

COVID-19 CASES

AS OF WEDNESDAY 4/8/2020, 6:00PM HST

Statistics regarding daily new cases and active cases of the eight countries that has the highest number of total cases, Switzerland, Austria, South Korea, Australia, and Cyprus.

Source: <https://www.worldometers.info/coronavirus/>

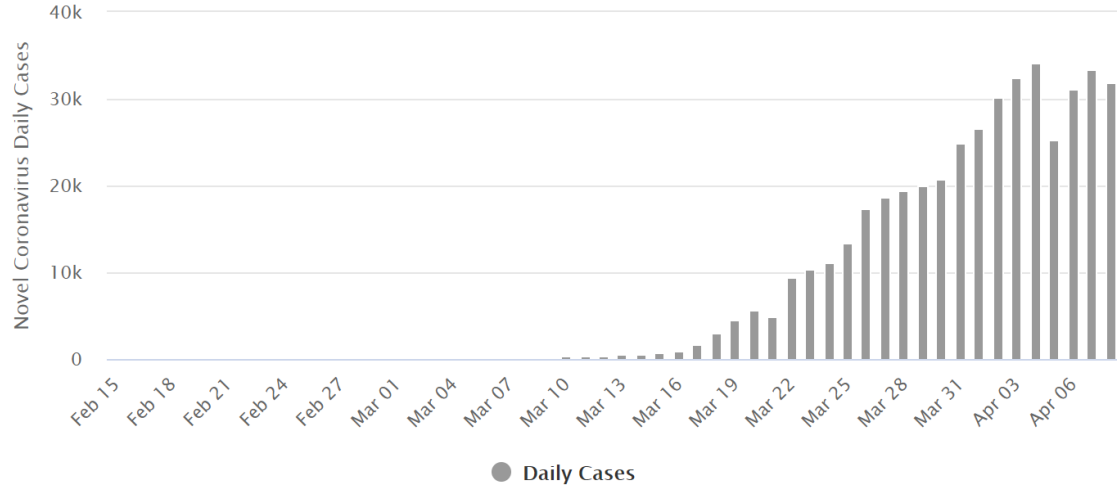
Statistics regarding daily new cases are also included for Hawaii.

Source: <https://health.hawaii.gov/news/covid-19-updates/>

Daily New Cases in the United States

Daily New Cases

Cases per Day
Data as of 0:00 GMT+0

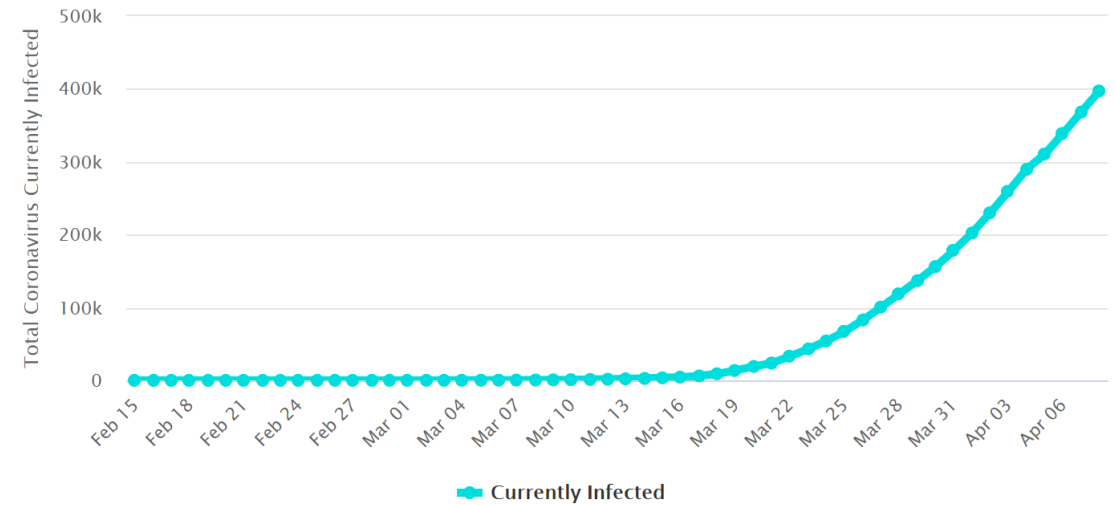


I. USA

Active Cases in the United States

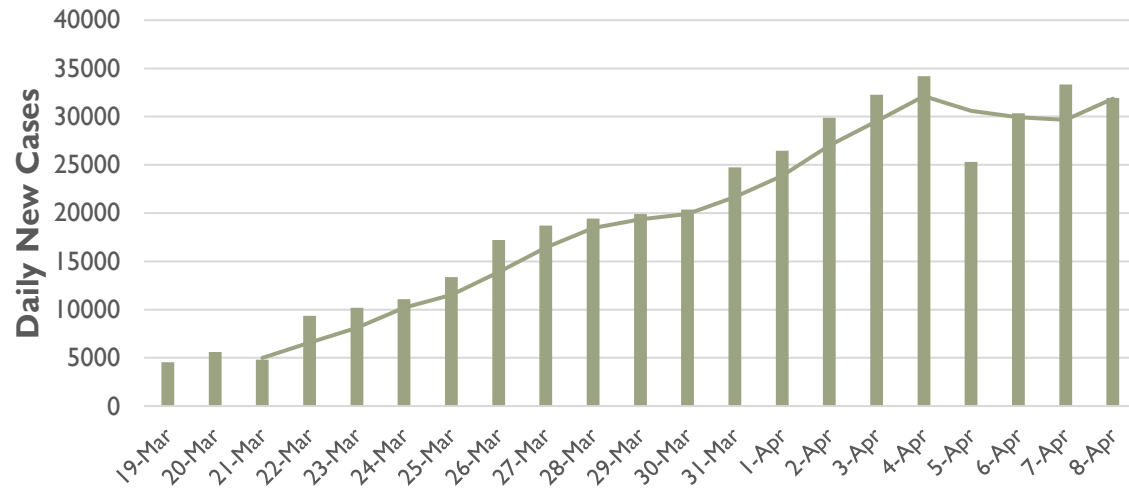
Active Cases

(Number of Infected People)



3-Day Moving Average Trendline

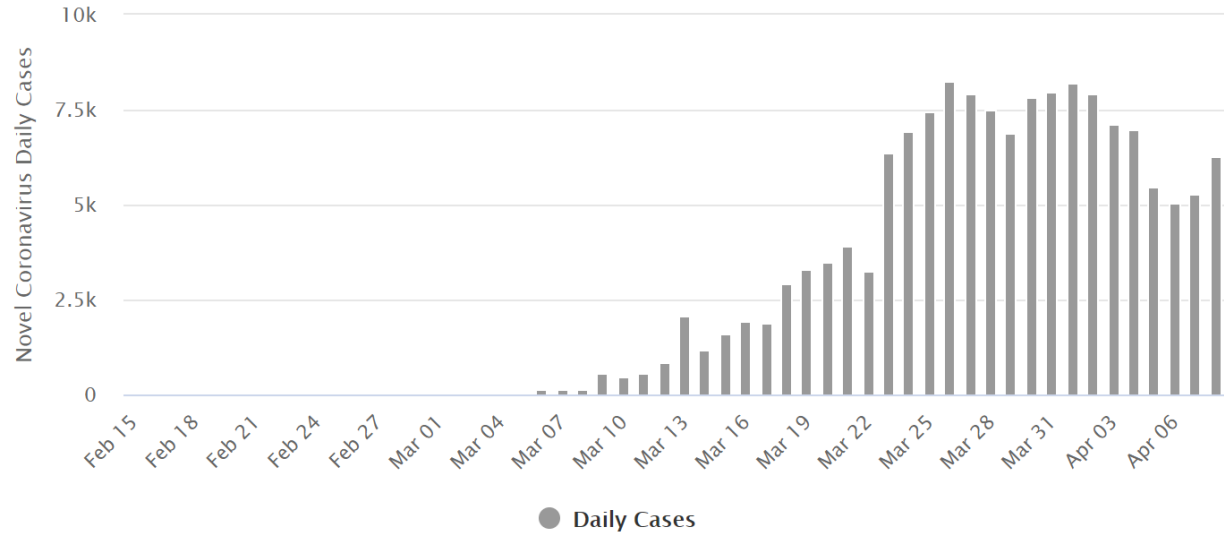
USA 3 per. Mov. Avg. (Daily New Cases)



Daily New Cases in Spain

Daily New Cases

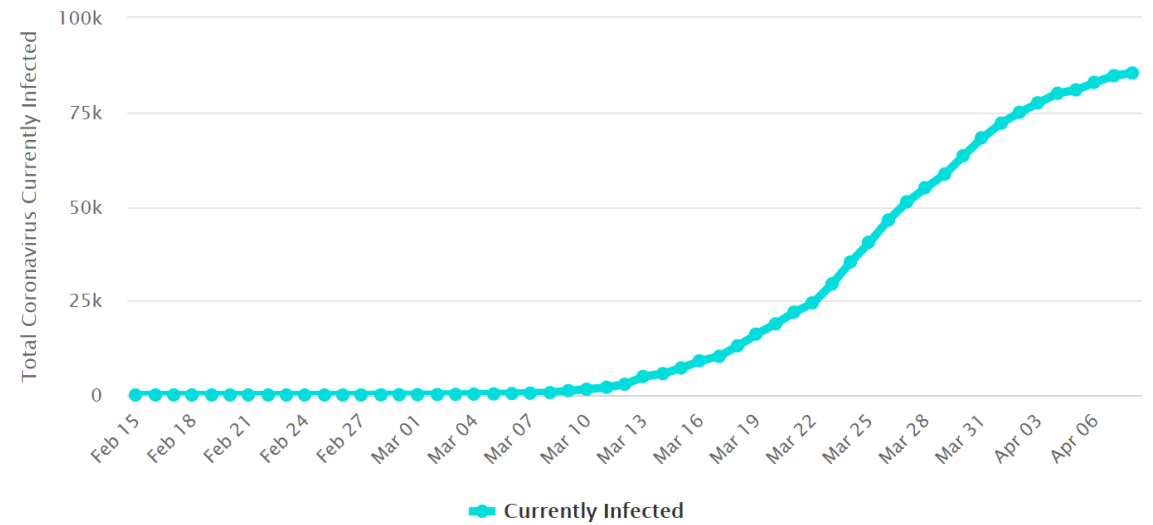
Cases per Day
Data as of 0:00 GMT+0



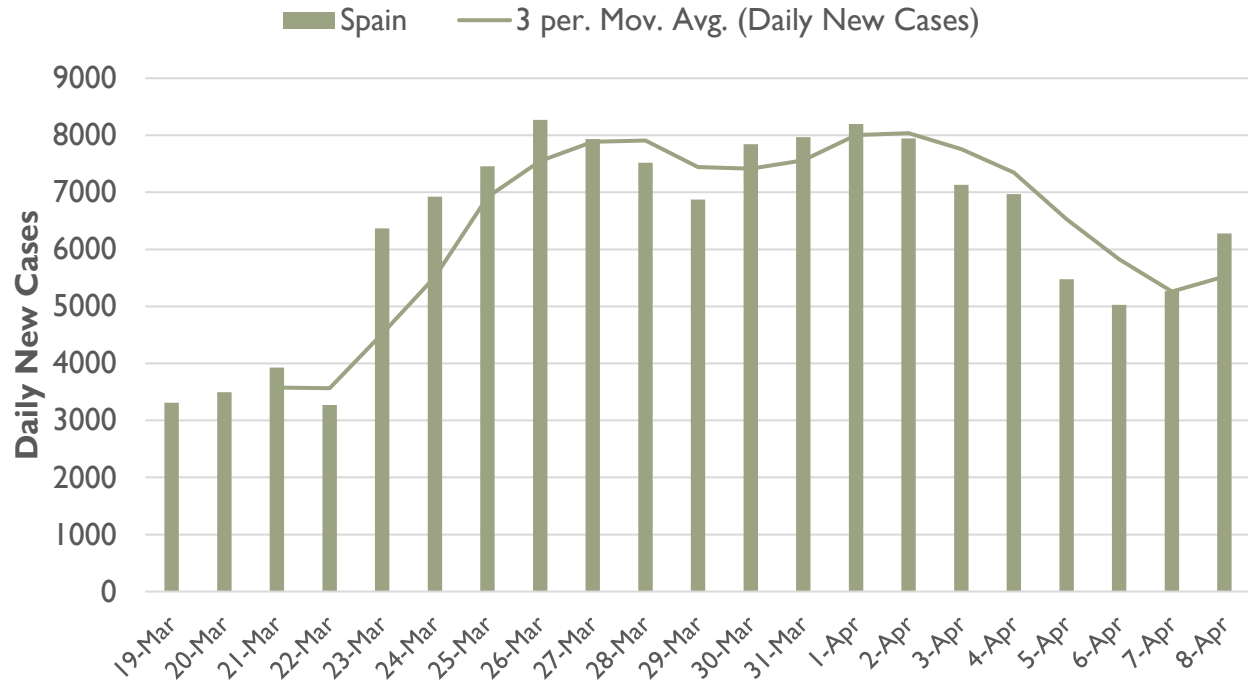
2. Spain

Active Cases in Spain

Active Cases
(Number of Infected People)

