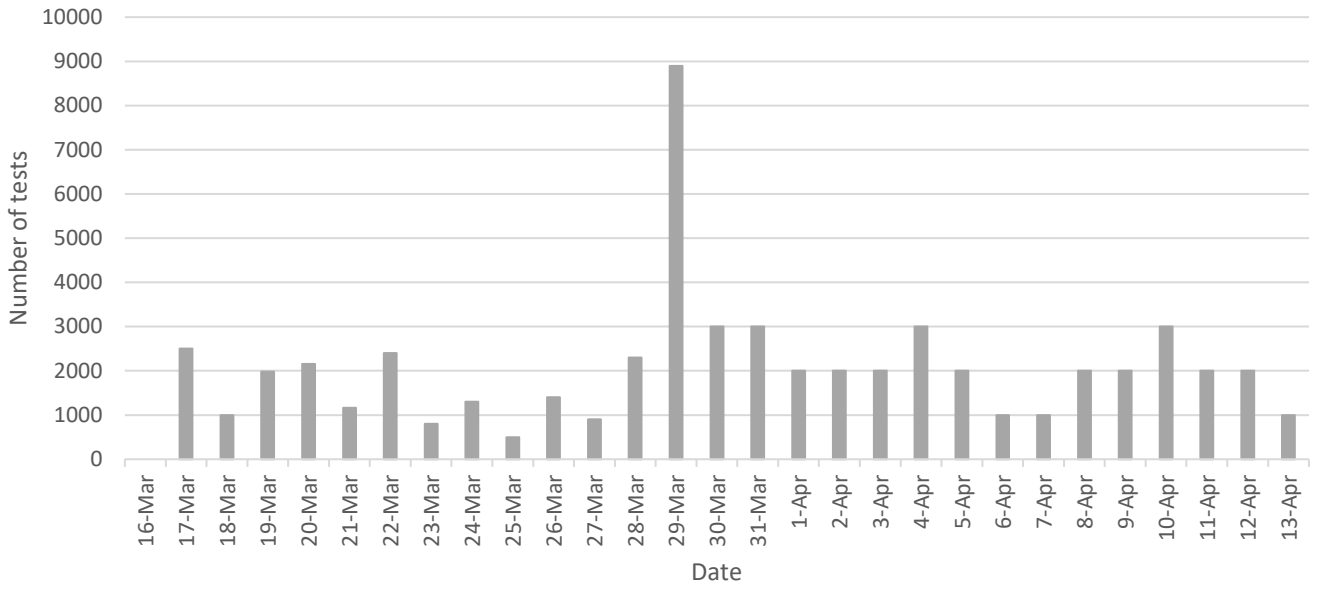
- 15 March:** gatherings >500 cancelled; international travellers arriving/returning must self-isolate for 14 days
- 20 March:** Aus borders closed to all non-residents/non-citizens; minimum of 4sqm per person required for indoor gatherings
- 23 March:** all pubs, bars, nightclubs, cinemas, casinos, indoor sporting venues, entertainment venues, places of worship close; cafes & restaurants delivery only
- 31 March:** federal government recommends limiting gatherings to max. two people on 29 March; state adopts this policy and issues [stay at home directions](#)



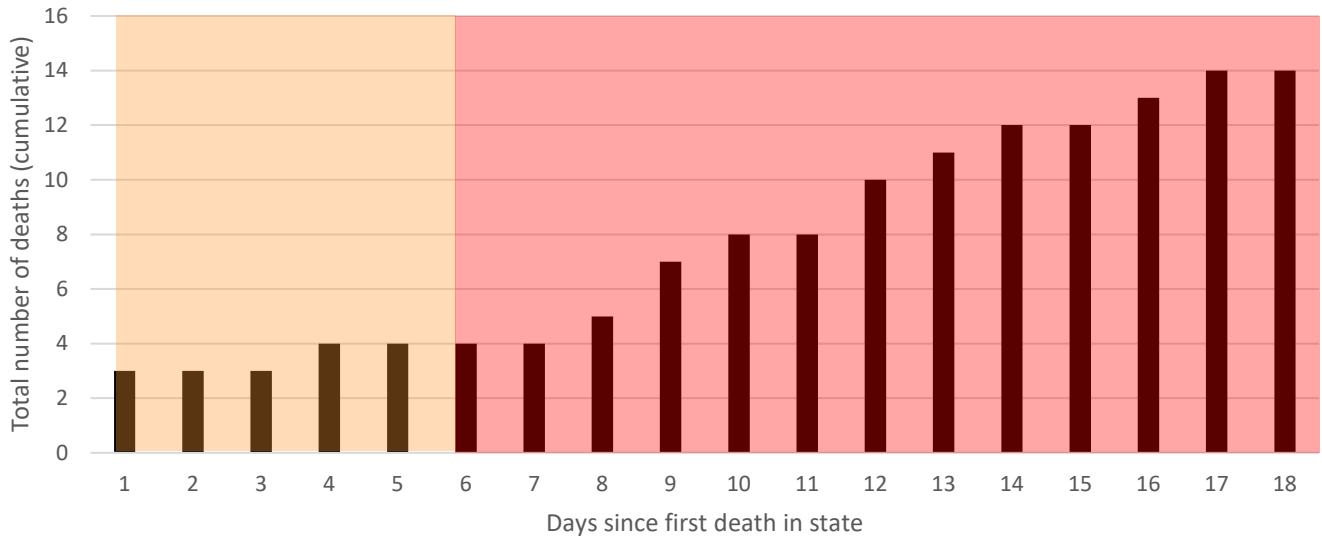
Total tests over time – VIC (approximate)



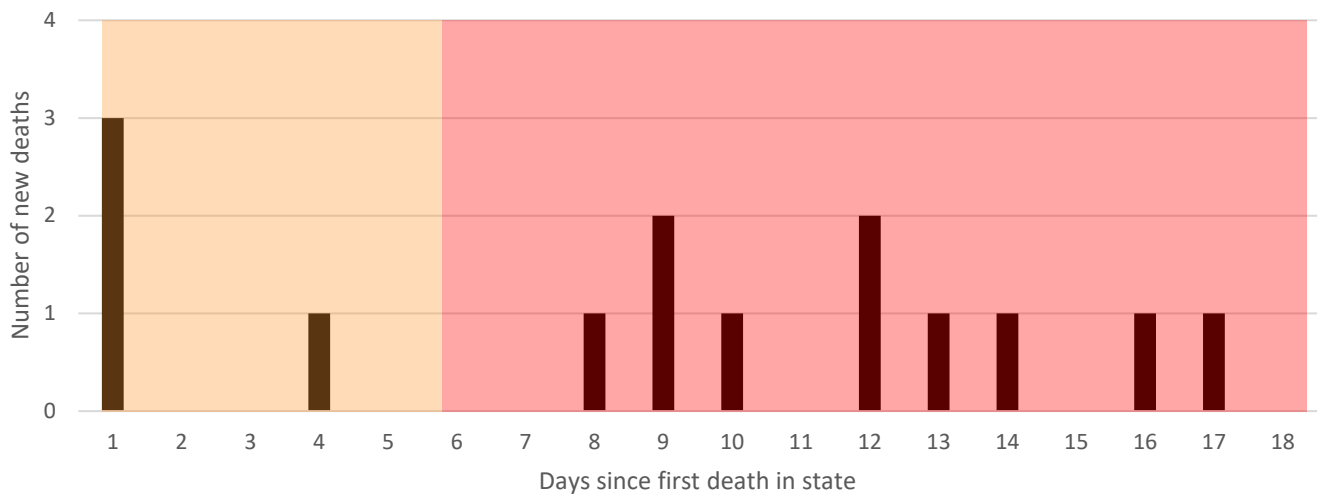
Number of new tests per day – VIC (approximate)



Total deaths over time – VIC



Number of deaths per day – VIC



15 March: gatherings >500 cancelled; international travellers arriving/returning must self-isolate for 14 days

20 March: Aus borders closed to all non-residents/non-citizens; minimum of 4sqm per person required for indoor gatherings

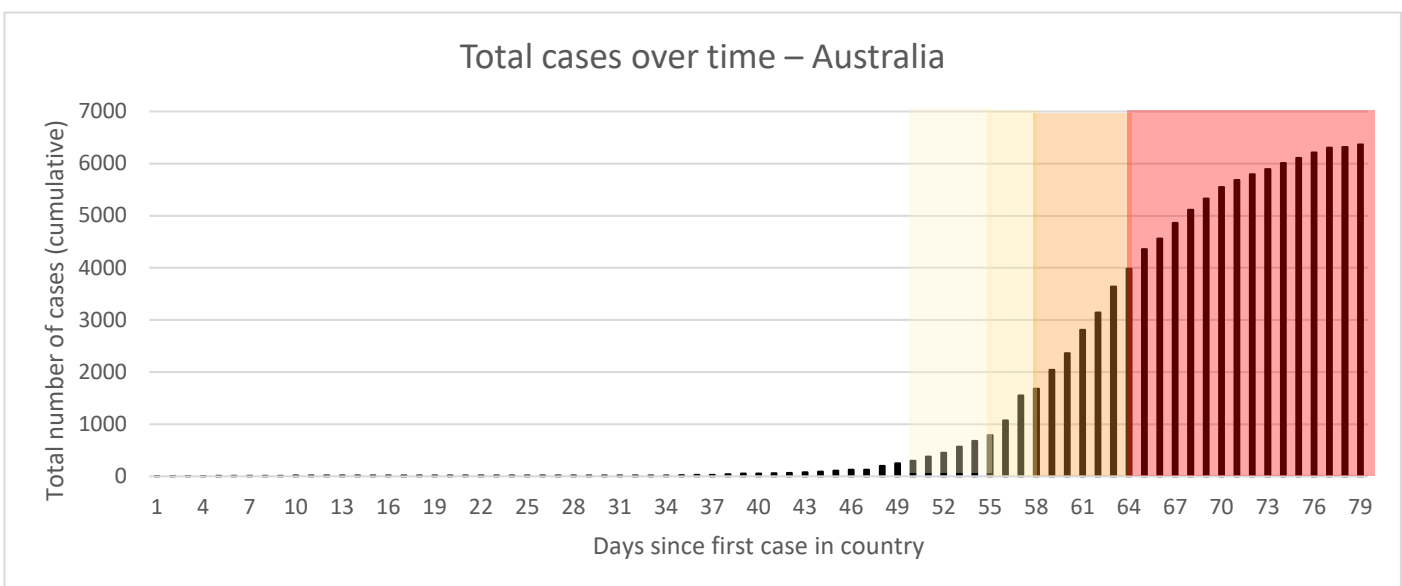
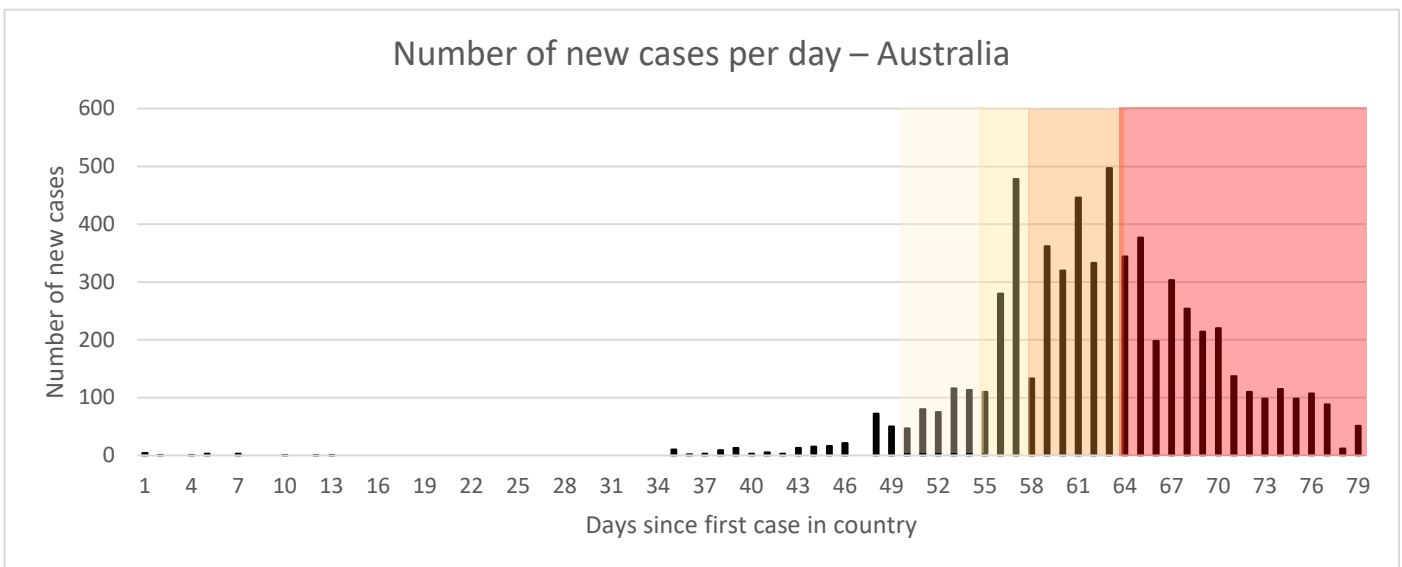
23 March: all pubs, bars, nightclubs, cinemas, casinos, indoor sporting venues, entertainment venues, places of worship close; cafes & restaurants delivery only

31 March: federal government recommends limiting gatherings to max. two people on 29 March; state adopts this policy and issues [stay at home directions](#)

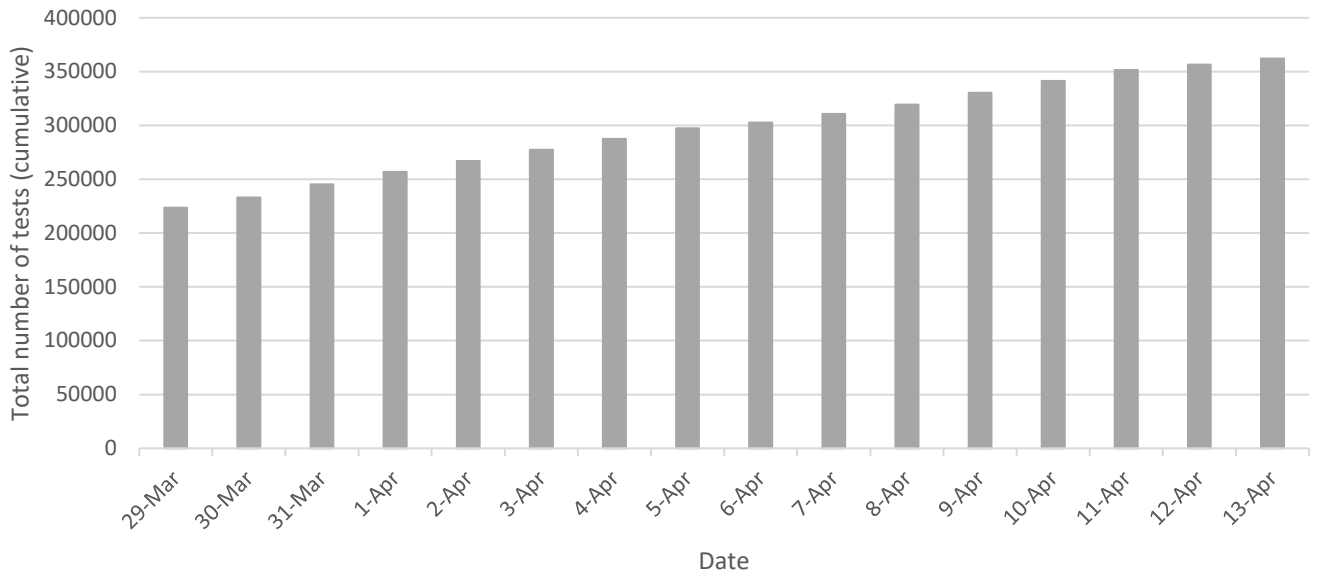
Australia (overall)

Population	24.6 million
Cases (total)	6366
Tests (total)	362,239
Deaths (total)	60

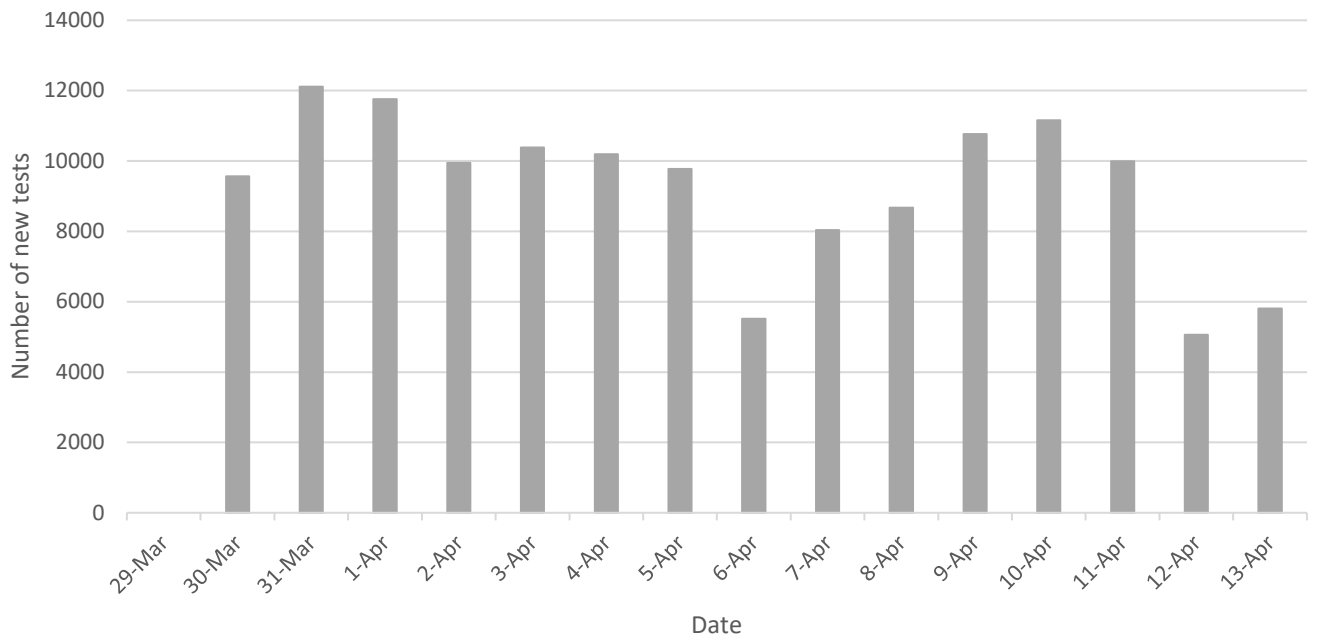
- 15 March:** gatherings >500 cancelled; travellers arriving/returning must self-isolate for 14 days
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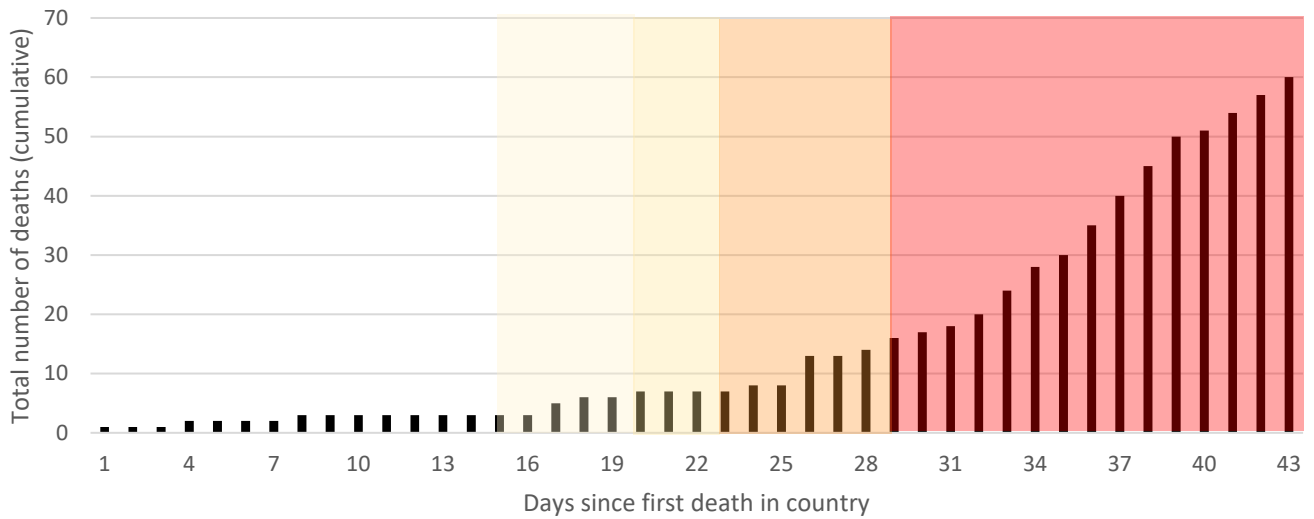
Total tests over time – Australia