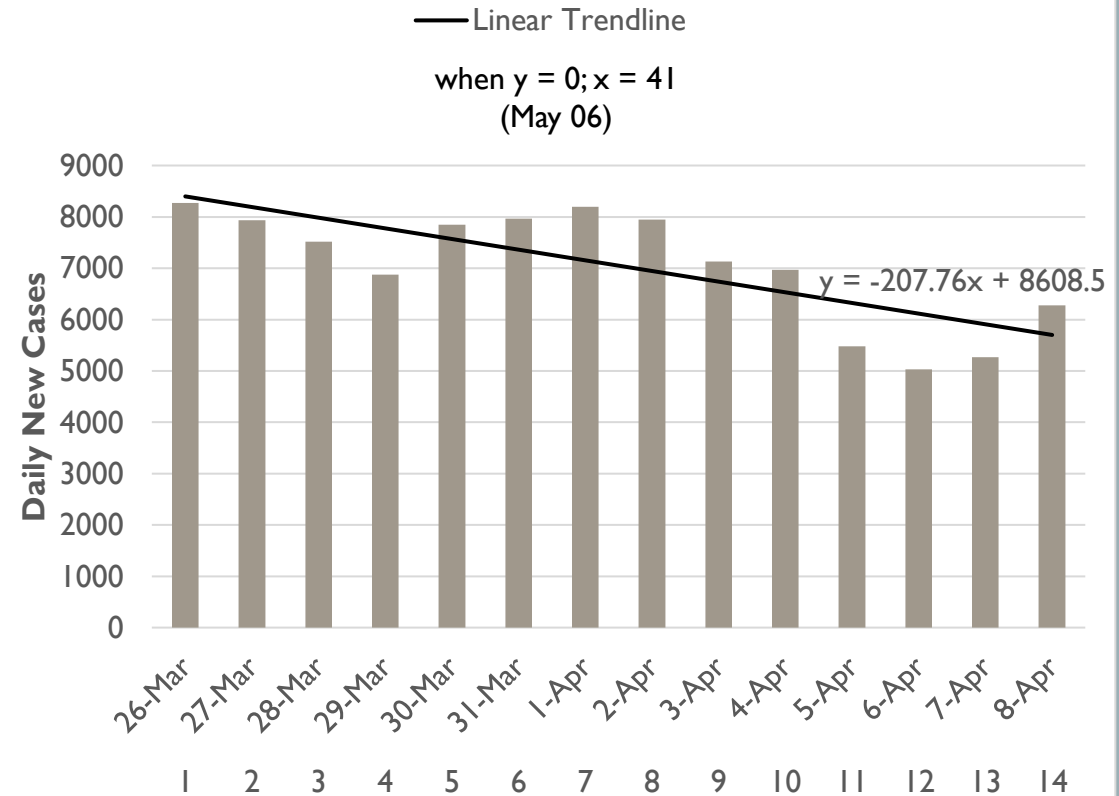


3-Day Moving Average Trendline



Trendlines for Spain

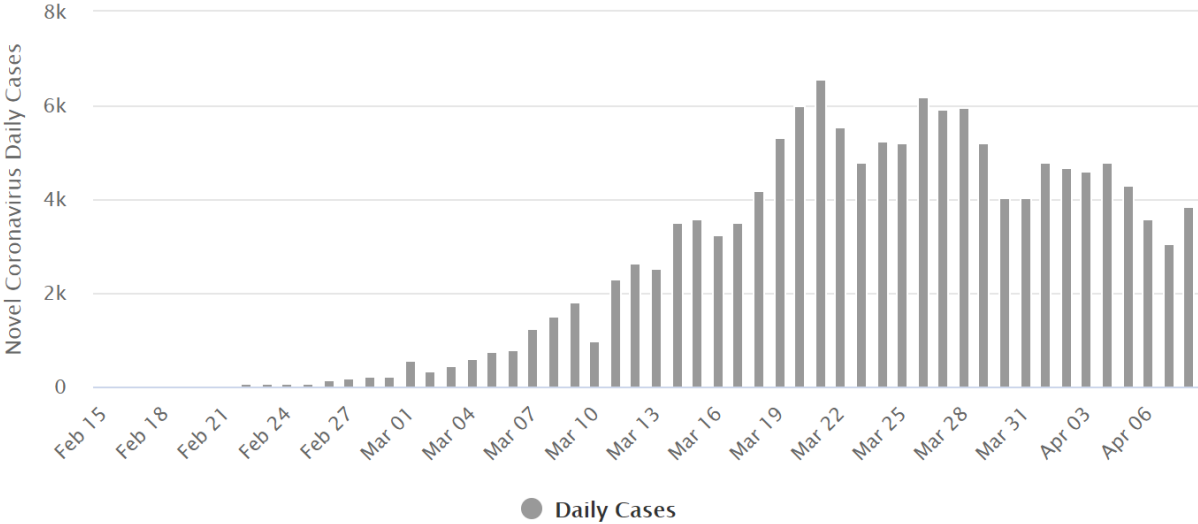
Spain Bar Chart of Daily New Cases from Peak till Today



Daily New Cases in Italy

Daily New Cases

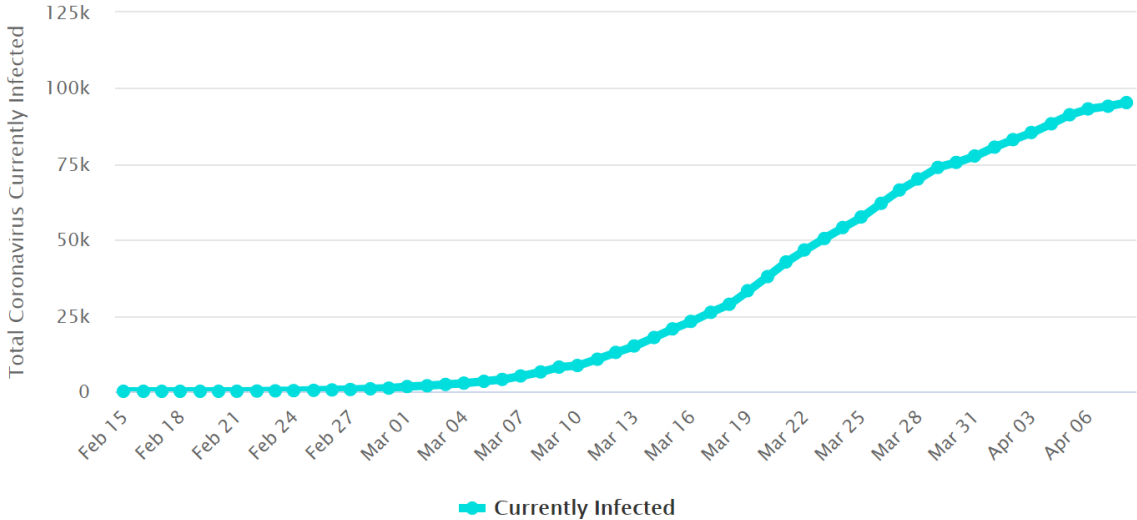
Cases per Day
Data as of 0:00 GMT+0



3. Italy

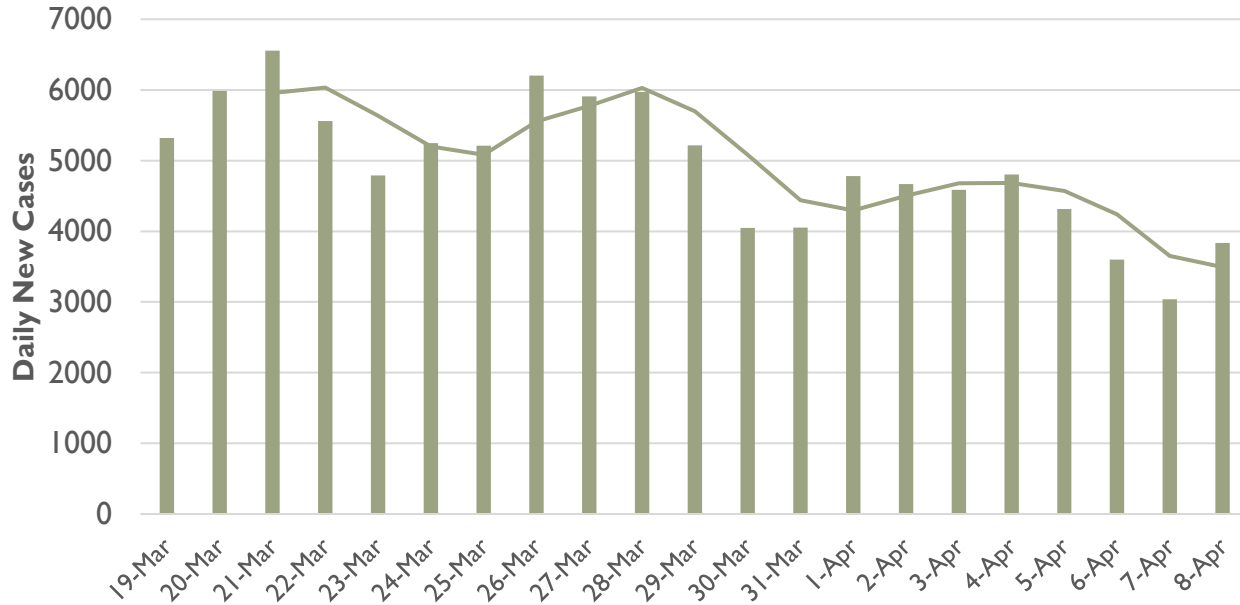
Active Cases in Italy

Active Cases
(Number of Infected People)



3-Day Moving Average Trendline

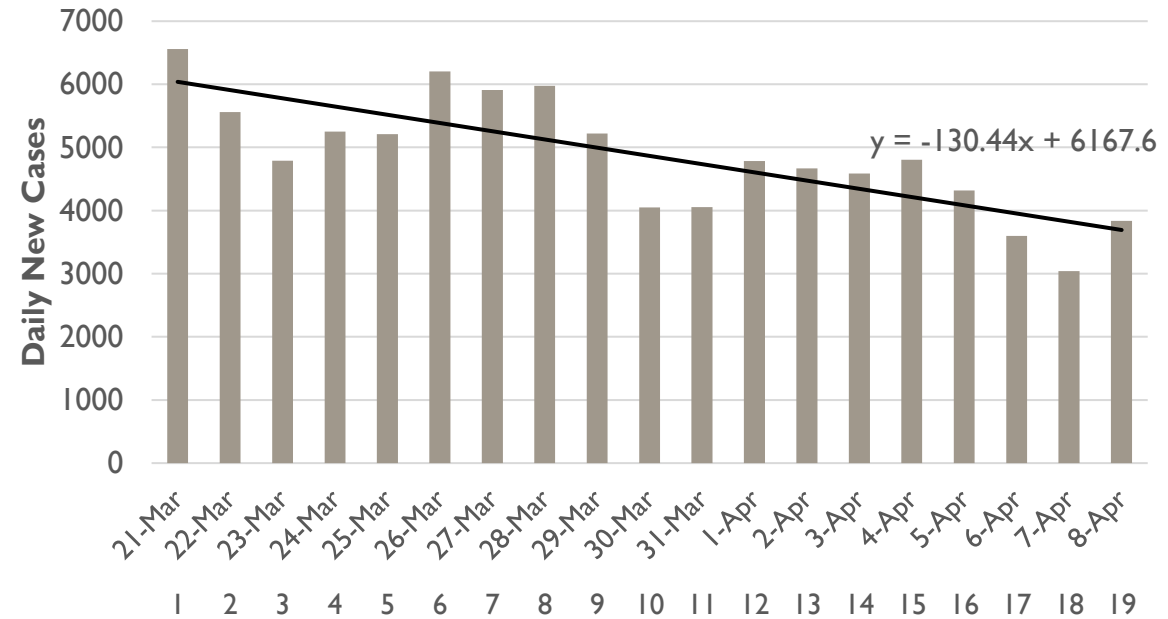
Italy 3 per. Mov. Avg. (Daily New Cases)



Trendlines for Italy

Italy Bar Chart of Daily New Cases from Peak till Today

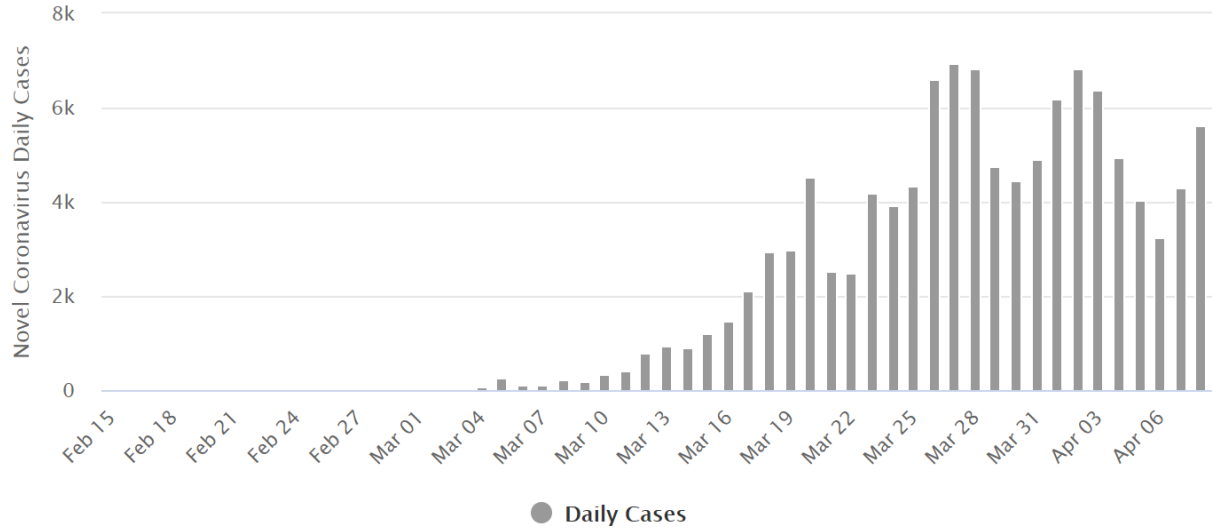
Linear Trendline
when $y = 0; x = 47$
(May 07)