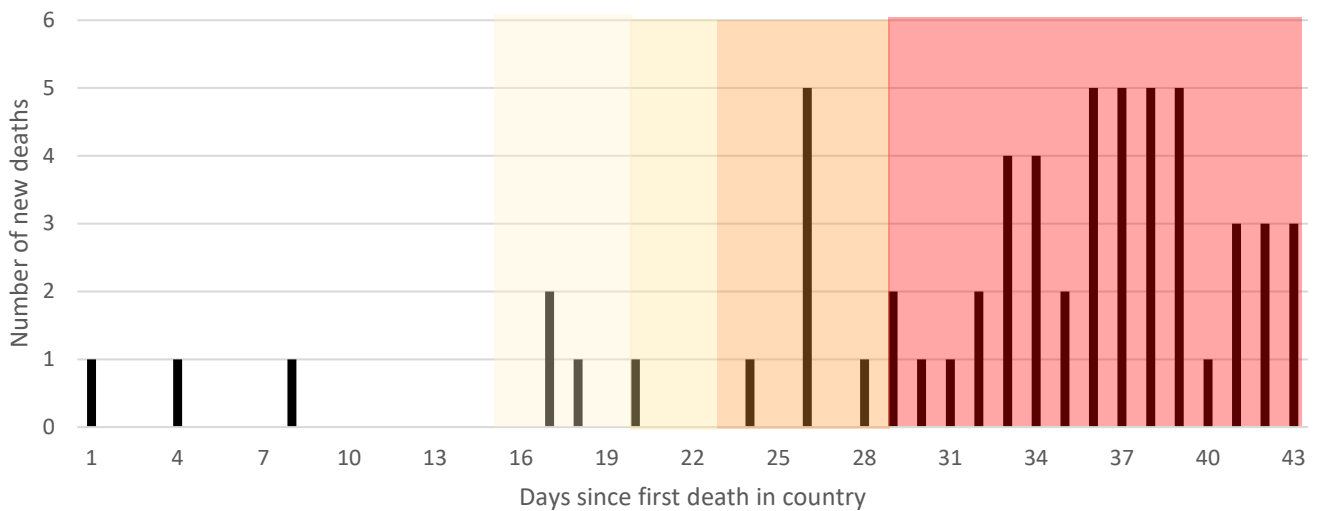
Number of new tests per day – Australia



Deaths over time – Australia



Deaths per day – Australia



15 March: gatherings >500 cancelled; travellers arriving/returning must self-isolate for 14 days

20 March: borders closed to all non-residents/non-citizens; minimum of 4sqm per person required for indoor gatherings

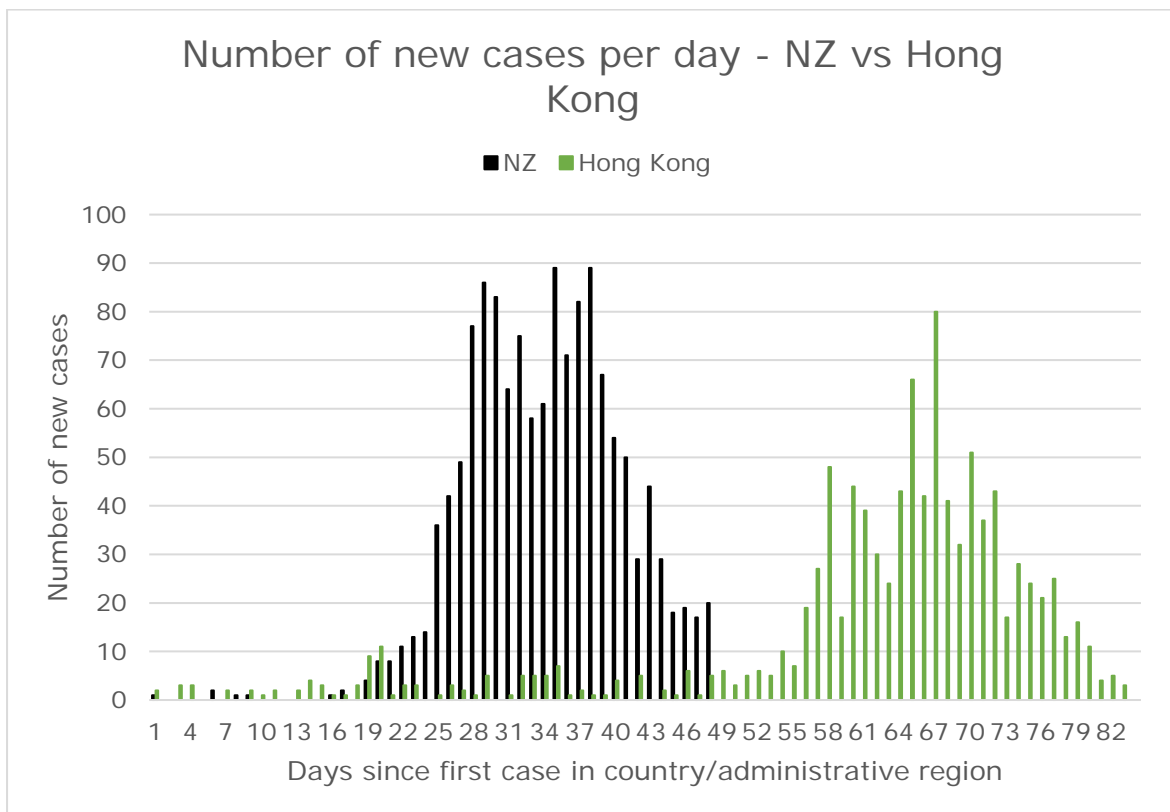
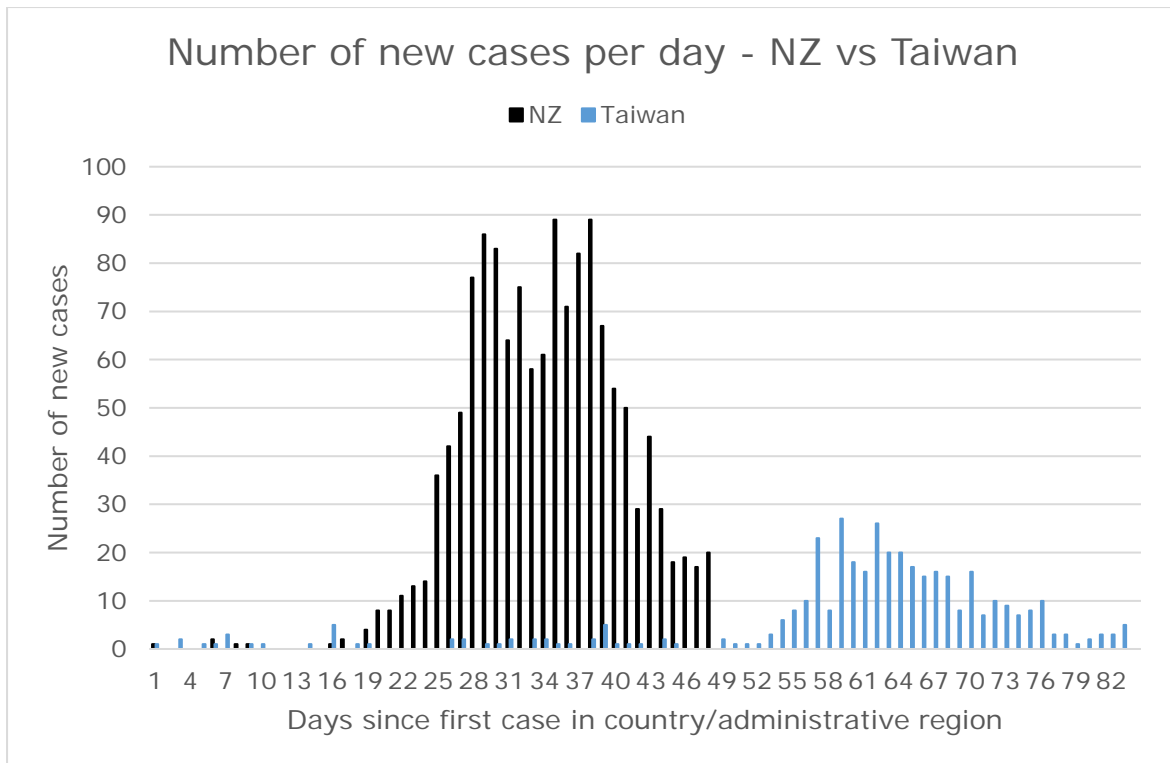
23 March: all pubs, bars, nightclubs, cinemas, casinos, indoor sporting venues, entertainment venues, places of worship close; cafes & restaurants delivery only

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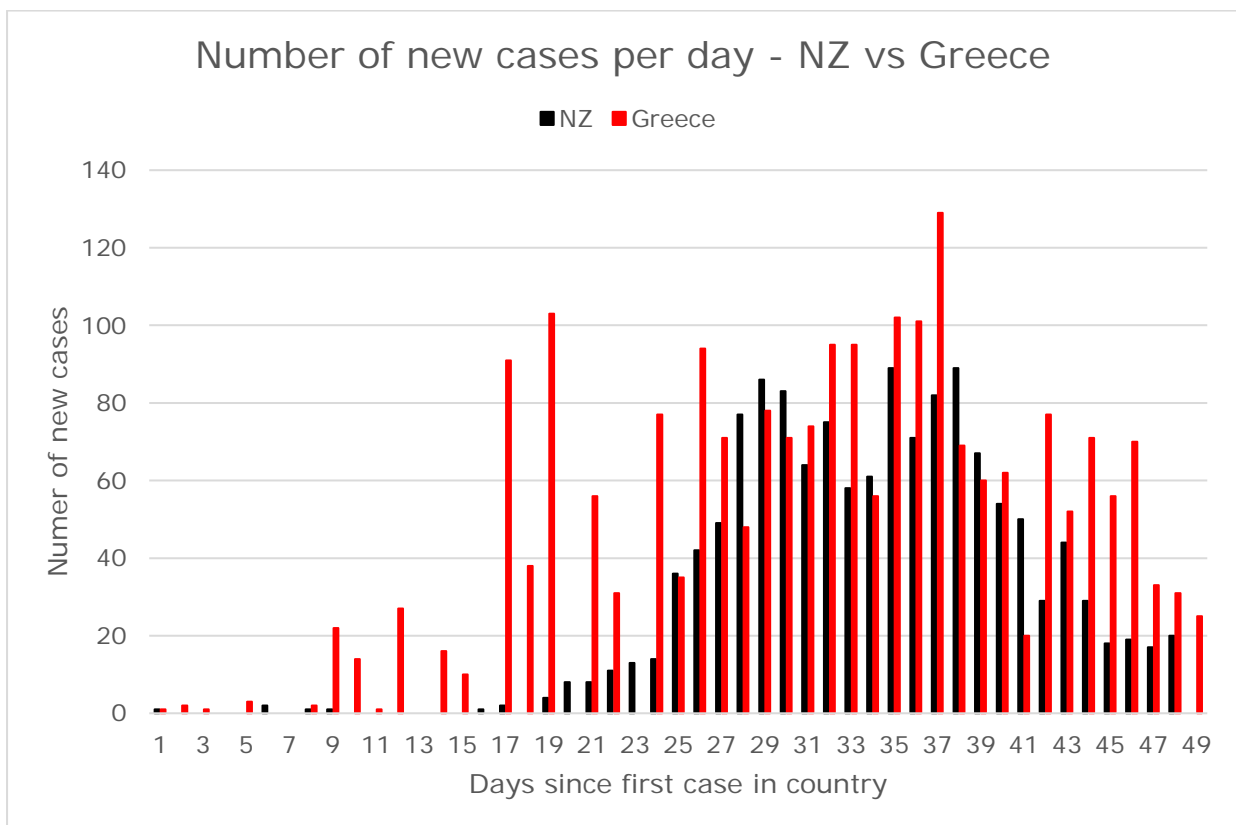
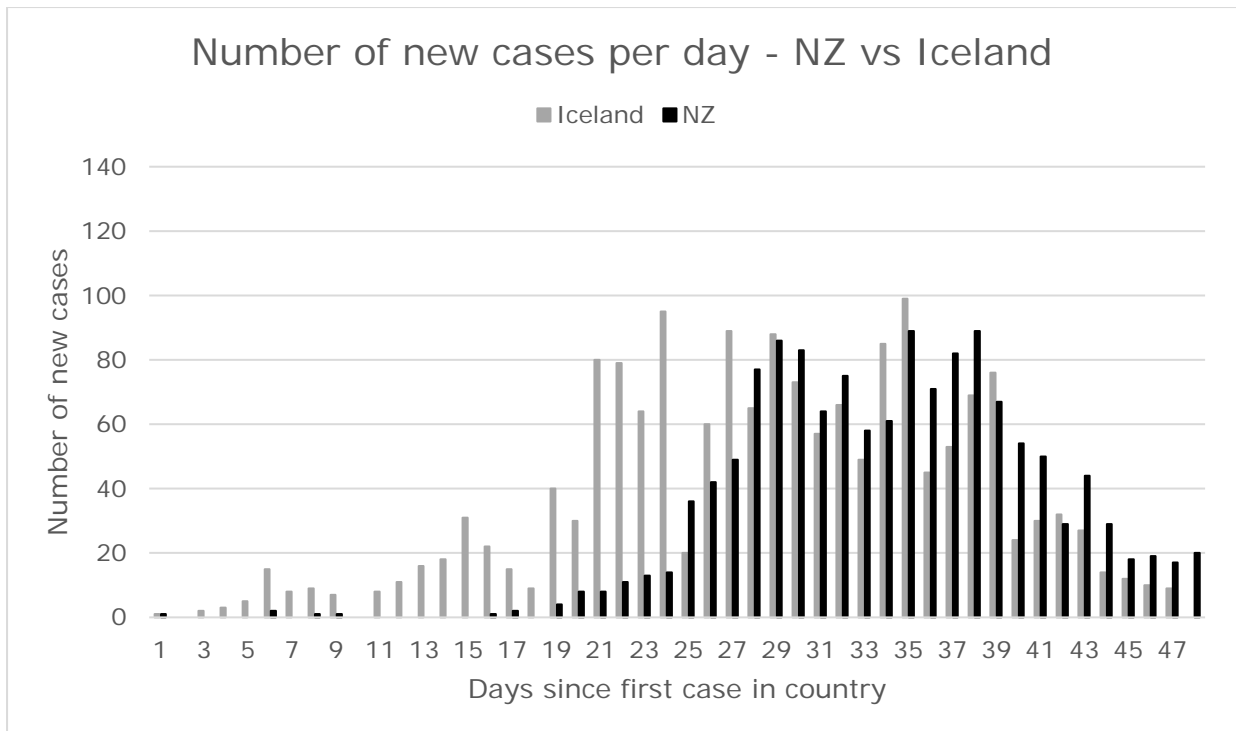
Data up to 13 April via JHU at https://github.com/CSSEGISandData/COVID-19/blob/master/csse_covid_19_data/csse_covid_19_daily_reports/04-13-2020.csv
 NZ data up to 14 April from MoH

Country	Population	Cases April 14	% of popn tested positive	Deaths April 14	% of cases that died
Italy	60000000	159516	0.27%	20465	12.83%
UK	67800000	88621	0.13%	11329	12.78%
France	65000000	136779	0.21%	14967	10.94%
Spain	47000000	170099	0.36%	17756	10.44%
Sweden	10000000	10948	0.11%	919	8.39%
Denmark	5800000	6318	0.11%	285	4.51%
US	330500000	580619	0.18%	23529	4.05%
Canada	37600000	25680	0.07%	780	3.04%
Germany	83700000	130072	0.16%	3194	2.46%
Norway	5400000	6603	0.12%	134	2.03%
Finland	5500000	3064	0.06%	59	1.93%
Taiwan	23800000	393	0.00%	6	1.53%
Croatia	4100000	1650	0.04%	25	1.52%
Australia	25500000	6351	0.02%	61	0.96%
NZ	4800000	1366	0.03%	9	0.66%
Hong Kong	7500000	1009	0.01%	4	0.40%
Singapore	5800000	2918	0.05%	9	0.31%