Daily New Cases in Germany

Daily New Cases

Cases per Day
Data as of 0:00 GMT+0

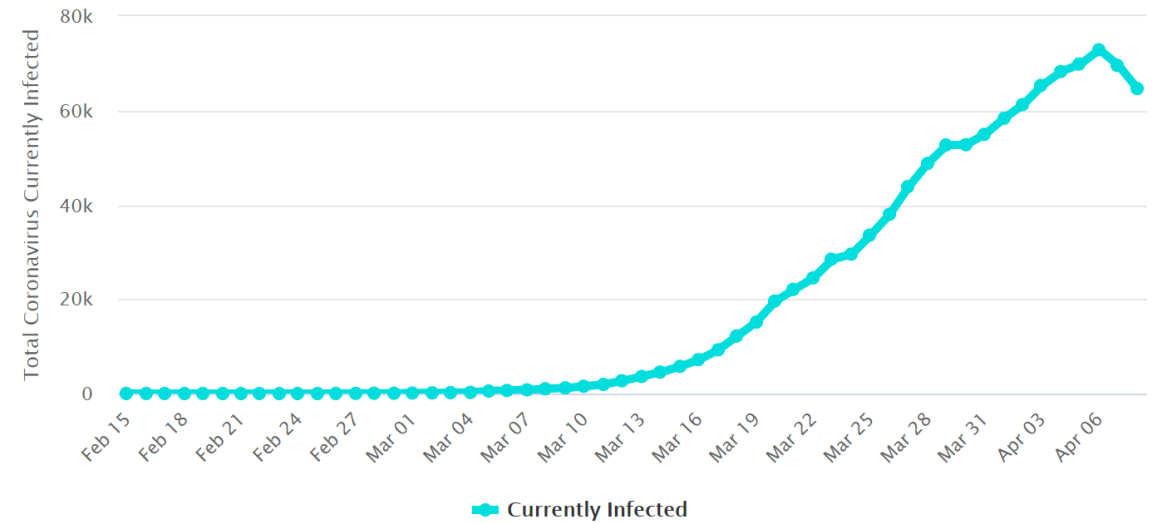


4. Germany

Active Cases in Germany

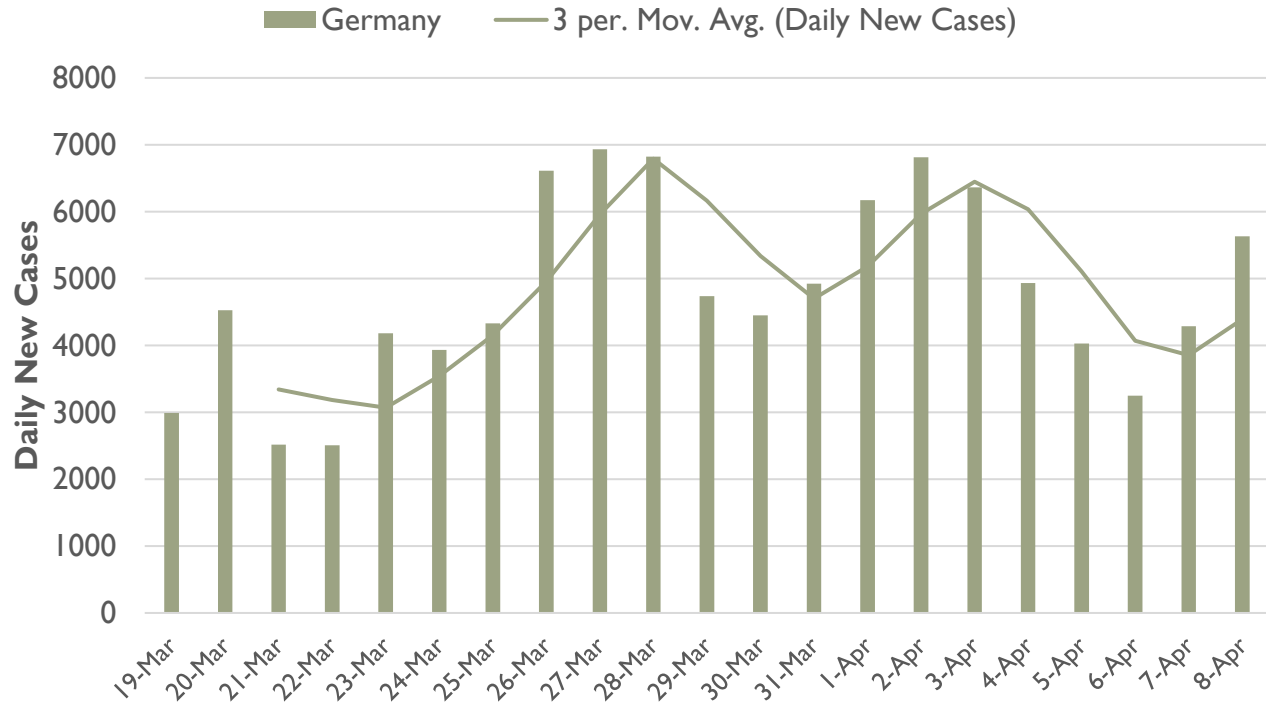
Active Cases

(Number of Infected People)

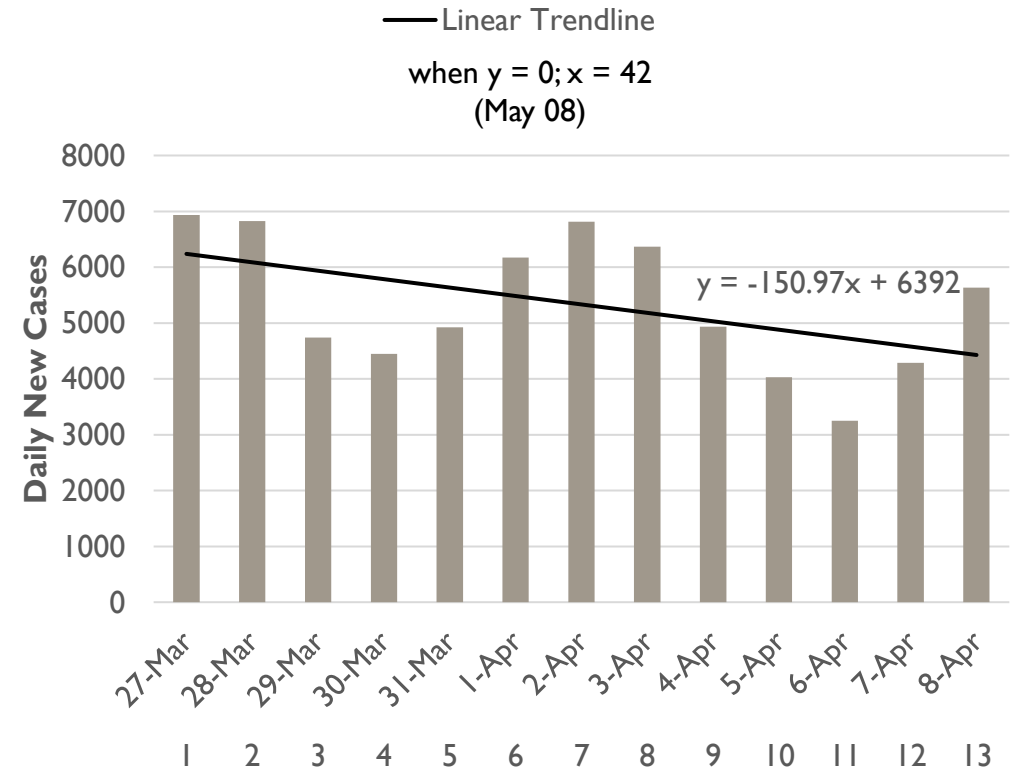


Trendlines for Germany

3-Day Moving Average Trendline



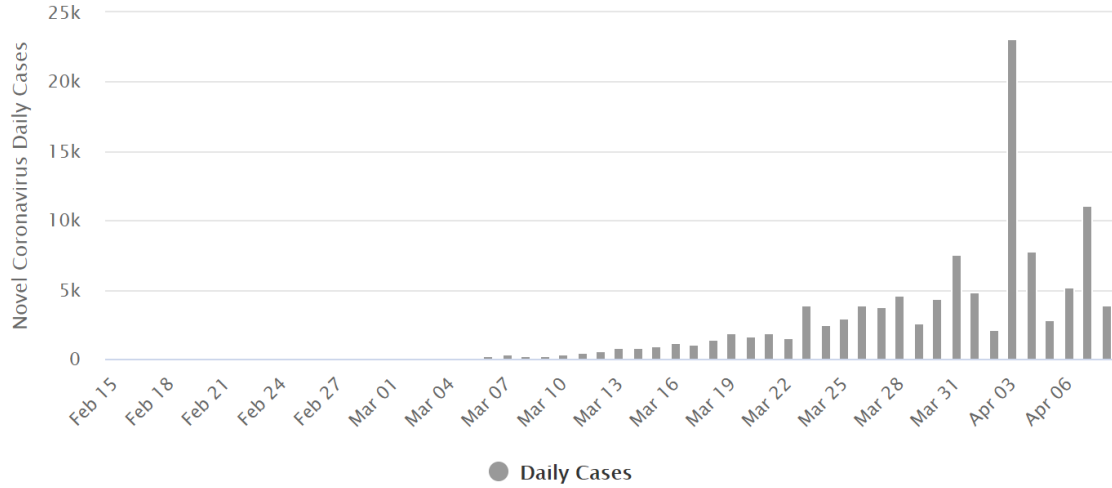
Germany Bar Chart of Daily New Cases
from Peak till Today



Daily New Cases in France

Daily New Cases

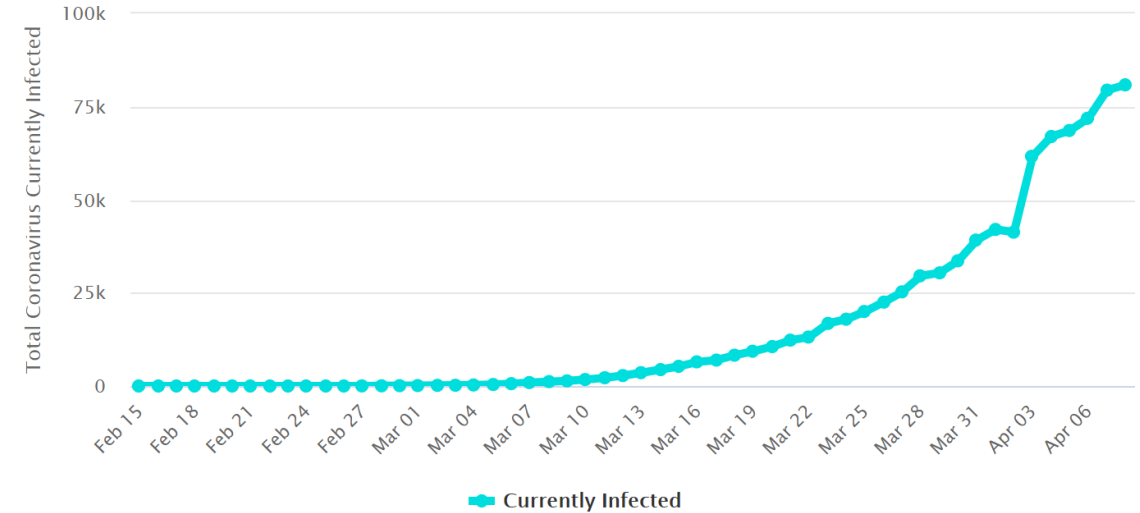
Cases per Day
Data as of 0:00 GMT+0



5. France

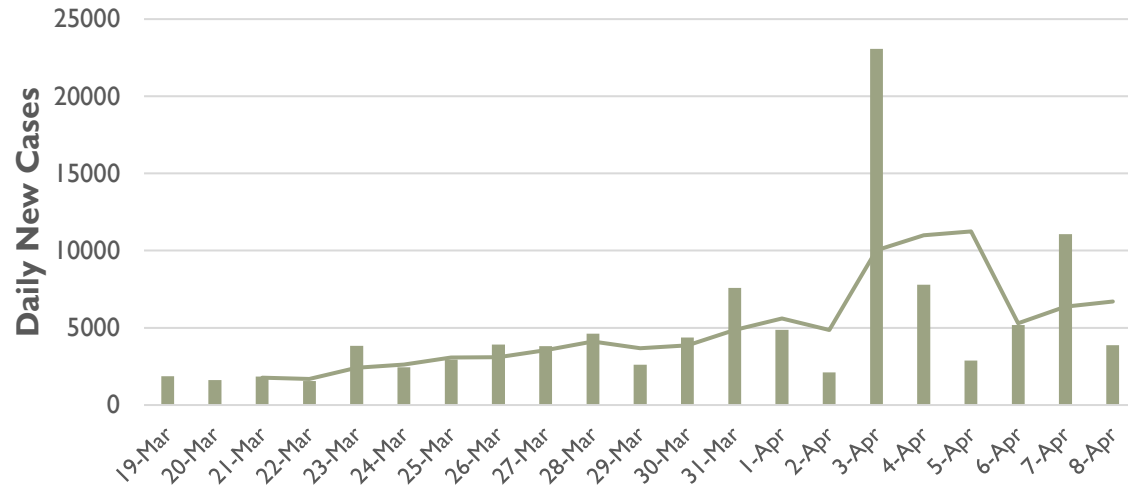
Active Cases in France

Active Cases
(Number of Infected People)



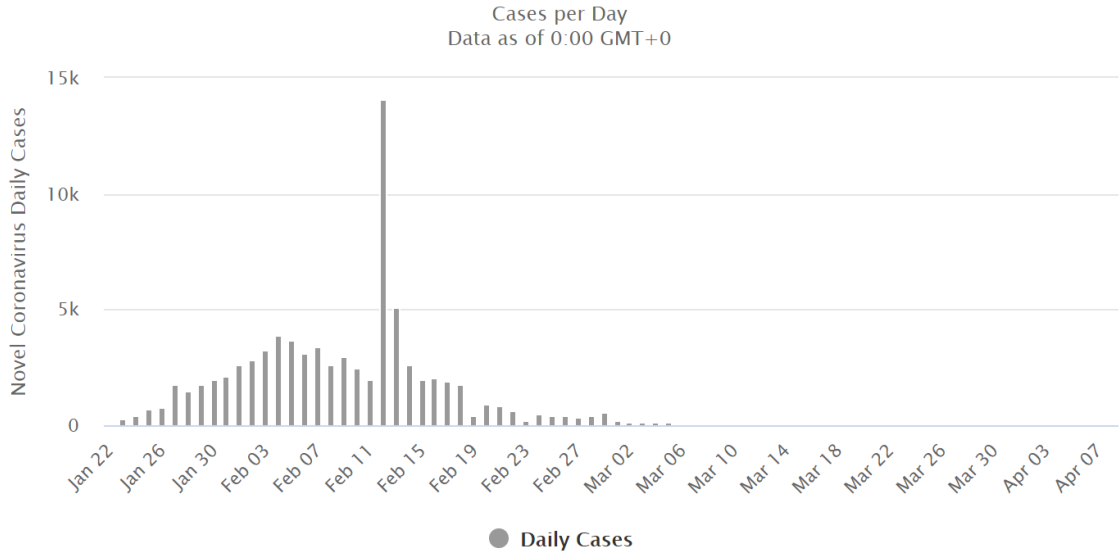
3-Day Moving Average Trendline

France 3 per. Mov. Avg. (Daily New Cases)