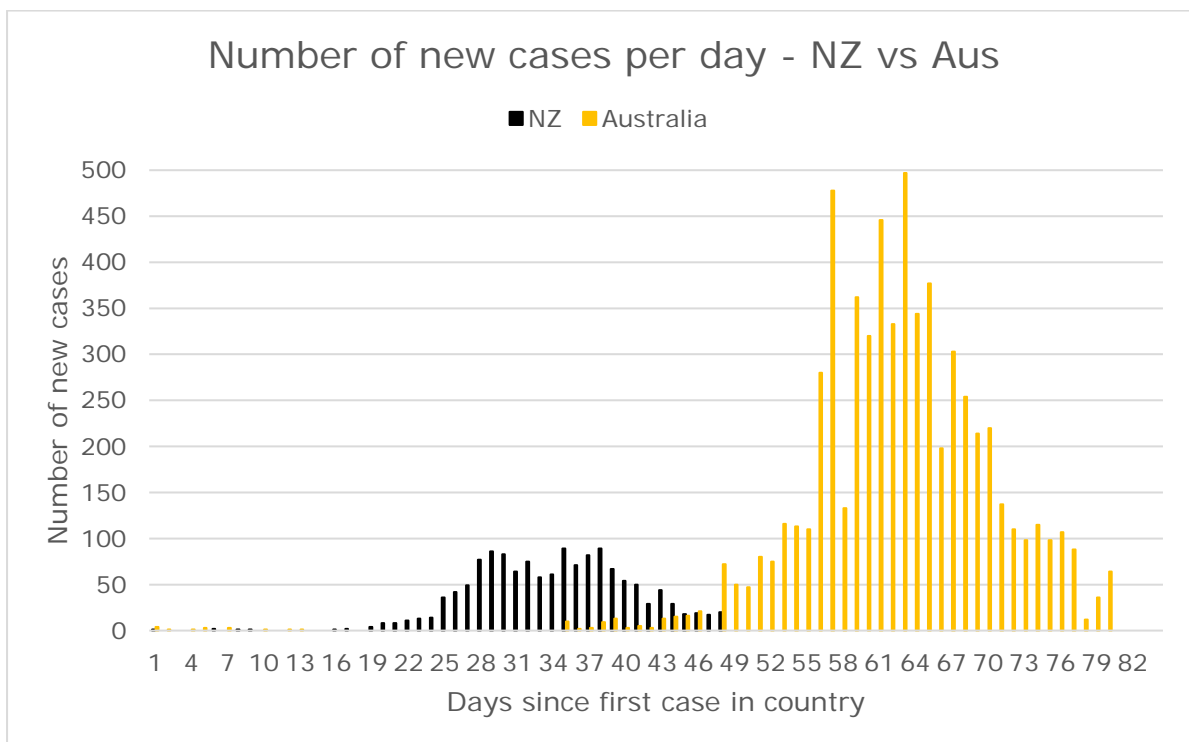
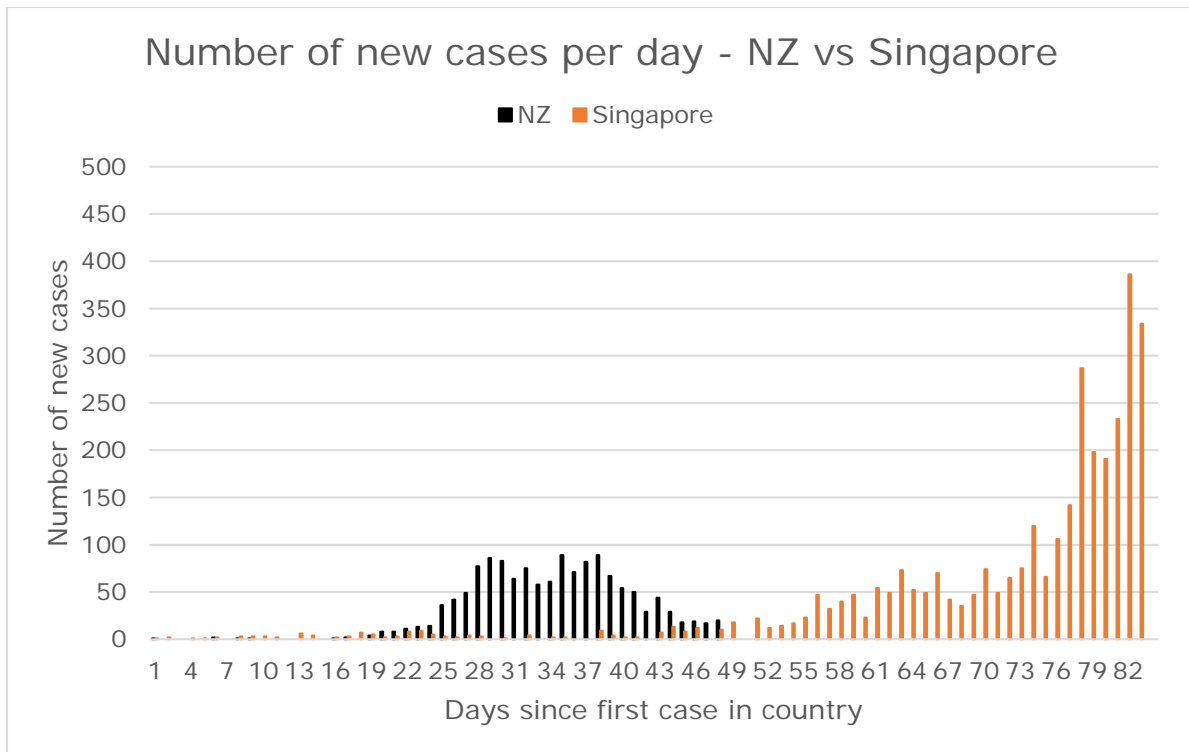
Data up to 14 April 2020 from Johns Hopkins University (<https://github.com/CSSEGISandData/COVID-19>)
NZ data to 15 April from Ministry of Health



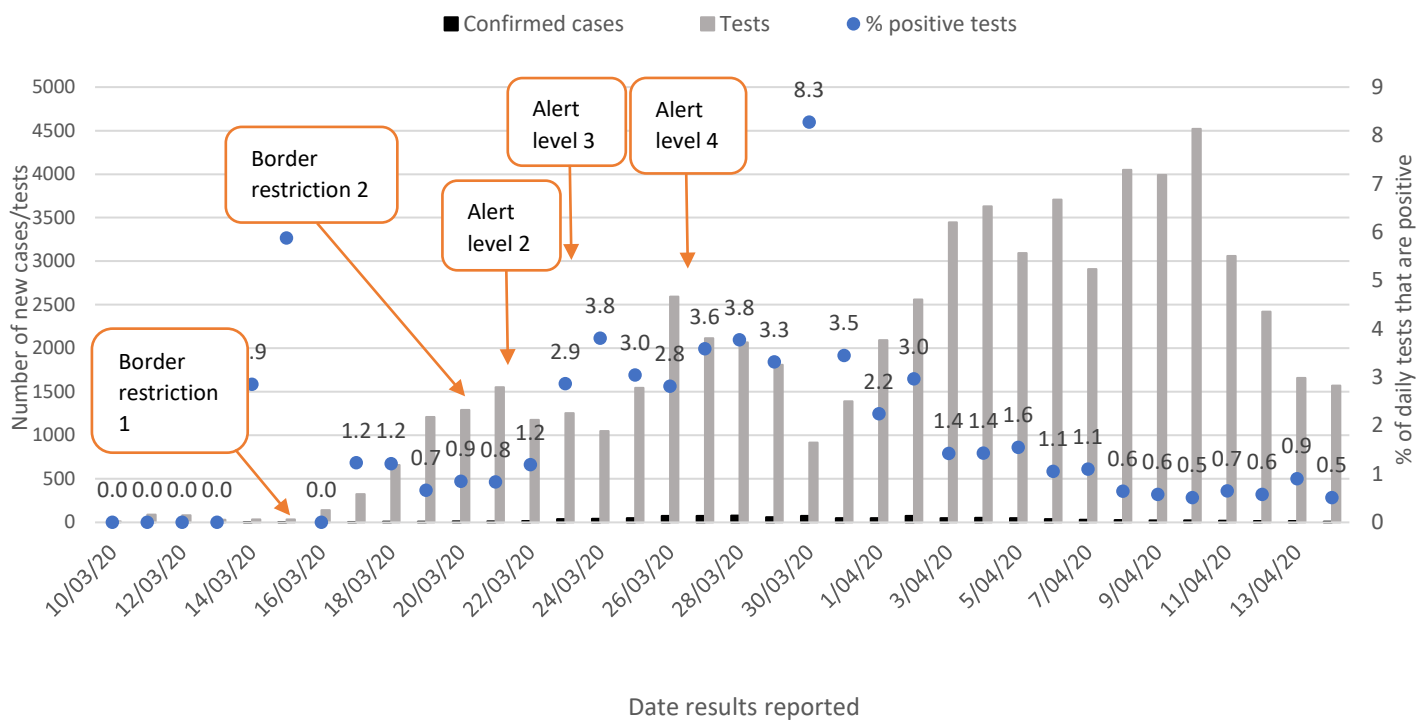
Data up to 14 April 2020 from Johns Hopkins University (<https://github.com/CSSEGISandData/COVID-19>)
NZ data to 15 April from Ministry of Health



Data up to 14 April 2020 from Johns Hopkins University (<https://github.com/CSSEGISandData/COVID-19>)
NZ data to 15 April from Ministry of Health



NZ daily new confirmed COVID-19 cases and number of tests



Note: this graph only includes confirmed cases (not probable) and the % positive tests is the % of tests performed that were confirmed cases.

Testing data – 18/04/2020

Country	Total cases	Tests	Test/m	Percent +
Bhutan	5	8,107	10,507	0.06%
Venezuela	227	299,714	10,540	0.08%
Vietnam	268	206,253	2,119	0.13%
Nepal	31	15,800	542	0.20%
Botswana	15	3,602	1,532	0.42%
Uganda	55	11,101	243	0.50%
New Caledonia	18	3,399	11,906	0.53%
Taiwan	398	52,445	2,202	0.76%
Mauritania	7	913	196	0.77%
Hong Kong	1,024	131,786	17,579	0.78%
UAE	6,302	767,000	77,550	0.82%
Maldives	35	3,714	6,871	0.94%
Zimbabwe	25	2,626	177	0.95%
Greenland	11	1,043	18,372	1.05%
Uzbekistan	1,490	136,000	4,063	1.10%
Brunei	137	11,254	25,725	1.22%
Ghana	834	60,916	1,960	1.37%
Laos	19	1,318	181	1.44%
Ethiopia	105	6,890	60	1.52%
Azerbaijan	1,373	86,607	8,542	1.59%
Kazakhstan	1,615	100,878	5,373	1.60%
Australia	6,577	406,510	15,942	1.62%
New Zealand	1,422	79,078	16,399	1.80%
Malta	426	23,253	52,663	1.83%
El Salvador	190	10,191	1,571	1.86%
Kyrgyzstan	506	26,147	4,008	1.94%
S. Korea	10,653	546,463	10,659	1.95%
Togo	84	4,191	506	2.00%
Russia	36,793	1,831,892	12,553	2.01%
Jordan	413	20,500	2,009	2.01%
Latvia	712	34,697	18,395	2.05%
Lithuania	1,239	58,816	21,605	2.11%

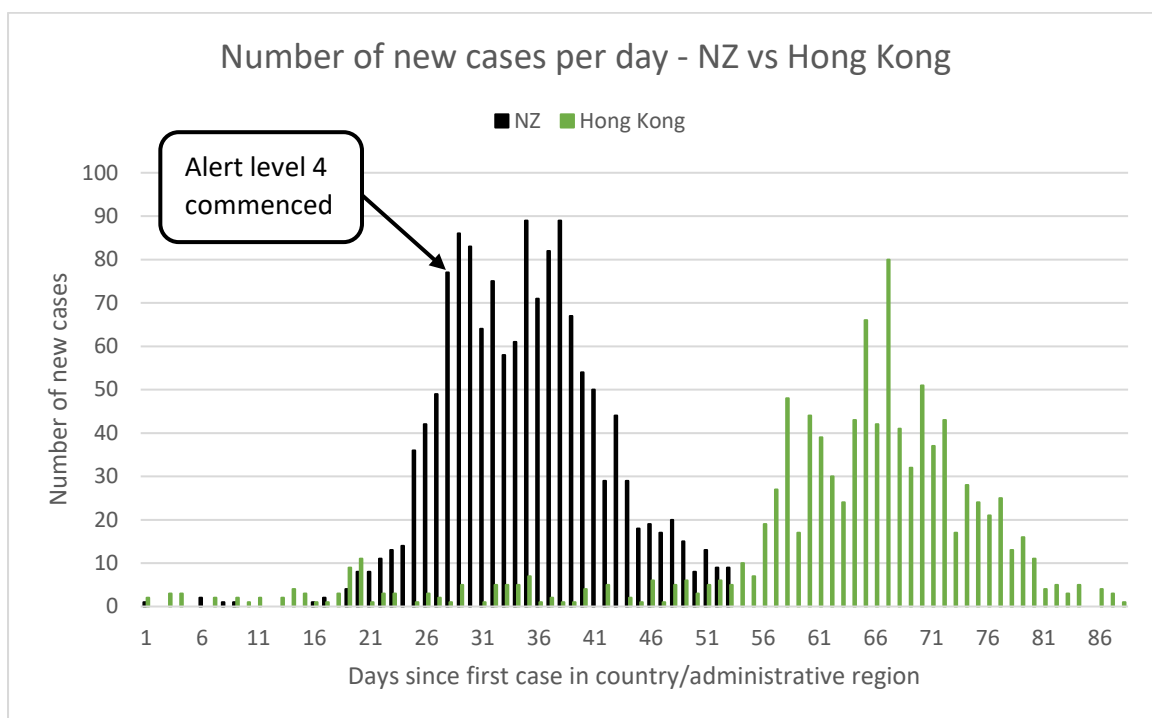
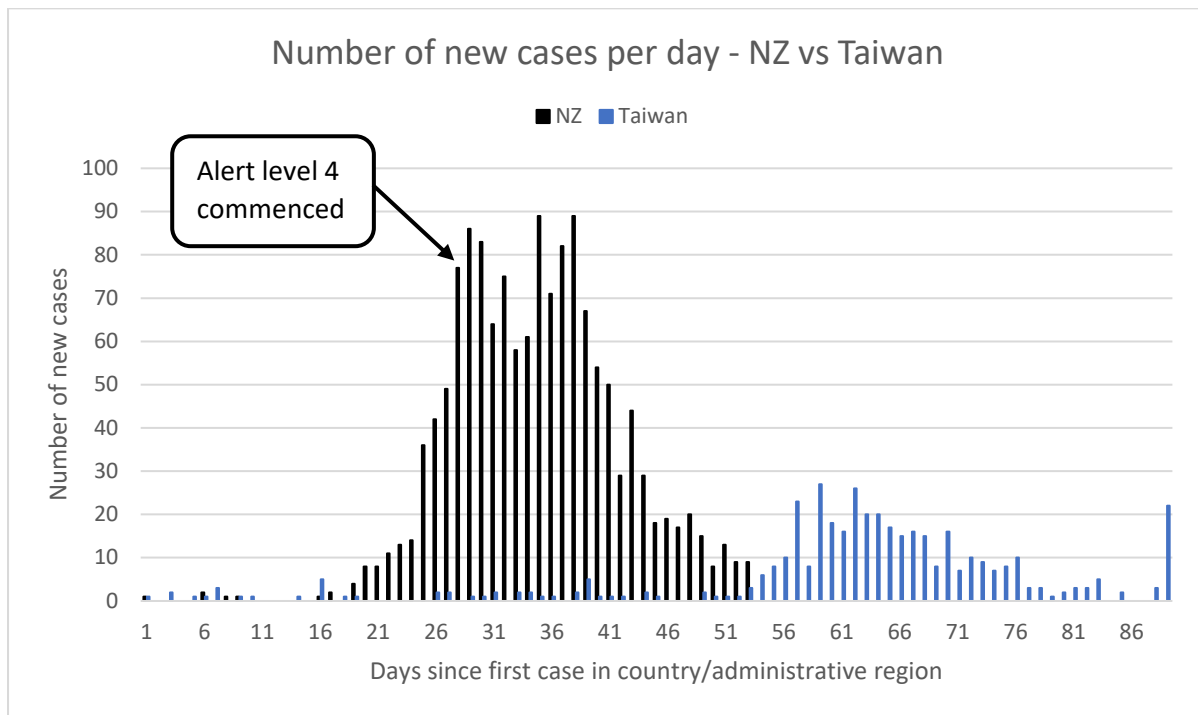
Cambodia	122	5,768	345	2.12%
Mongolia	31	1,450	442	2.14%
Bahrain	1,773	82,568	48,524	2.15%
Rwanda	144	6,237	482	2.31%
Cyprus	761	32,284	26,739	2.36%
Myanmar	98	4,065	75	2.41%
Palestine	418	17,329	3,397	2.41%
Kenya	262	10,784	201	2.43%
Zambia	57	2,191	119	2.60%
Slovakia	1,089	40,953	7,501	2.66%
Thailand	2,733	100,498	1,440	2.72%
Belize	18	651	1,637	2.76%
Iraq	1,513	53,955	1,341	2.80%
South Africa	3,034	108,021	1,821	2.81%
Gambia	9	316	131	2.85%
Guinea-Bissau	46	1,500	762	3.07%
Faeroe Islands	184	5,981	122,403	3.08%
Eswatini	22	714	615	3.08%
Namibia	16	499	196	3.21%
Slovenia	1,317	40,580	19,520	3.25%
Guatemala	235	7,200	402	3.26%
Lebanon	672	20,225	2,963	3.32%
Bulgaria	878	26,417	3,802	3.32%
Mauritius	325	9,755	7,670	3.33%
Falkland Islands	11	319	91,667	3.45%
Mozambique	35	952	30	3.68%
Estonia	1,512	39,605	29,856	3.82%
Cuba	986	25,309	2,234	3.90%
Czechia	6,606	162,533	15,177	4.06%
Malawi	17	417	22	4.08%
Paraguay	202	4,950	694	4.08%
Hungary	1,834	43,901	4,544	4.18%
Papua New Guinea	7	167	19	4.19%
Greece	2,235	53,290	5,113	4.19%
French Polynesia	55	1,302	4,635	4.22%
Iceland	1,760	41,091	120,416	4.28%
Uruguay	508	11,749	3,382	4.32%
Saint Lucia	15	344	1,873	4.36%
Poland	8,742	192,960	5,098	4.53%
Dominica	16	345	4,793	4.64%
India	15,722	335,123	243	4.69%

Curaçao	14	286	1,743	4.90%
Norway	7,036	139,668	25,763	5.04%
Madagascar	120	2,357	85	5.09%
Malaysia	5,305	100,794	3,114	5.26%
Sri Lanka	254	4,768	223	5.33%
Belarus	4,779	86,813	9,187	5.50%
Egypt	3,032	55,000	537	5.51%
Saudi Arabia	8,274	150,000	4,309	5.52%
Tunisia	866	14,640	1,239	5.92%
Saint Kitts and Nevis	14	234	4,399	5.98%
Colombia	3,621	59,002	1,160	6.14%
Burundi	5	80	7	6.25%
Singapore	5,992	94,796	16,203	6.32%
Costa Rica	655	10,138	1,990	6.46%
Canada	33,383	516,216	13,677	6.47%
Finland	3,681	55,600	10,035	6.62%
Libya	49	707	103	6.93%
Aruba	96	1,358	12,719	7.07%
Israel	13,265	187,250	21,634	7.08%
Gibraltar	132	1,859	55,178	7.10%
Barbados	75	1,000	3,480	7.50%
Bosnia and Herzegovina	1,268	16,868	5,141	7.52%
Nigeria	542	7,153	35	7.58%
Georgia	388	5,027	1,260	7.72%
Denmark	7,242	91,437	15,786	7.92%
Montenegro	307	3,874	6,168	7.92%
Pakistan	7,638	92,548	419	8.25%
Germany	143,342	1,728,357	20,629	8.29%
Qatar	5,008	60,139	20,874	8.33%
Austria	14,671	175,932	19,534	8.34%
Portugal	19,685	235,878	23,133	8.35%
Croatia	1,832	21,647	5,273	8.46%
Trinidad and Tobago	114	1,320	943	8.64%
Cayman Islands	61	702	10,681	8.69%
Liechtenstein	79	900	23,605	8.78%
Haiti	44	498	44	8.84%
Argentina	2,758	30,942	685	8.91%
Chile	9,730	108,891	5,696	8.94%
Japan	10,296	111,325	880	9.25%
Equatorial Guinea	79	854	609	9.25%
Romania	8,418	90,991	4,730	9.25%
Ukraine	5,106	52,534	1,201	9.72%
Djibouti	732	7,486	7,577	9.78%
Bangladesh	2,144	21,307	129	10.06%

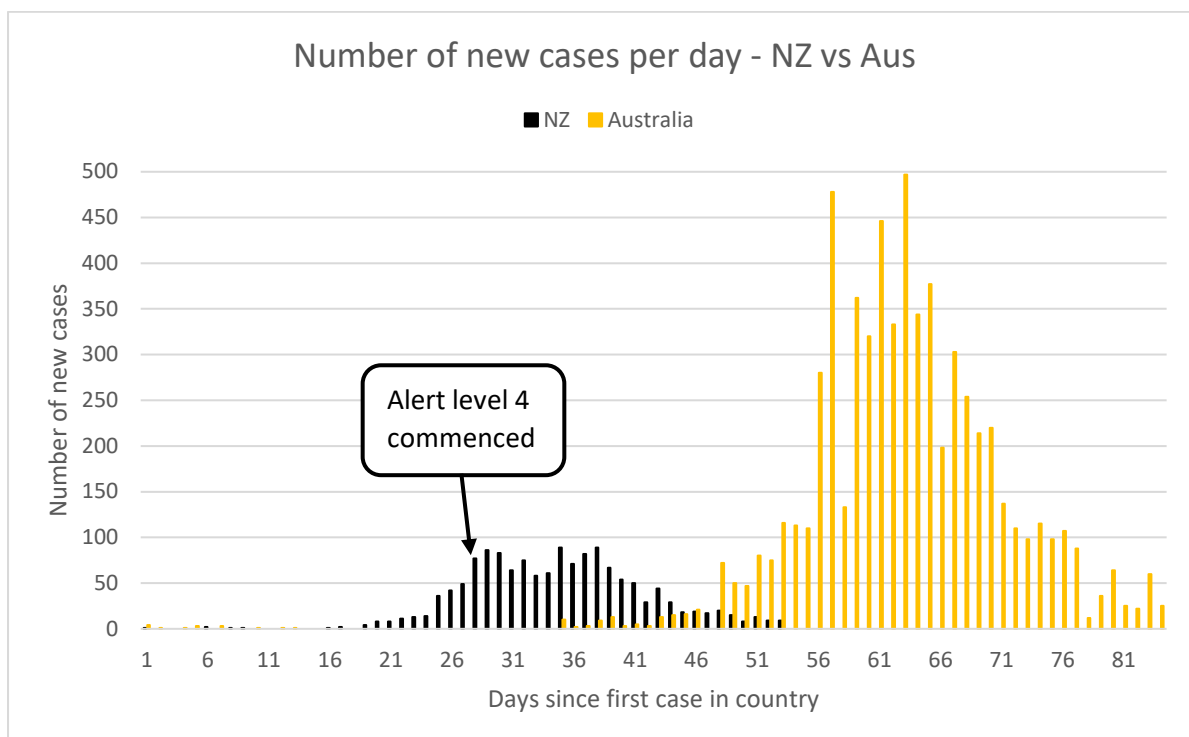
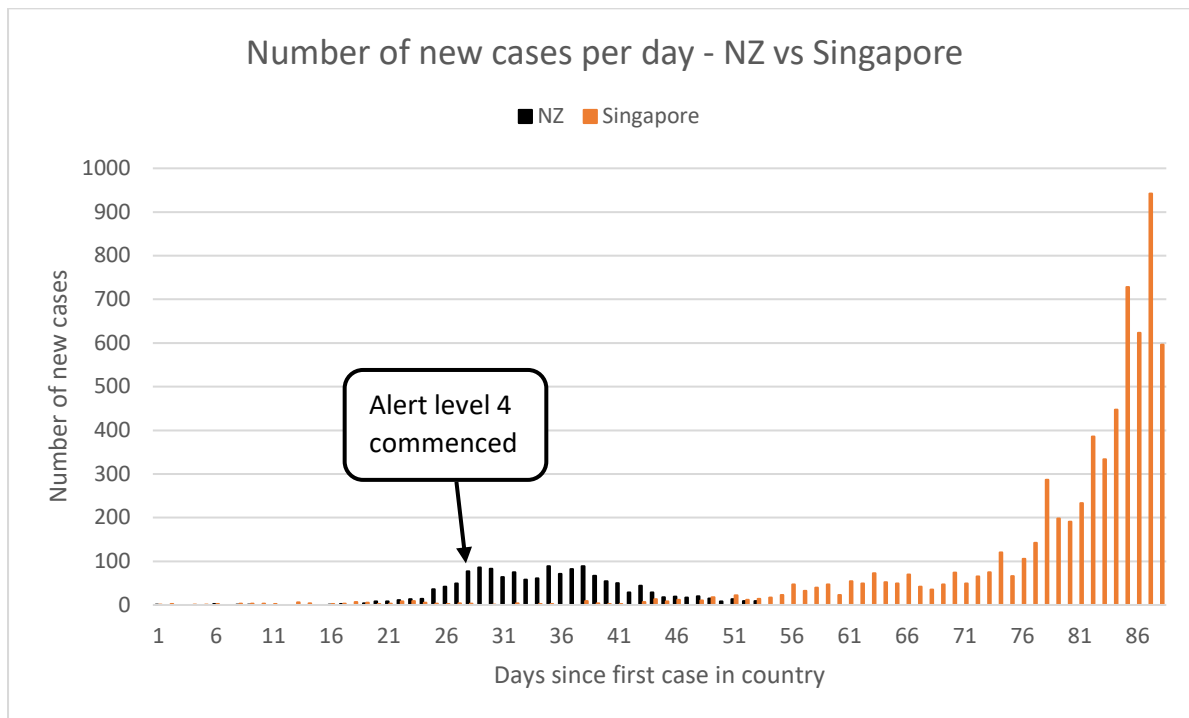
North Macedonia	1,170	11,556	5,547	10.12%
Albania	548	5,311	1,846	10.32%
Armenia	1,248	11,796	3,981	10.58%
Peru	14,420	135,895	4,122	10.61%
Luxembourg	3,537	33,252	53,120	10.64%
Jamaica	163	1,516	512	10.75%
Philippines	6,087	56,048	511	10.86%
Isle of Man	297	2,414	28,389	12.30%
Switzerland	27,404	216,400	25,004	12.66%
Turks and Caicos	11	83	2,144	13.25%
Italy	175,925	1,305,833	21,598	13.47%
Niger	639	4,715	195	13.55%
Turkey	82,329	598,933	7,101	13.75%
St. Vincent Grenadines	12	87	784	13.79%
Bolivia	493	3,569	306	13.81%
Mayotte	254	1,800	6,598	14.11%
Mexico	6,875	48,365	375	14.21%
Channel Islands	484	3,320	19,095	14.58%
Bermuda	83	552	8,863	15.04%
Grenada	14	92	818	15.22%
Indonesia	6,248	39,422	144	15.85%
Ireland	14,758	90,646	18,358	16.28%
Serbia	5,994	36,028	4,123	16.64%
Sweden	13,822	74,600	7,387	18.53%
Gabon	108	572	257	18.88%
Honduras	457	2,396	242	19.07%
Morocco	2,685	13,689	371	19.61%
USA	737,217	3,711,141	11,212	19.86%
Netherlands	31,589	154,911	9,041	20.39%
Spain	191,726	930,230	19,896	20.61%
Sao Tome and Principe	4	19	87	21.05%
Guyana	63	283	360	22.26%
Panama	4,210	18,559	4,301	22.68%
Moldova	2,378	9,848	2,441	24.15%
Iran	80,868	330,137	3,931	24.50%
UK	114,217	460,437	6,783	24.81%
Belgium	37,183	145,997	12,597	25.47%
San Marino	455	1,605	47,302	28.35%
Ecuador	9,022	30,922	1,753	29.18%
Caribbean Netherlands	3	10	381	30.00%
Dominican Republic	4,335	14,373	1,325	30.16%