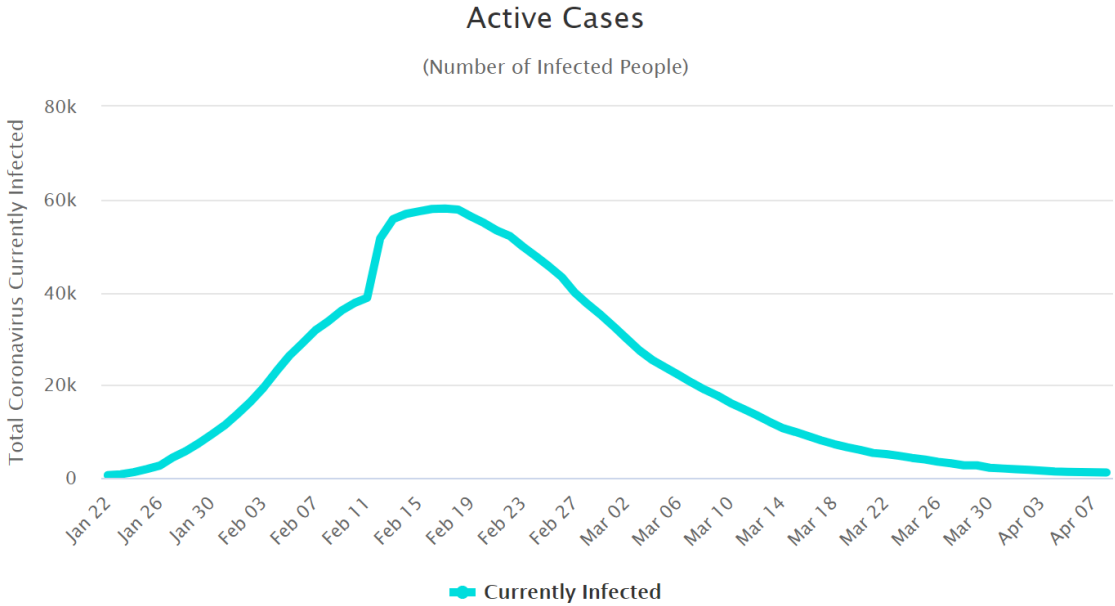
Daily New Cases in China

Daily New Cases

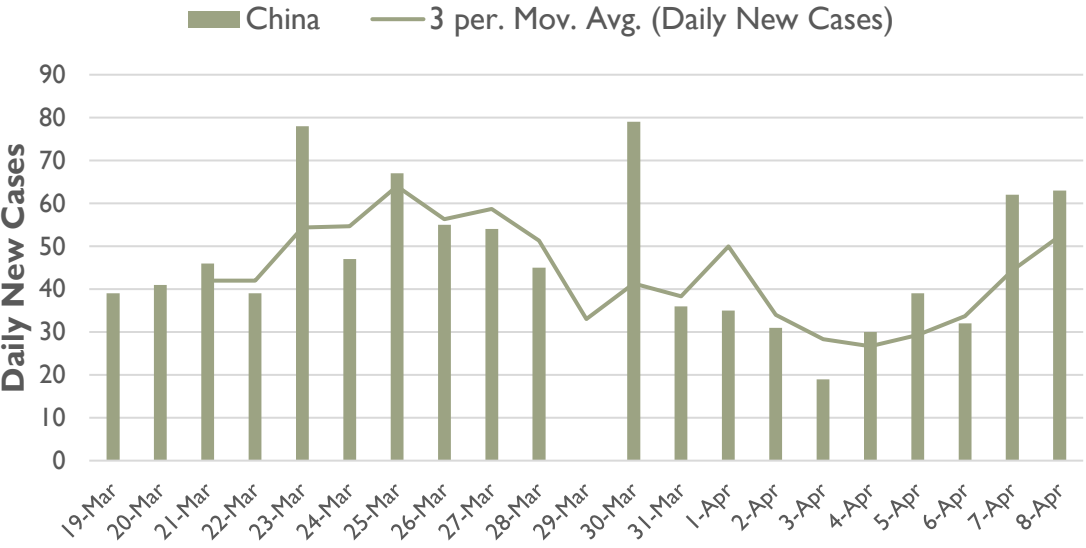


6. China

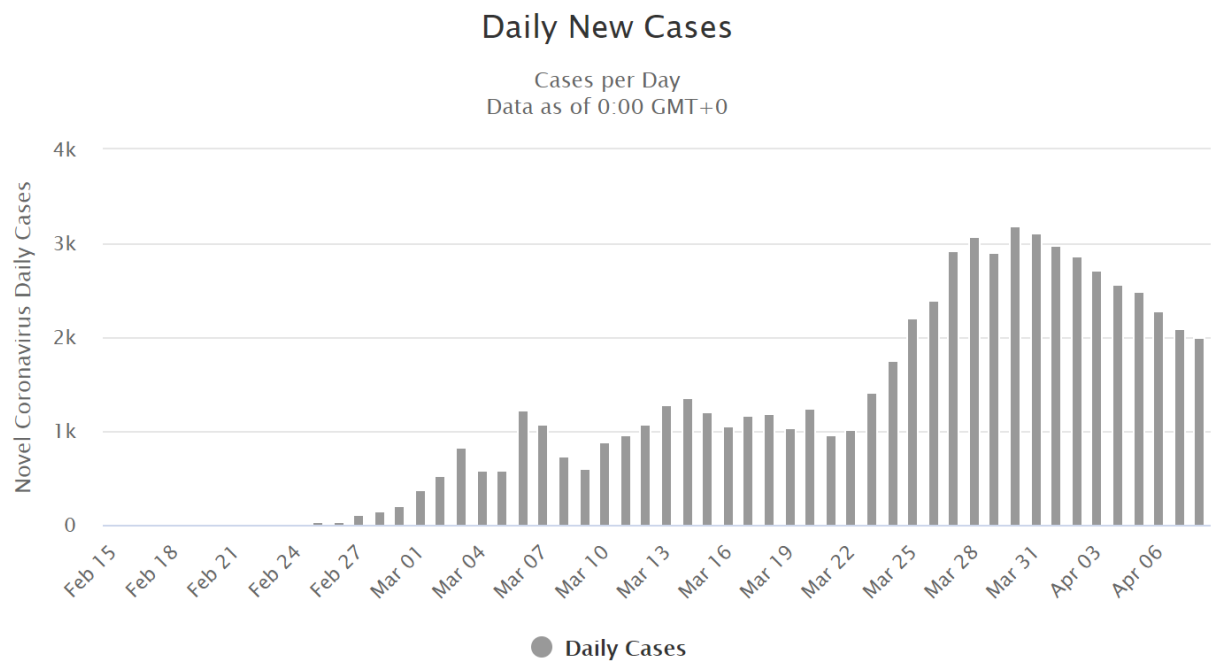
Active Cases in China



3-Day Moving Average Trendline

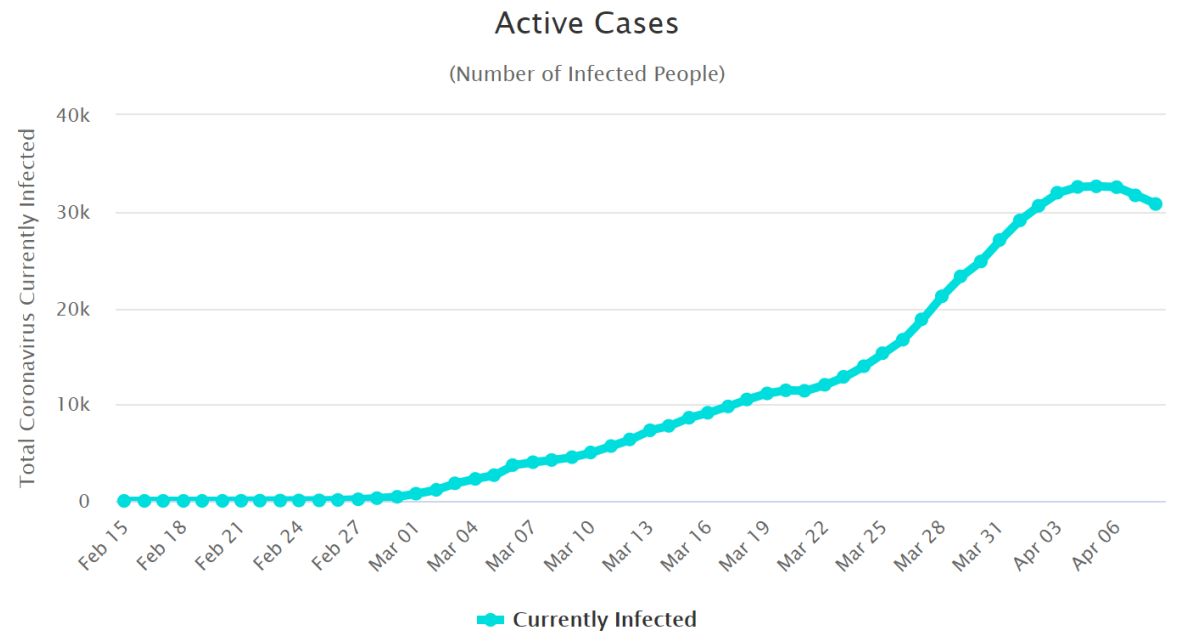


Daily New Cases in Iran

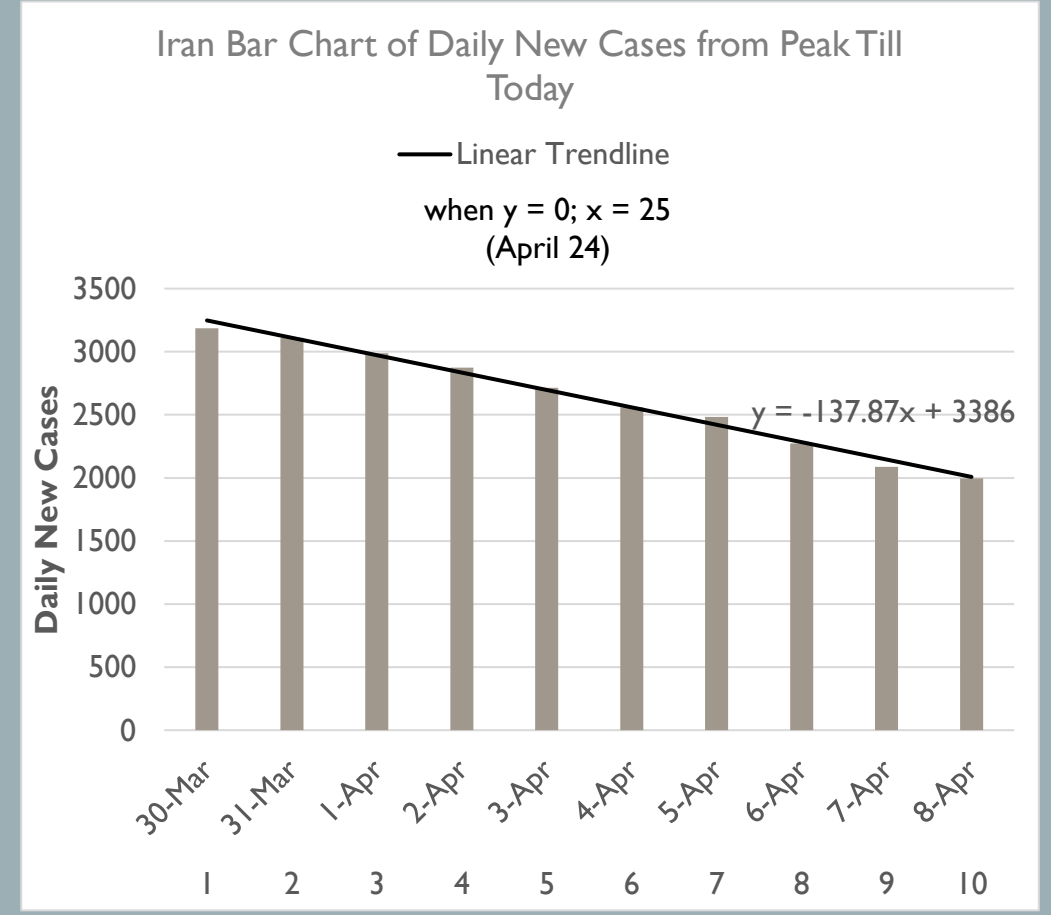
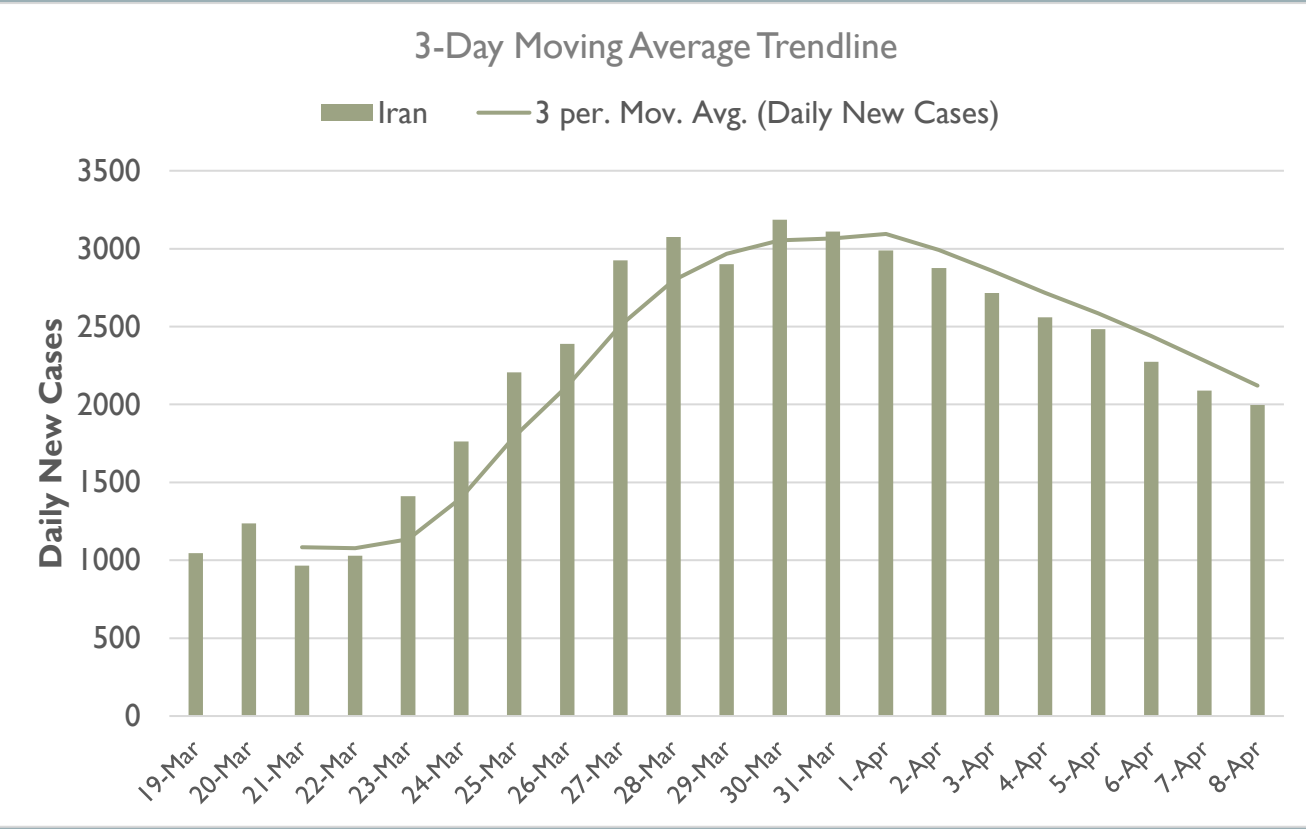


7. Iran

Active Cases in Iran



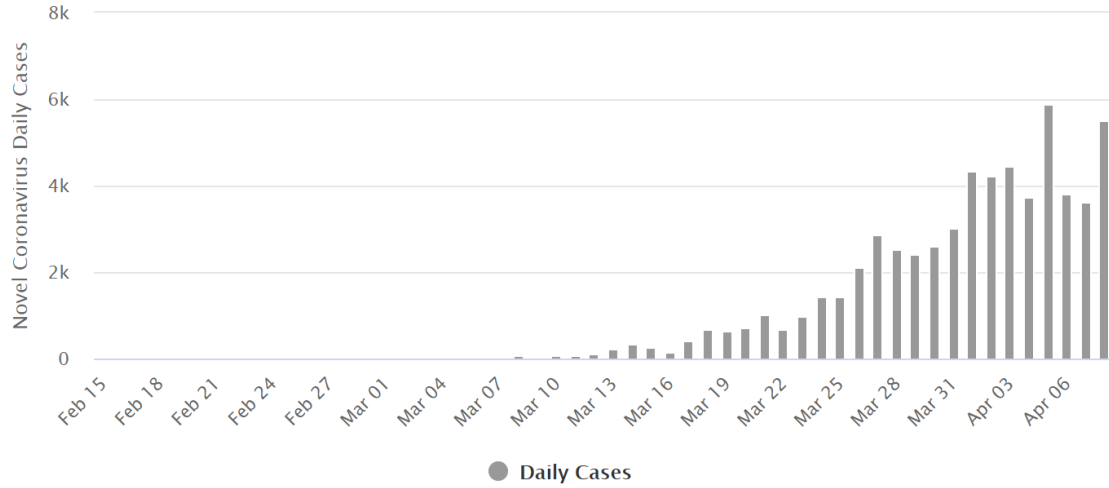
Trendlines for Iran



Daily New Cases in the United Kingdom

Daily New Cases

Cases per Day
Data as of 0:00 GMT+0

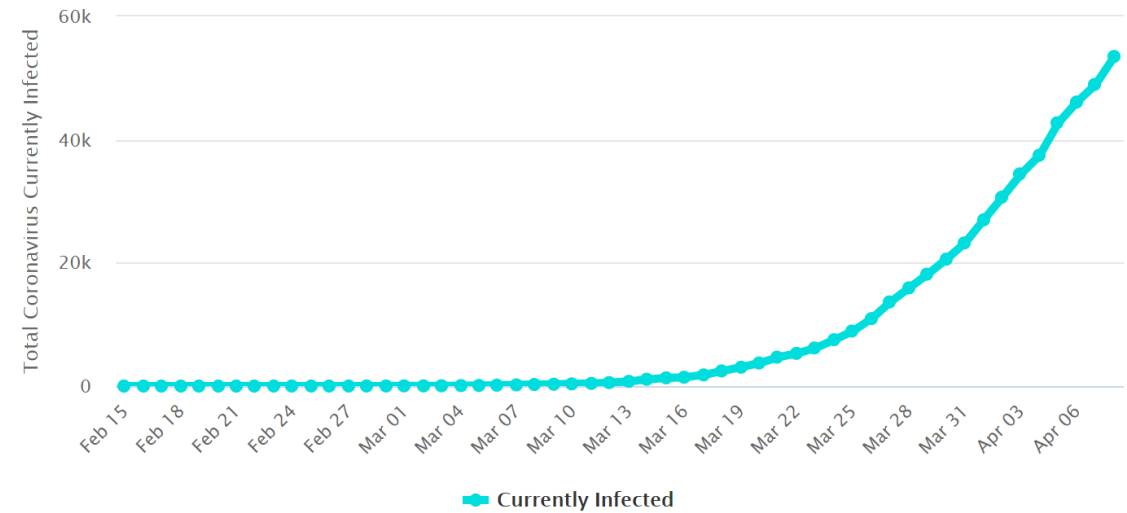


8. UK

Active Cases in the United Kingdom

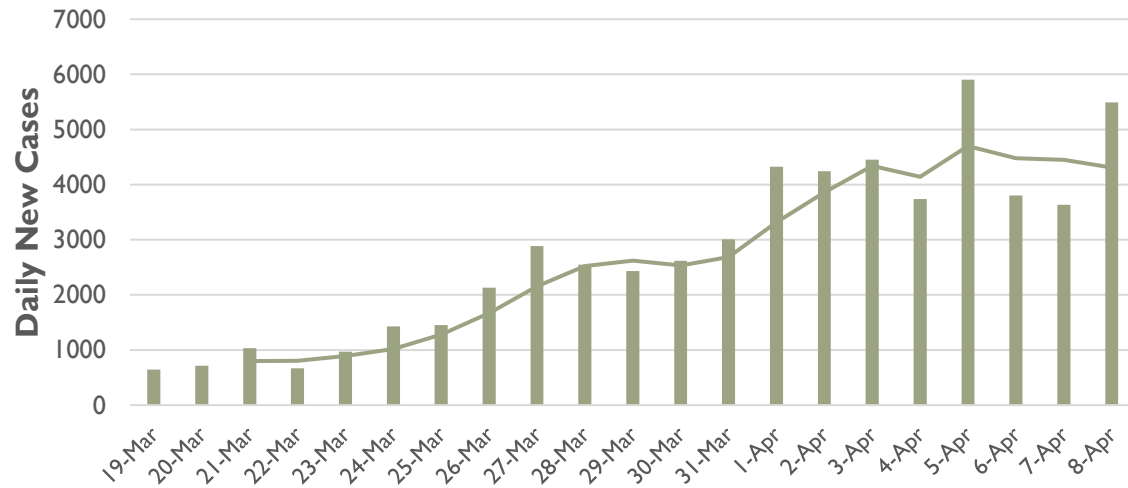
Active Cases

(Number of Infected People)



3-Day Moving Average Trendline

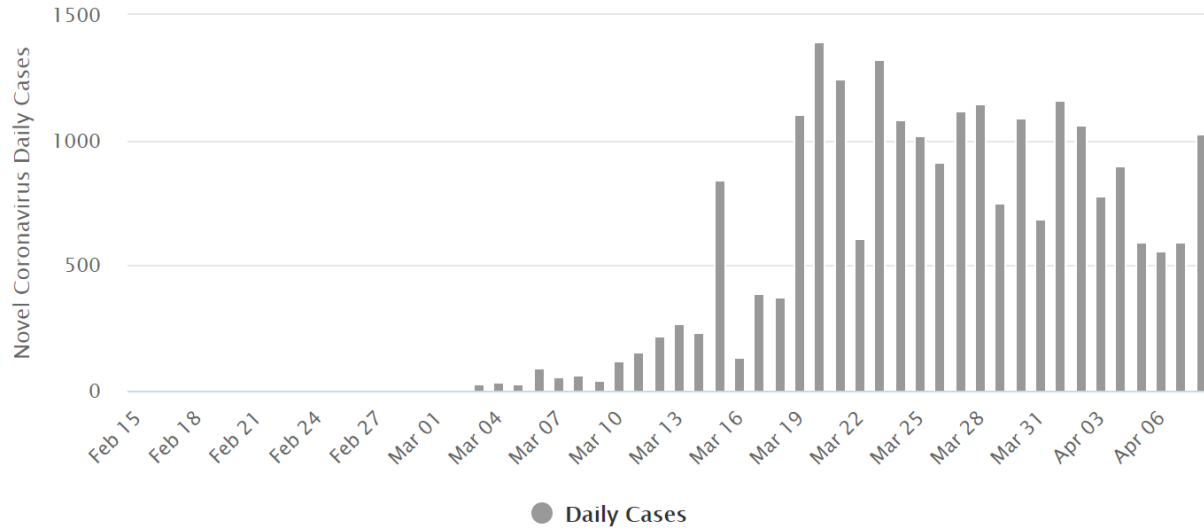
UK 3 per. Mov. Avg. (Daily New Cases)



Daily New Cases in Switzerland

Daily New Cases

Cases per Day
Data as of 0:00 GMT+0

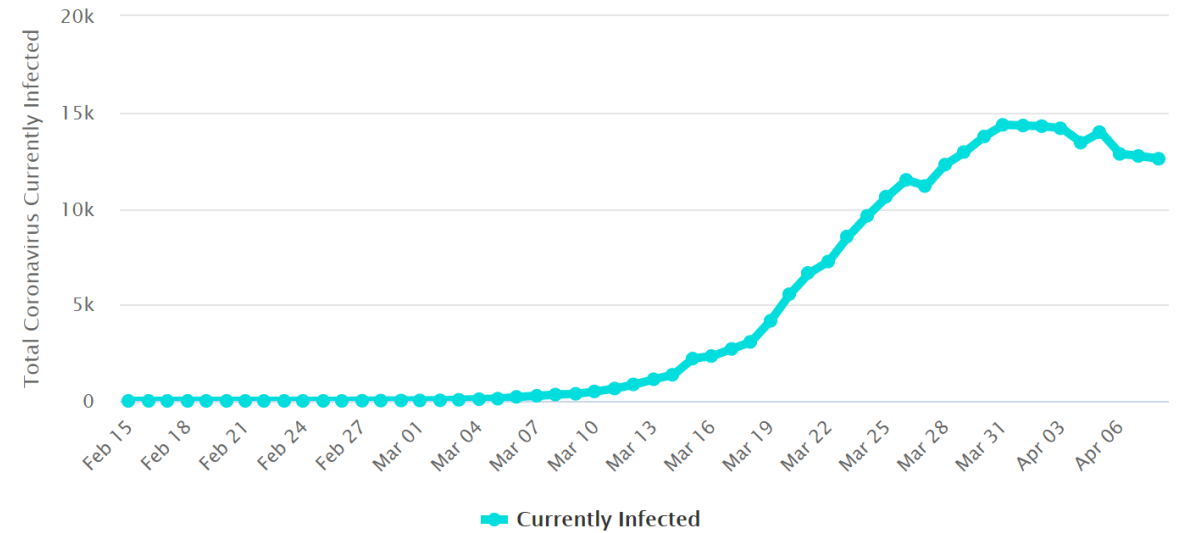


9. Switzerland

Active Cases in Switzerland

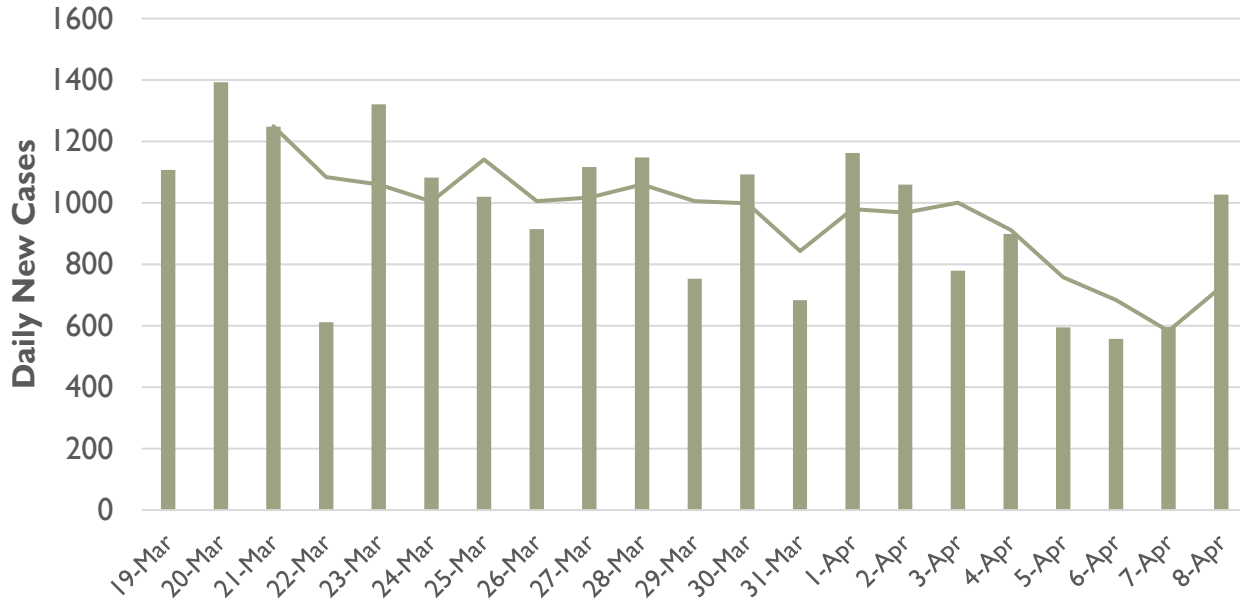
Active Cases

(Number of Infected People)



3-Day Moving Average Trendline

Switzerland 3 per. Mov. Avg (Daily New Cases)

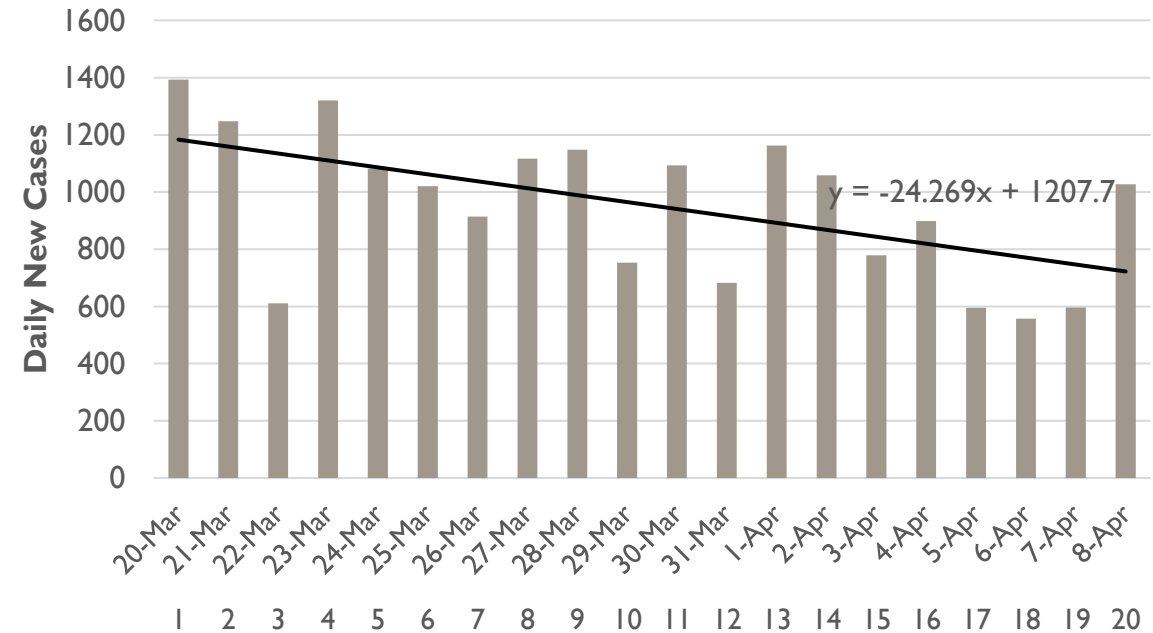


Trendlines for Switzerland

Switzerland Bar Chart of Daily New Cases from Peak till Today

Linear Trendline

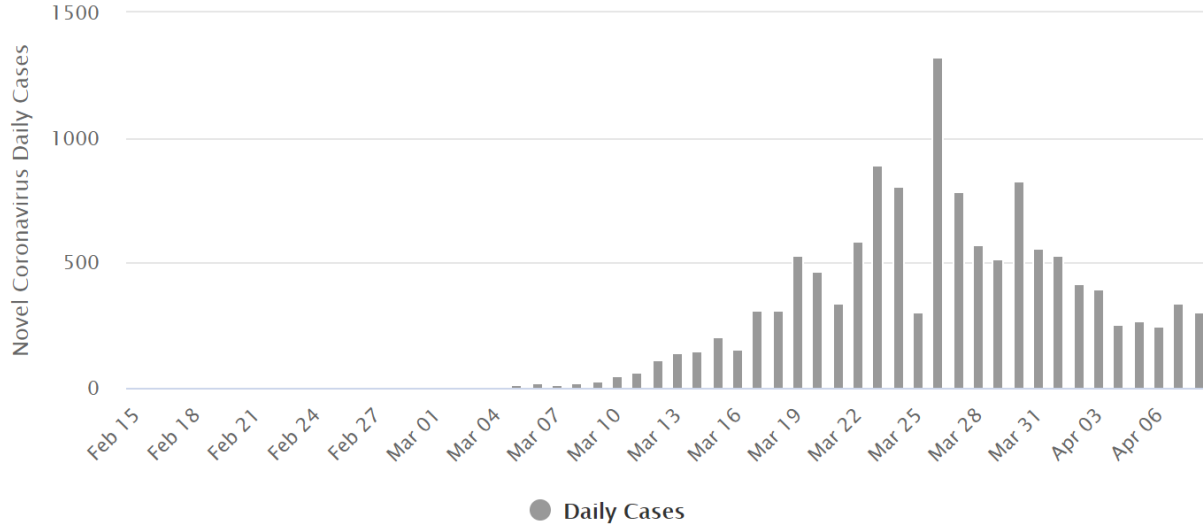
when $y = 0; x = 50$
(May 09)



Daily New Cases in Austria

Daily New Cases

Cases per Day
Data as of 0:00 GMT+0

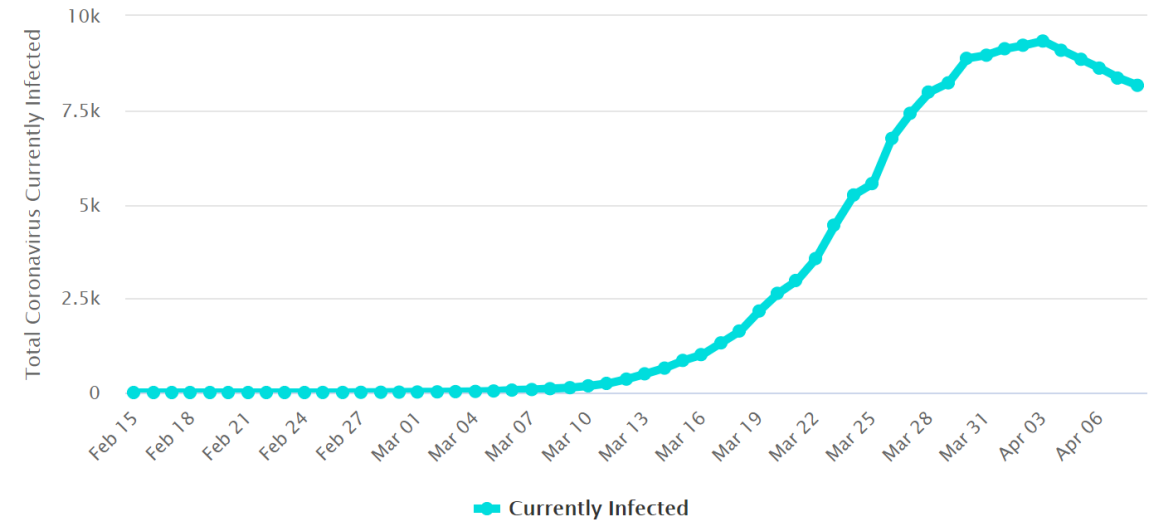


Austria

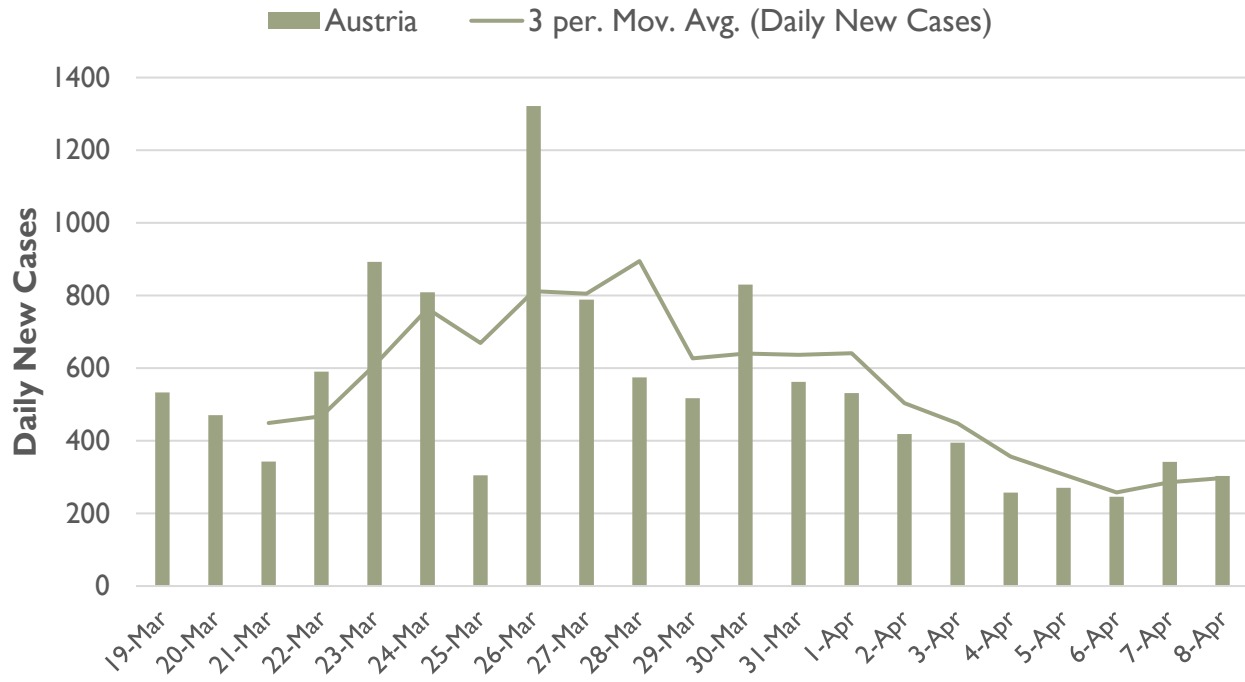
Active Cases in Austria

Active Cases

(Number of Infected People)