Montserrat	11	36	7,212	30.56%
Antigua and Barbuda	23	73	745	31.51%
France	151,793	463,662	7,103	32.74%
Sint Maarten	64	163	3,802	39.26%
Andorra	704	1,673	21,653	42.08%
Brazil	36,658	62,985	296	58.20%
Algeria	2,534	3,359	77	75.44%

Data up to 19 April 2020 from Johns Hopkins University (<https://github.com/CSSEGISandData/COVID-19>)
NZ data to 20 April from Ministry of Health



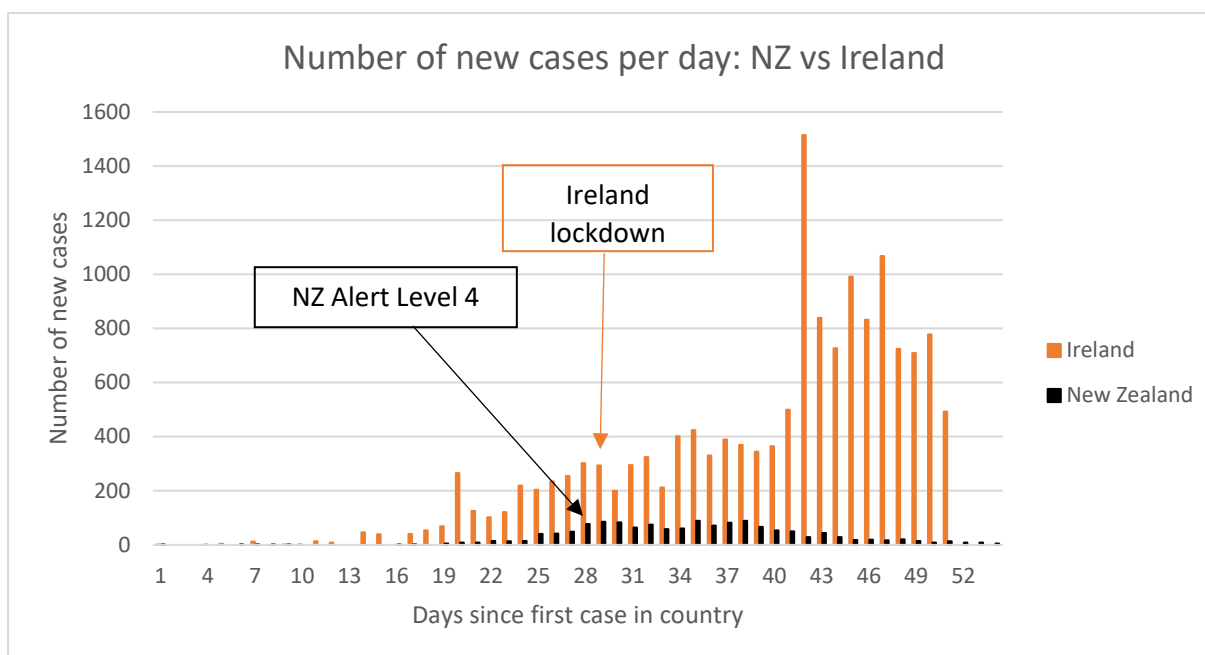
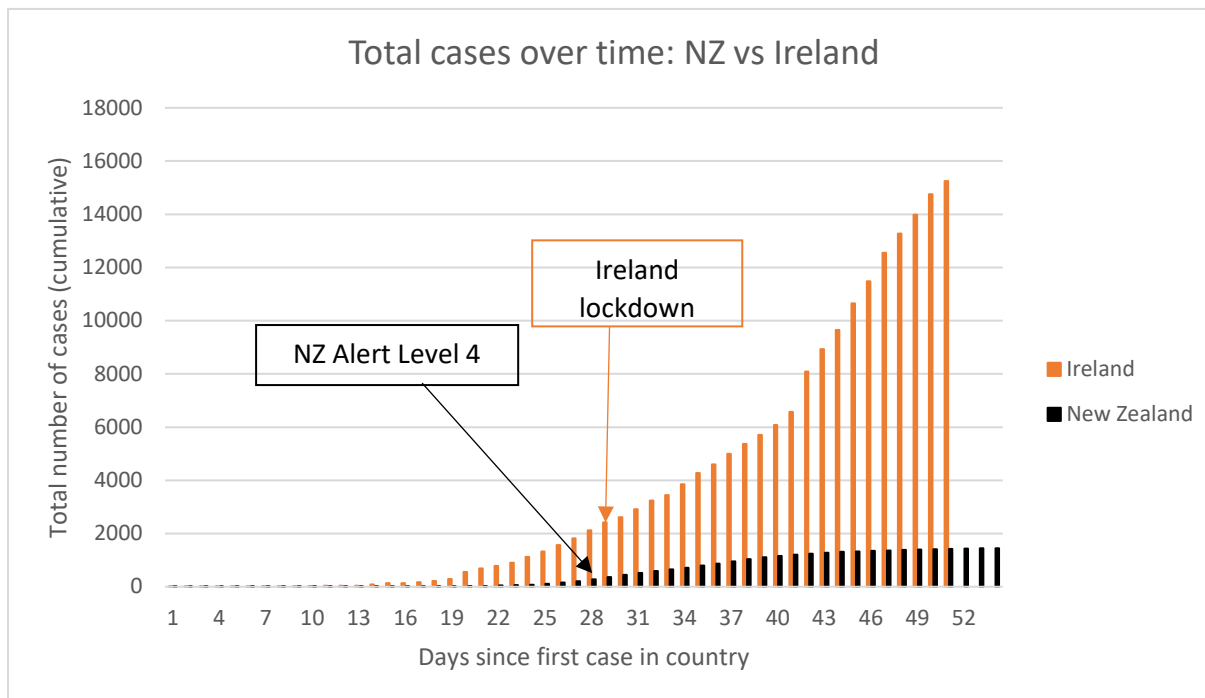
Data up to 19 April 2020 from Johns Hopkins University (<https://github.com/CSSEGISandData/COVID-19>)
NZ data to 20 April from Ministry of Health



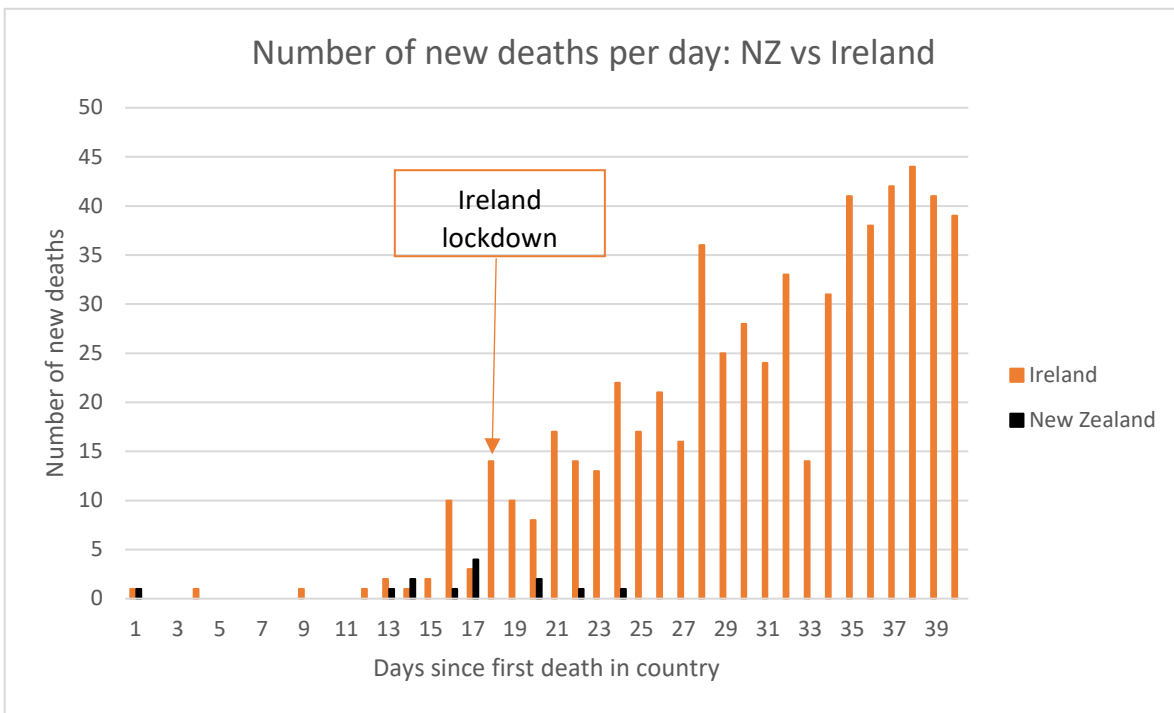
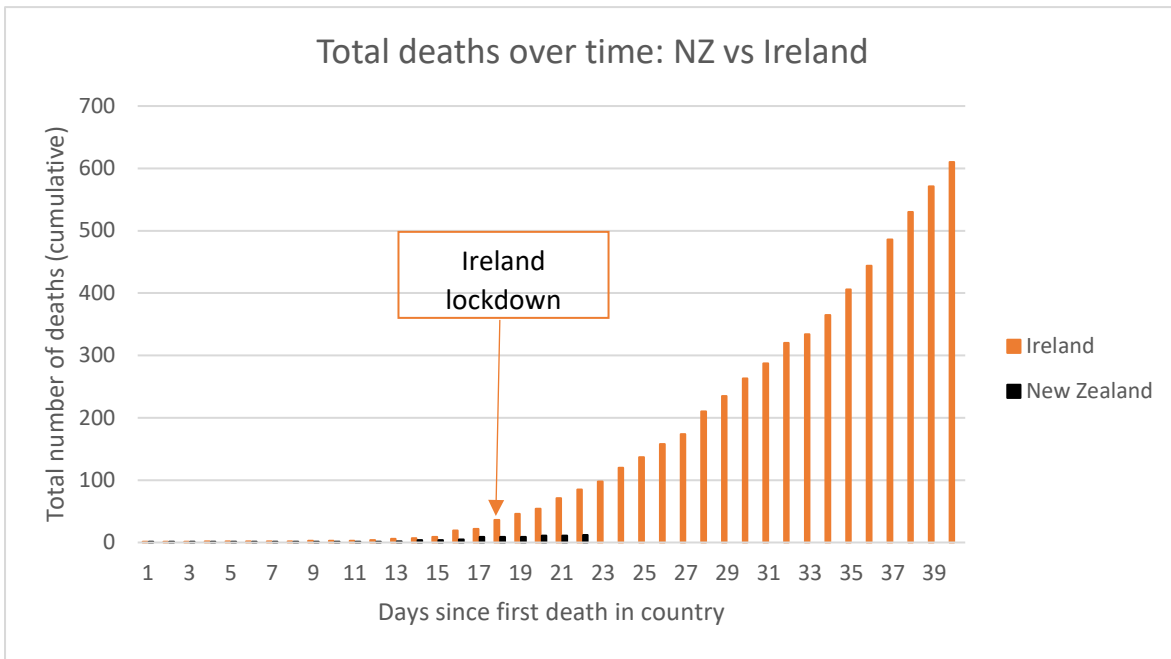
Ireland data up to 19 April 2020 from Johns Hopkins University (<https://github.com/CSSEGISandData/COVID-19>)
NZ data to 21 April 2020 collated from daily stand-up meetings; includes both confirmed and probable cases