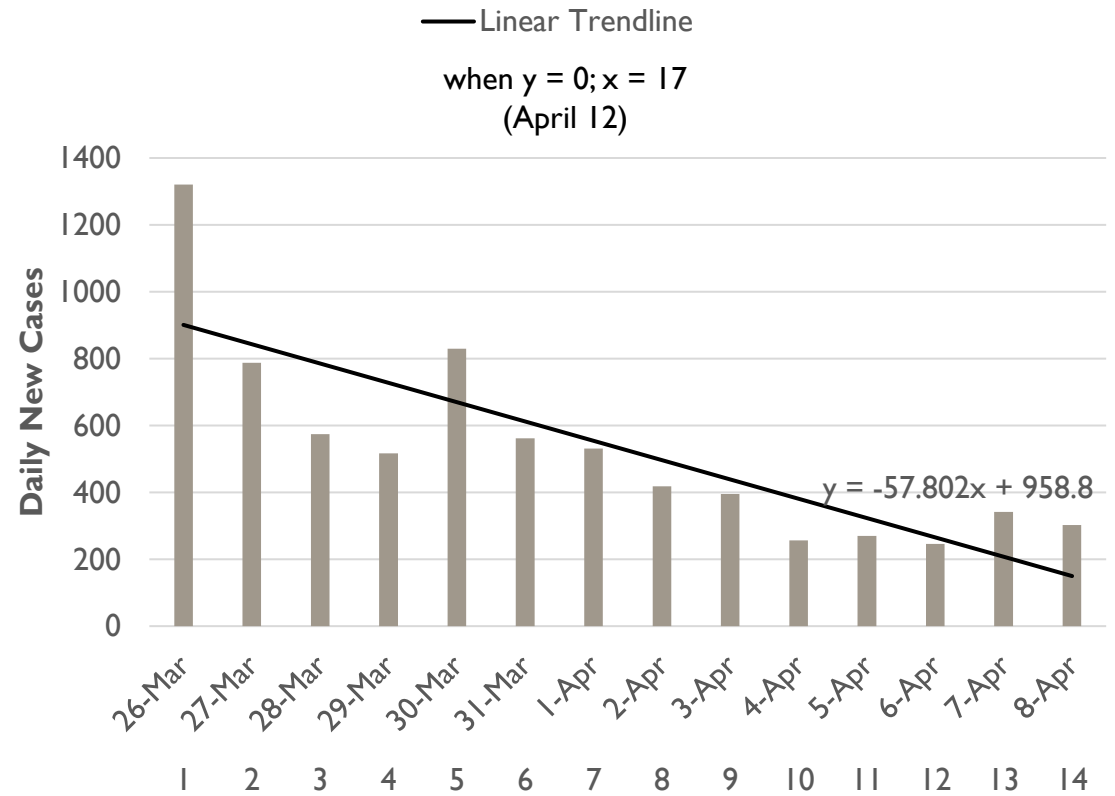


3-Day Moving Average Trendline

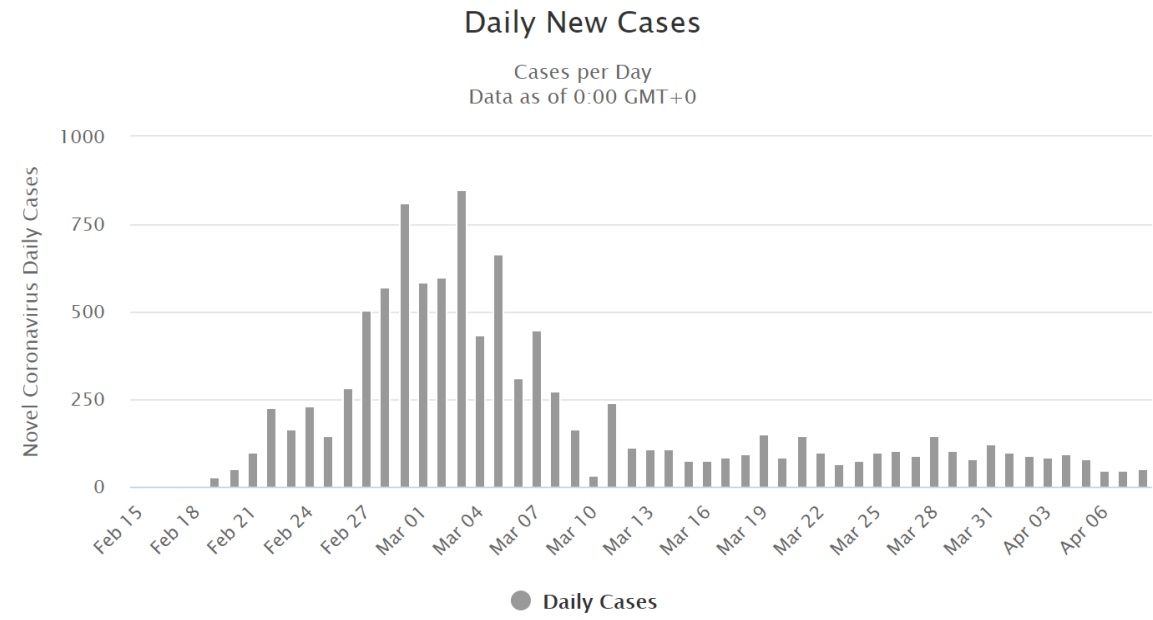


Trendlines for Austria

Austria Bar Chart of Daily New Cases from Peak till Today

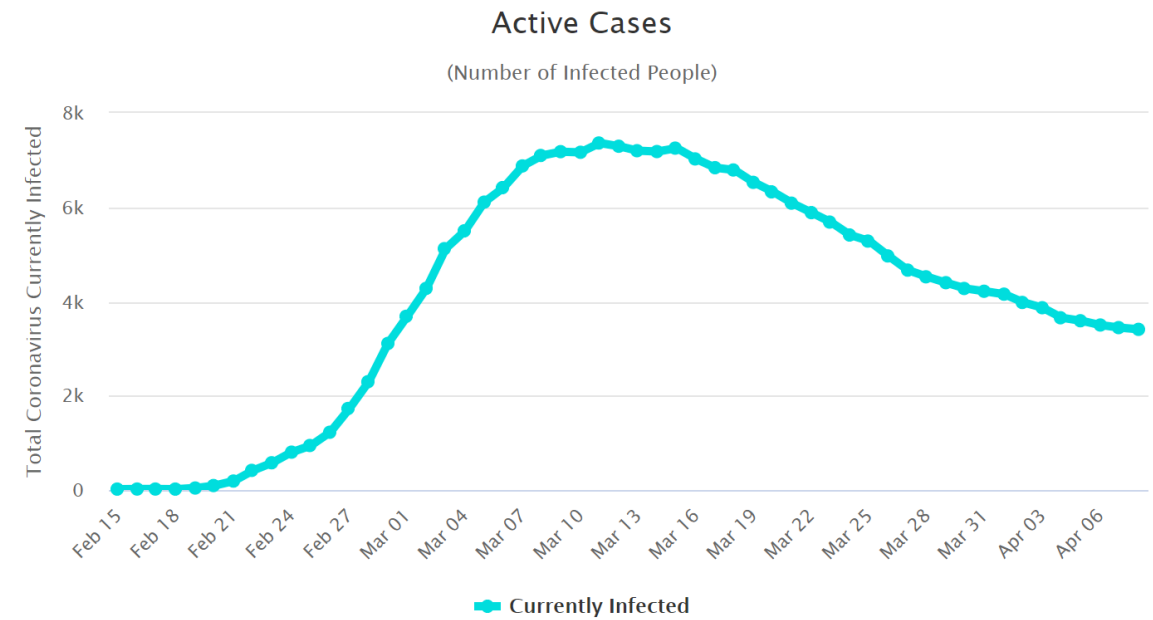


Daily New Cases in South Korea

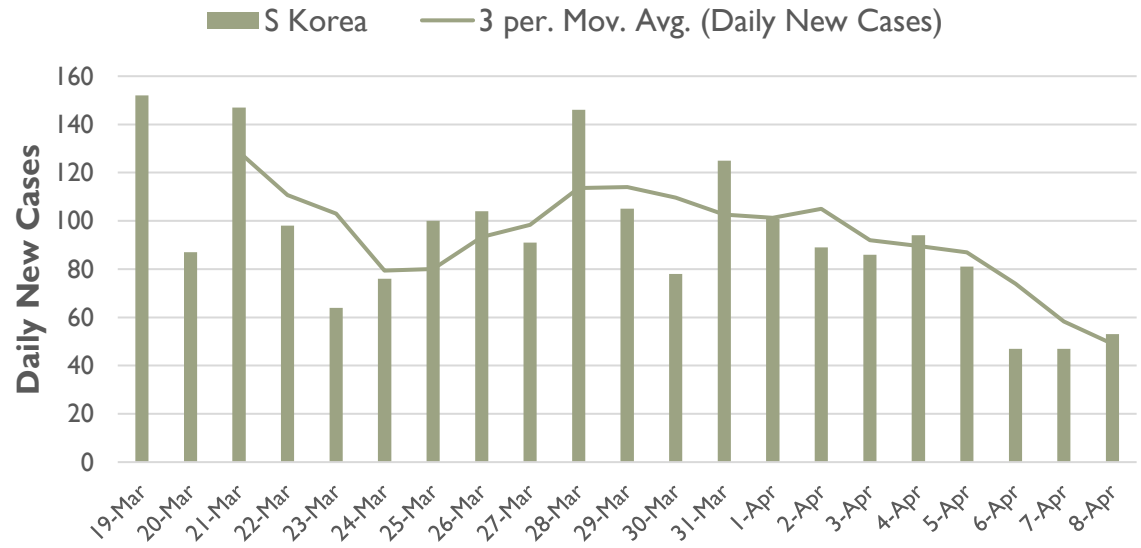


South Korea

Active Cases in South Korea



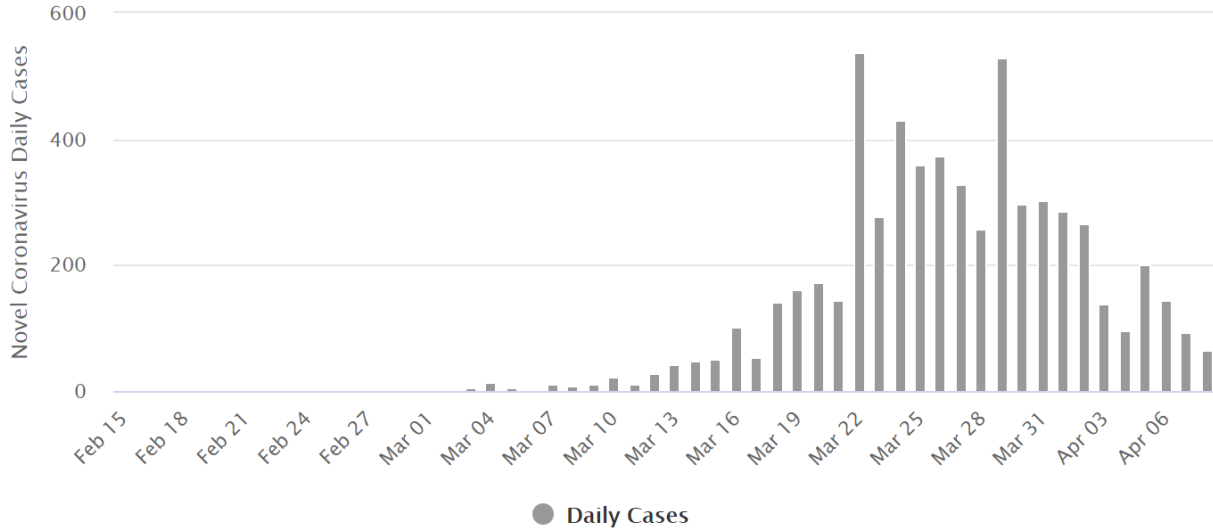
3-Day Moving Average Trendline



Daily New Cases in Australia

Daily New Cases

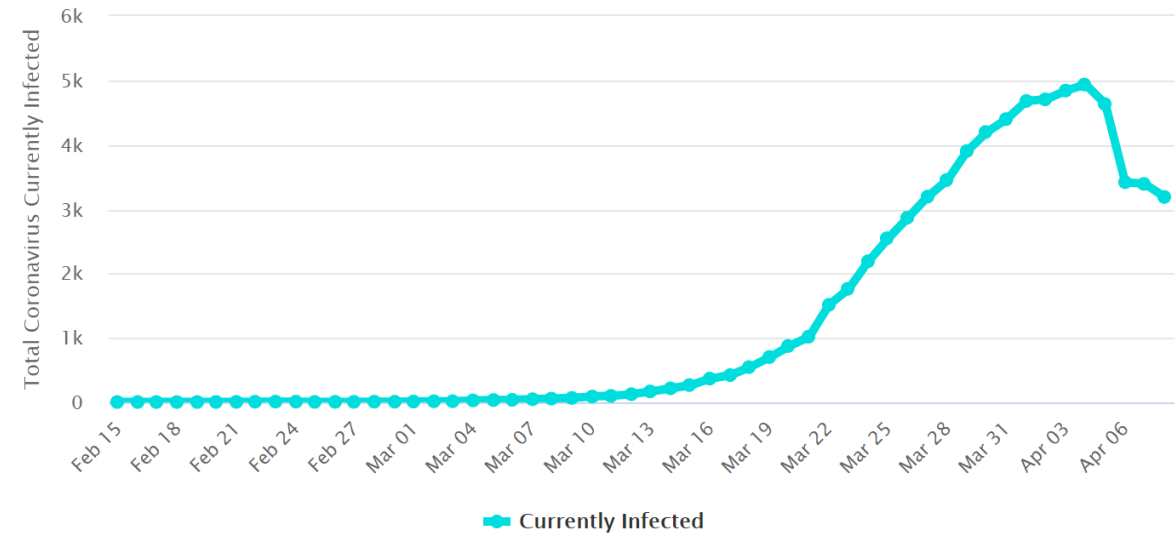
Cases per Day
Data as of 0:00 GMT+0



Australia

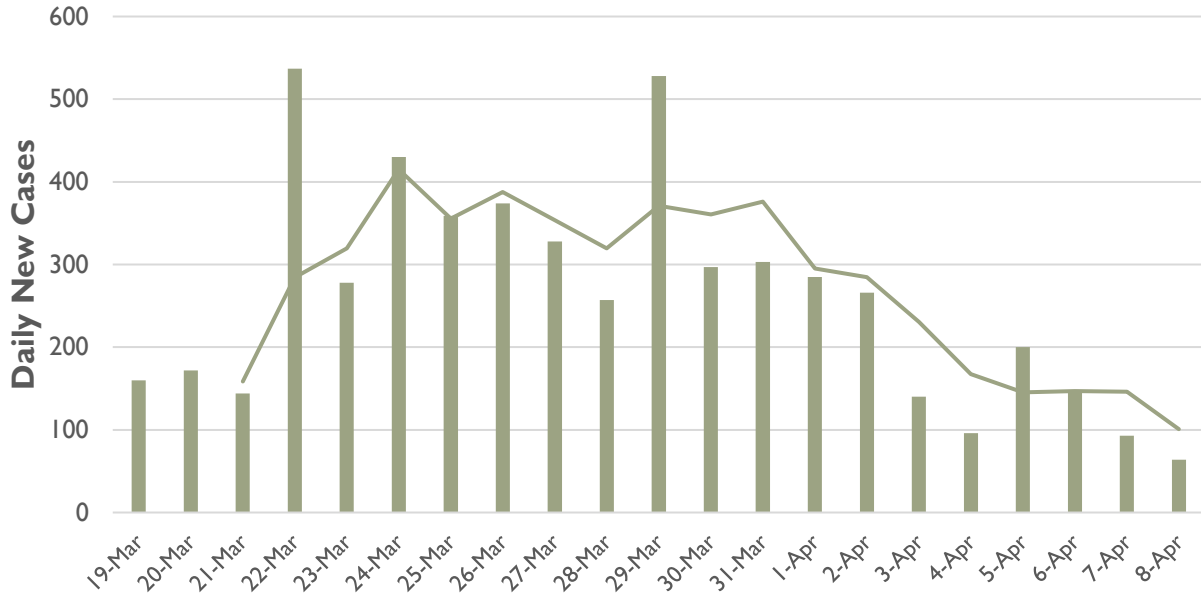
Active Cases in Australia