COVID-19: New Zealand vs Republic of Ireland

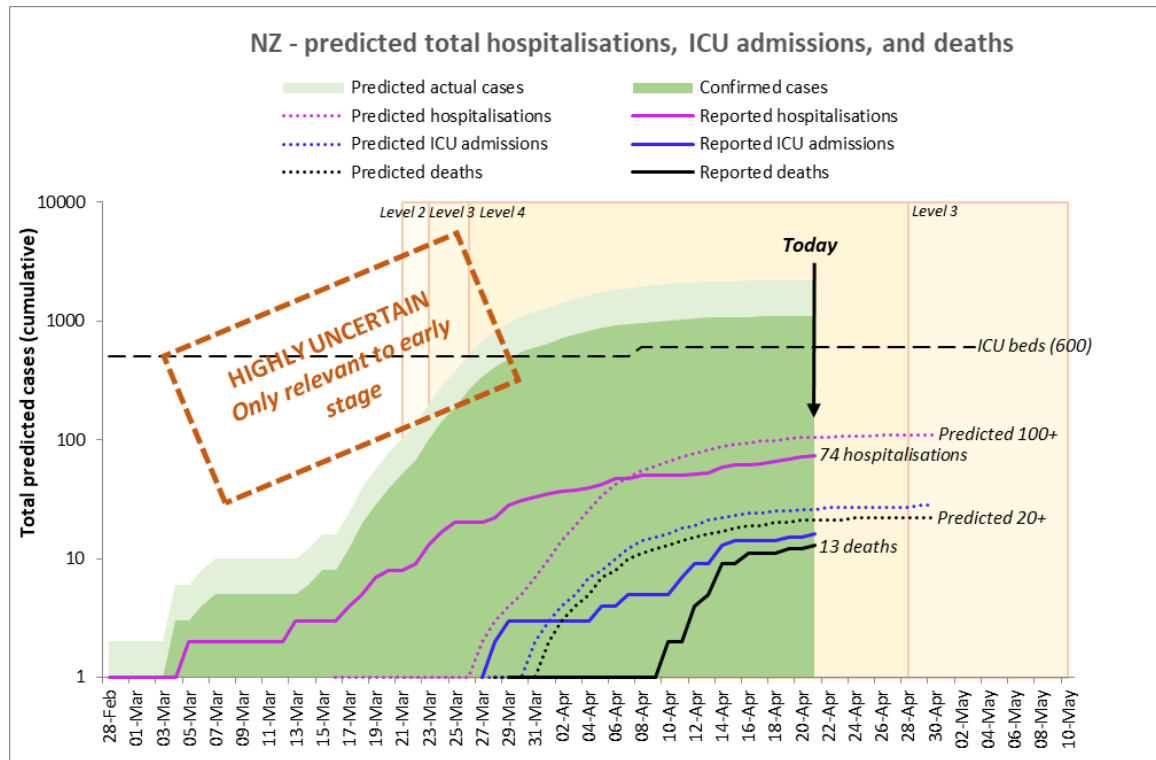
	Republic of Ireland	New Zealand
Population	4.9 million	4.9 million
Date of first case	29 February	28 February
Total number of cases	15,652	1,445
Total number tested	90,646 (as of 14 April)	89,508 (as of 21 April)
Total number of deaths	687	13
Total hospitalised	2,272	74
Date of lockdown	28 March (2415 cases)	26 March (281 cases)



Ireland data up to 19 April 2020 from Johns Hopkins University (<https://github.com/CSSEGISandData/COVID-19>)
NZ data to 21 April 2020 collated from daily stand-up meetings; includes both confirmed and probable cases



Note: New Zealand already in Alert Level 4 when first death occurs on 29 March.



Median time from onset of symptoms to ICU admission has been reported as approximately ten days.¹⁸ This time has been applied to confirmed NZ cases¹⁹ with an assumption that 50% of actual cases have been missed²⁰, at a rate of 5% for hospitalisations, 1.25% for ICU admissions²¹ and 1% for deaths²².

Reported hospitalisations are from Ministry of Health data.²³ The hospitalisations are cumulative and have not allowed for those leaving hospital, so the graph is only relevant to the early stage of the response.

¹⁸ See [https://www.thelancet.com/journals/laninf/article/PIIS1473-3099\(20\)30195-X/fulltext](https://www.thelancet.com/journals/laninf/article/PIIS1473-3099(20)30195-X/fulltext) and <https://www.nejm.org/doi/full/10.1056/NEJMe2002387>

¹⁹ Only **confirmed** cases included here.

²⁰ We have assumed only 50% of actual cases in NZ have been identified and confirmed.

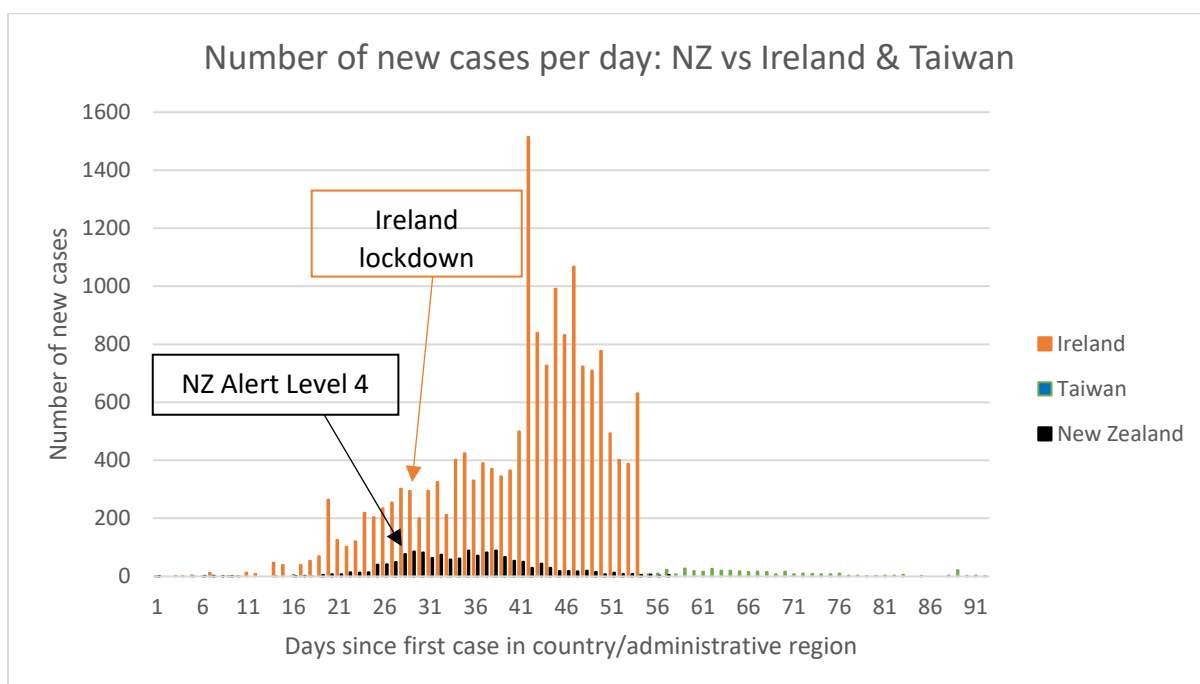
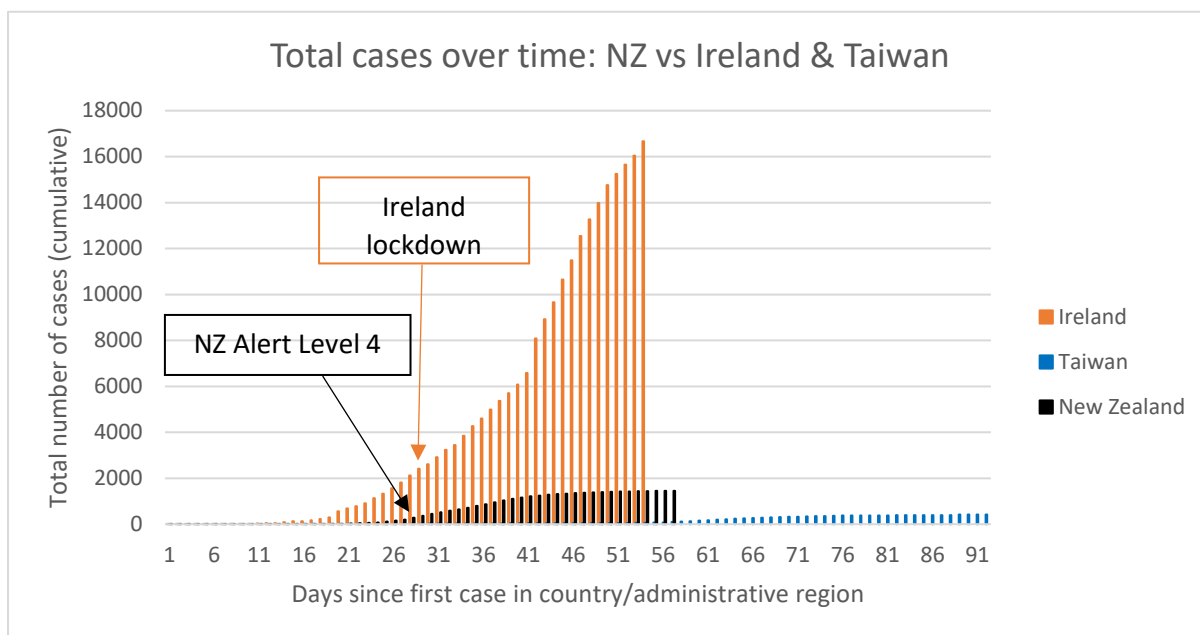
²¹ ICU data is approximate – official data not accessed.

²² Figures taken from model assumptions under ‘realistic’ scenario from ‘COVID-19 Modelling Update’, 26 March 20, produced by Te Punaha Matatini with support from Orion Health, Contact Shaun Hendy.

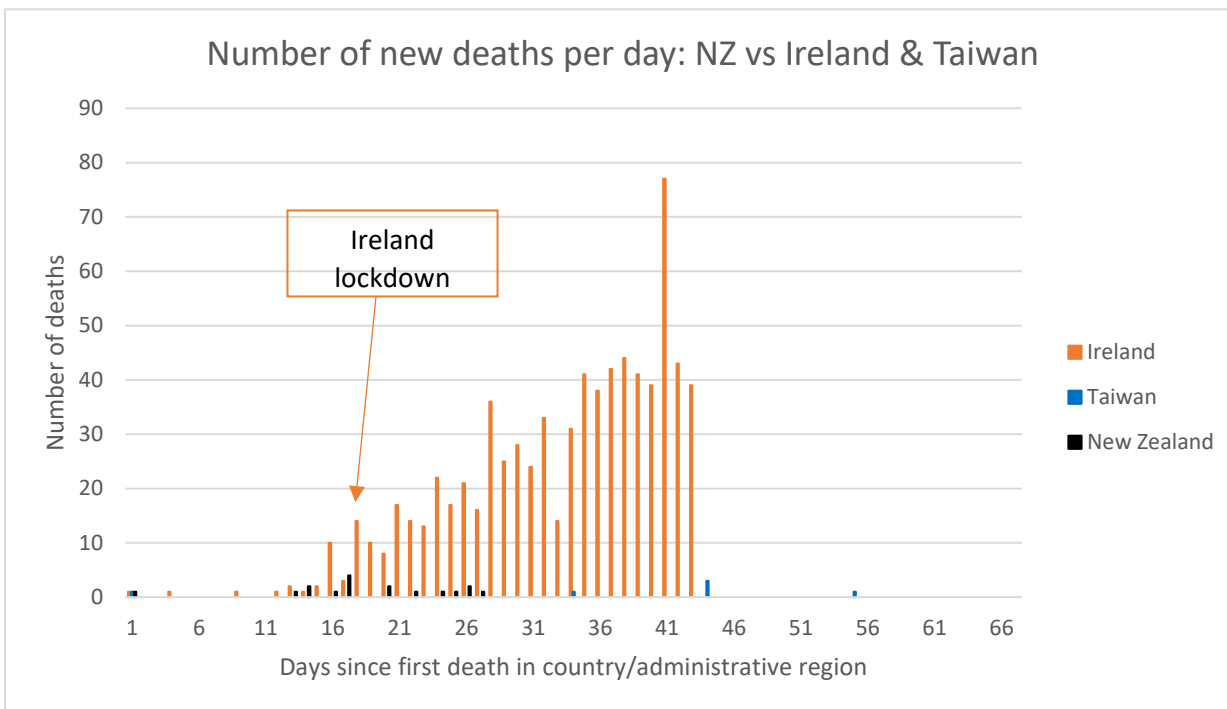
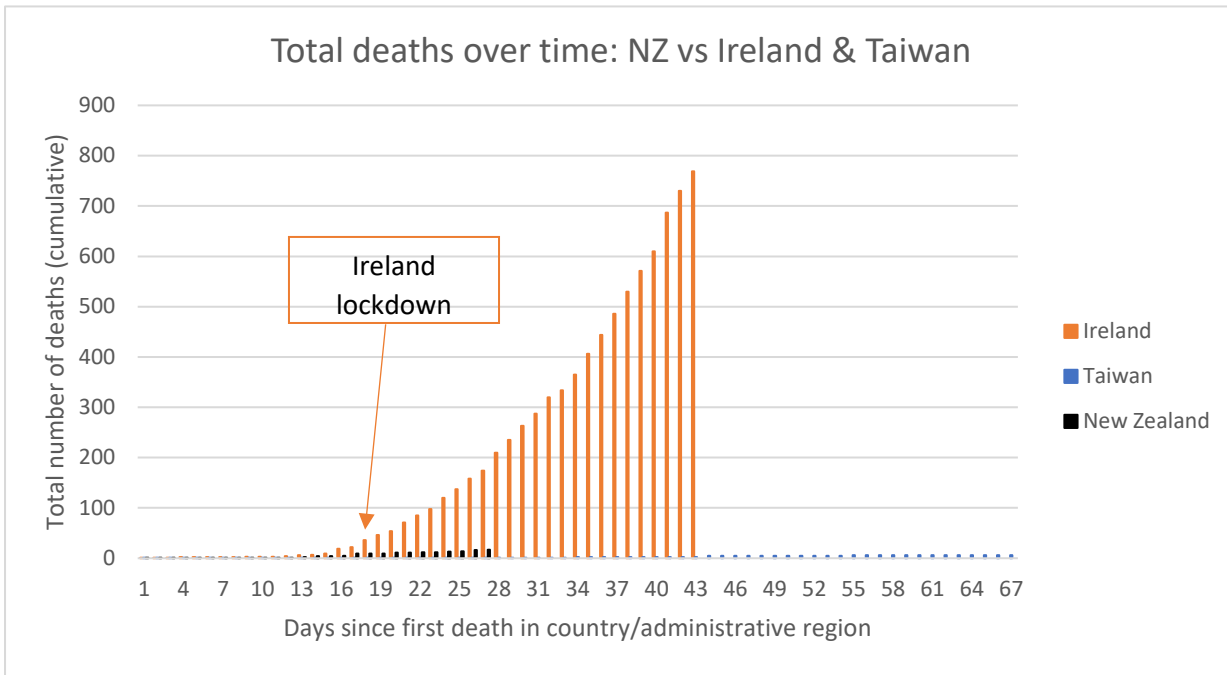
²³ Hospitalisation date may not align with actual admission date.

Ireland & Taiwan data up to 22 April 2020 from Johns Hopkins University (<https://github.com/CSSEGISandData/COVID-19>)
NZ data to 24 April 2020 collated from daily stand-up meetings; includes both confirmed and probable cases

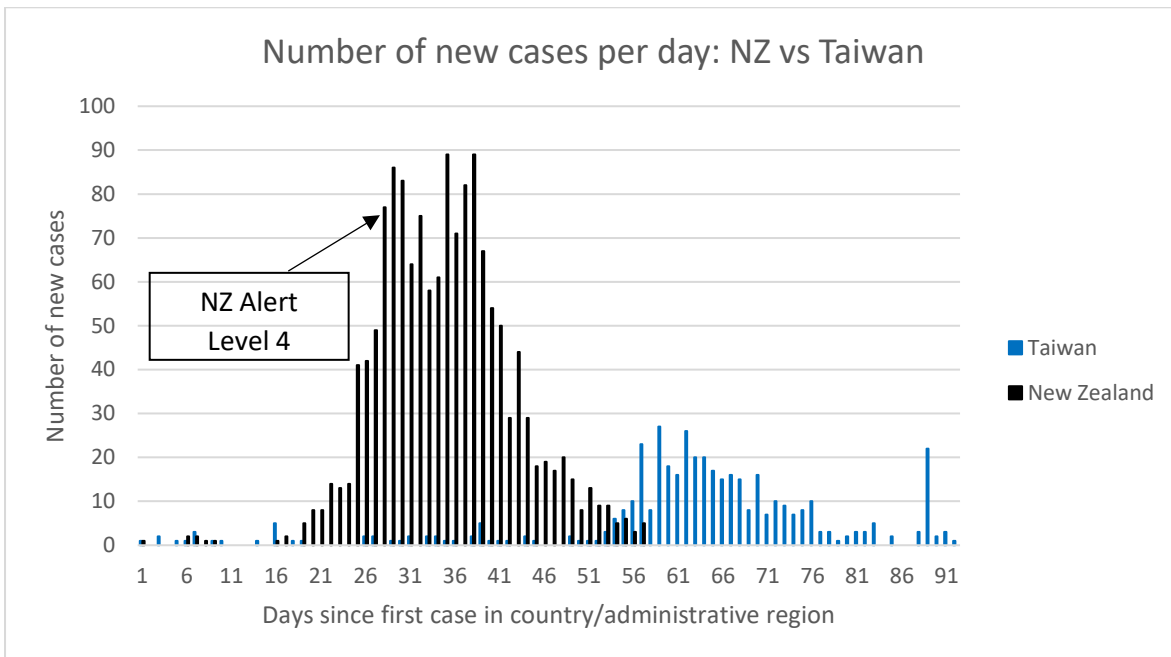
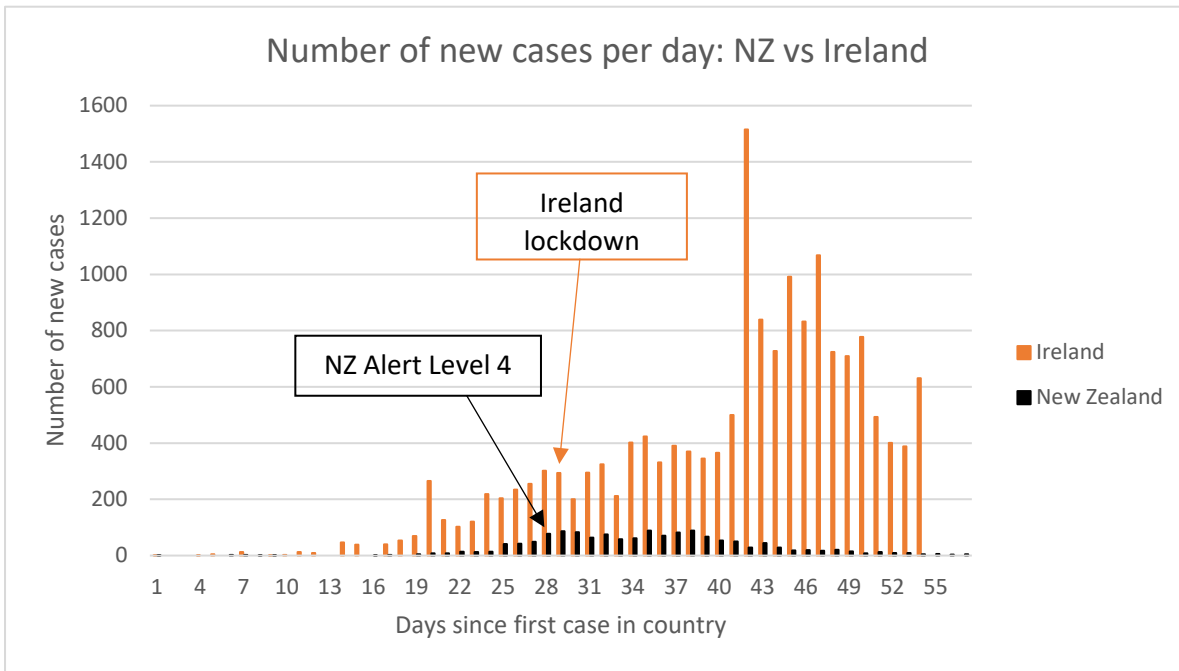
	Republic of Ireland	New Zealand	Taiwan
Population	4.9 million	4.9 million	23.8 million
Date of first case	29 February	28 February	21 January
Total number of cases	16,671	1,456	426
Total number tested	111,584 (as of 21 April)	108,238 (as of 24 April)	58,003 (as of 22 April)
Total number of deaths	769	17	6
Total hospitalised	2,424	83	All patients
Date of lockdown	28 March (2415 cases)	26 March (281 cases)	No lockdown



Ireland & Taiwan data up to 22 April 2020 from Johns Hopkins University (<https://github.com/CSSEGISandData/COVID-19>)
NZ data to 24 April 2020 collated from daily stand-up meetings; includes both confirmed and probable cases



Note: New Zealand already in Alert Level 4 on date of first death (29 March).



	Max lockdown level*	Level 3 or 4 Lockdown (days)#	Level 3 or 4 extensions	Lockdown start			Lockdown completed			As at 25 April				Notes	
				Days since first case (date of start)	Total cases at lockdown start	New cases at lockdown start	Days since first case (date lifted)	Total cases at lockdown finish	New cases/day at lockdown finish	Level	Days since first case	Total cases	New cases		
New Zealand	3-4	Ongoing (35)	1 (5 days)	26 (24-Mar)	155	42	-				4	58	1,464	5	
Australia	3	Ongoing (36)	1	59 (23-Mar)	1,887	278	-				3	92	6,695	20	
Austria	3-4	Ongoing (43)		21 (16-Mar)	1,018	158	-				3-4	61	15,148	77	
Czechia	3-4	Lifted (37)		14 (14-Mar)	189	48	51 (20-Apr)	6,900	154		2+	56	7,352	79	
Denmark	3-4	Ongoing (47)		15 (12-Mar)	674	160	-				3	59	8,445	235	
France	4	Ongoing (42)	2	54 (17-Mar)	7,730	1,097	-				3	93	161,488	1,660	
Germany	4	Lifted (35)		50 (16-Mar)	7,272	1,459	85 (20-Apr)	147,065	1,323		2+	90	156,513	1,514	
Hong Kong	2	-	-	-			-				2	94	1,038	2	
Hubei, China	4	Ongoing (76)		68 (23-Jan)	444	0	144 (08-Apr)	67803	0		1-2	161	68128	0	Based on assumption that first case was 17 Nov 2019
Ireland	3-4	Ongoing (47)	1	13 (12-Mar)	70	27	-				3-4	57	18,561	377	
Japan	2	-	-	-			-				2	102	13,231	519	
Italy	3-4	Ongoing (49)	2	40 (10-Mar)	10,149	977	-				3-4	86	195,351	2,357	
Norway	3-4	Ongoing (39)		16 (12-Mar)	800	171	55 (20-Apr)	7,156	78		2+	60	7,493	30	
Daegu Region, South Korea	3-4	Lifted (59)		33 (21-Feb)			92 (20-Apr)								Indicative dates
Singapore	3-4	Ongoing (25)	2	72 (03-Apr)	1,114	65	-				3-4	94	12,693	618	
Spain	3-4	Ongoing (44)	1	44 (14-Mar)	6,391	1,159	-				3-4	86	223,759	3,995	Reported as scheduled to lower to "Level 2" on 26 April
Sweden	1-2	-	-	-			-				1-2	86	18,177	610	
Taiwan (Territory)	1-2	-	-	-			-				1-2	96	429	1	
UK	3-4	Ongoing (36)		38 (23-Mar)	6,650	697	-				3-4	71	148,377	4,913	
Vietnam	3-4	Lifted (22)		70 (01-Apr)	218	6	92 (23-Apr)	268	0		1-2	94	270	0	

* NZ Level equivalence

As at 27 April

NZ data from MoH, Hubei data from Johns Hopkins, Other data from Worldometer