Active Cases
(Number of Infected People)



3-Day Moving Average Trendline

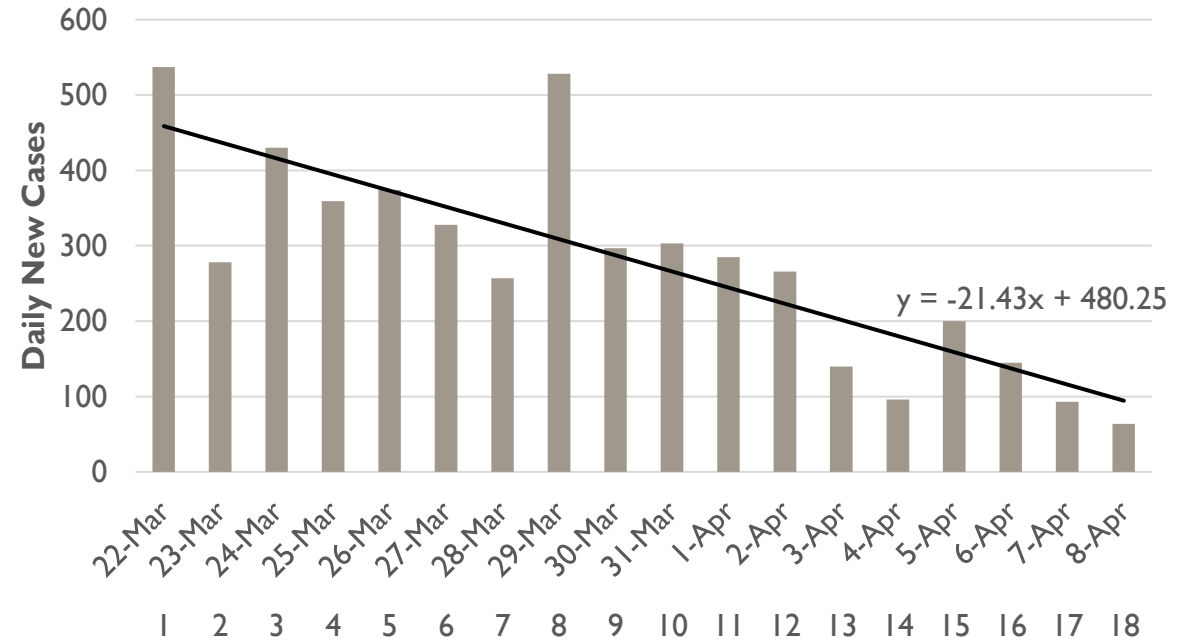
Australia 3 per. Mov. Avg. (Daily New Cases)



Trendlines for Australia

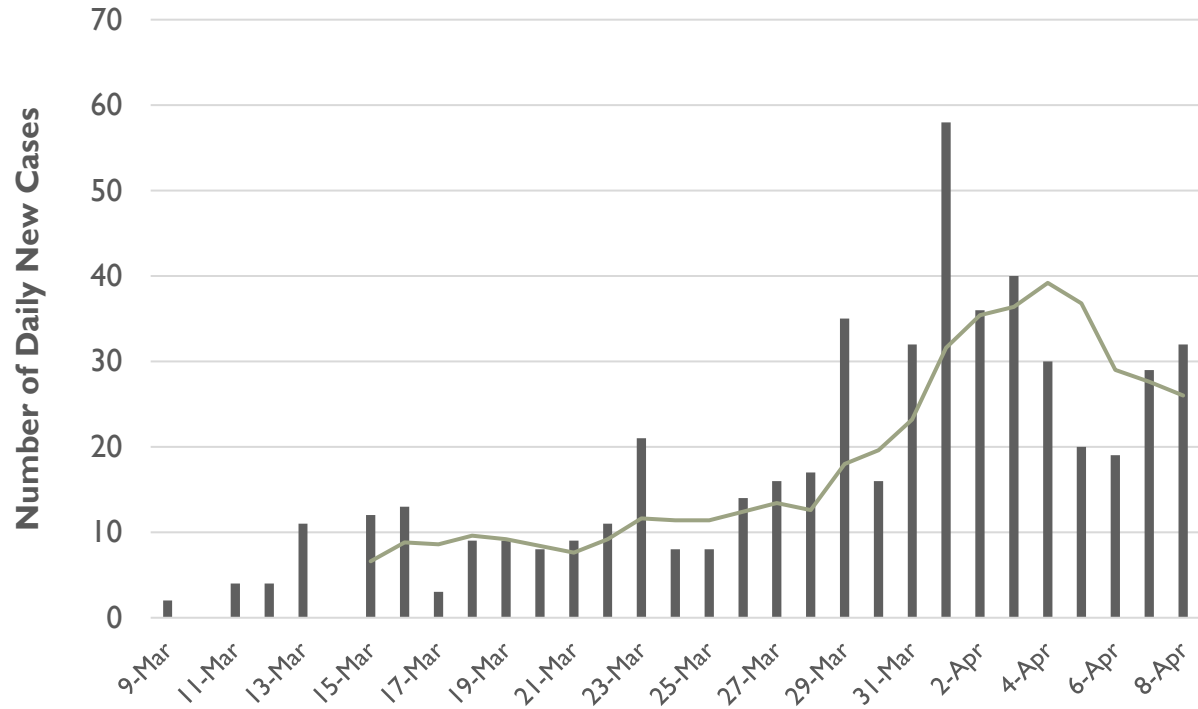
Australia Bar Chart of Daily New Cases from Peak till Today

Linear Trendline
when $y = 0$; $x = 22$
(April 13)



Daily New Cases in Cyprus

— 5 per. Mov. Avg. (Daily New Cases)



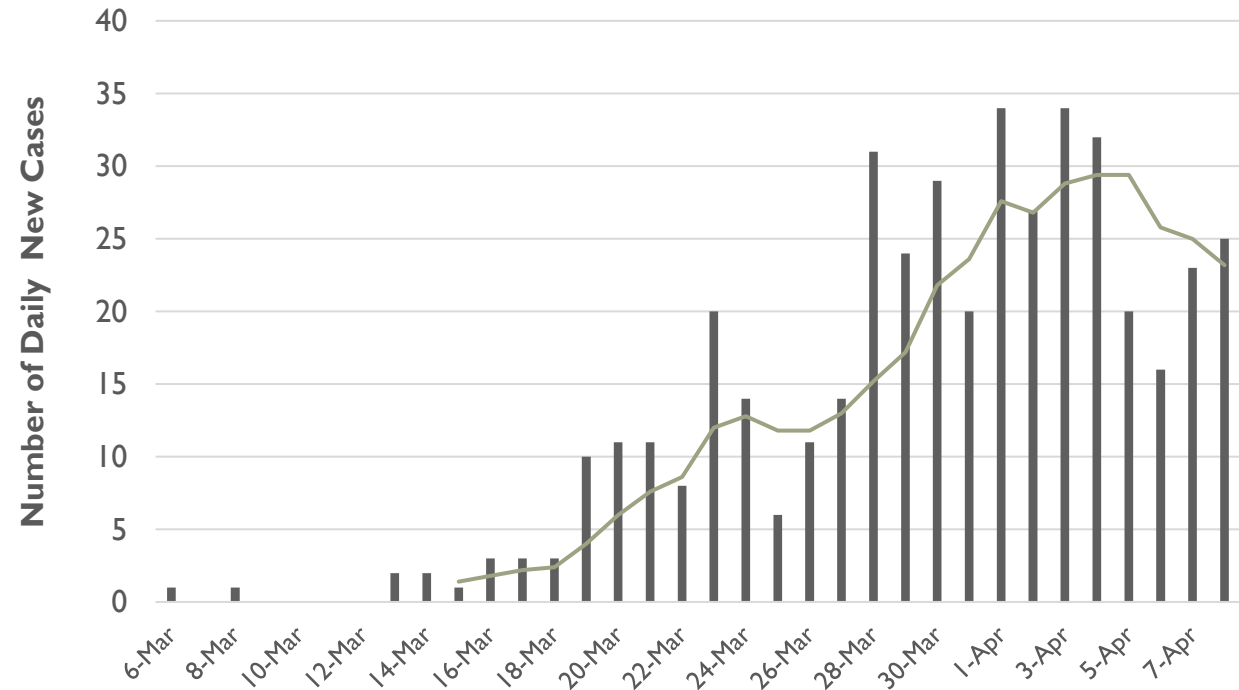
Cyprus

Correlation, r (Between Cyprus and Hawaii) = 0.786
 r is significant at $\alpha = 5\%$

Hawaii

Daily New Cases in Hawaii

— 5 per. Mov. Avg. (Daily New Cases)



Worldwide

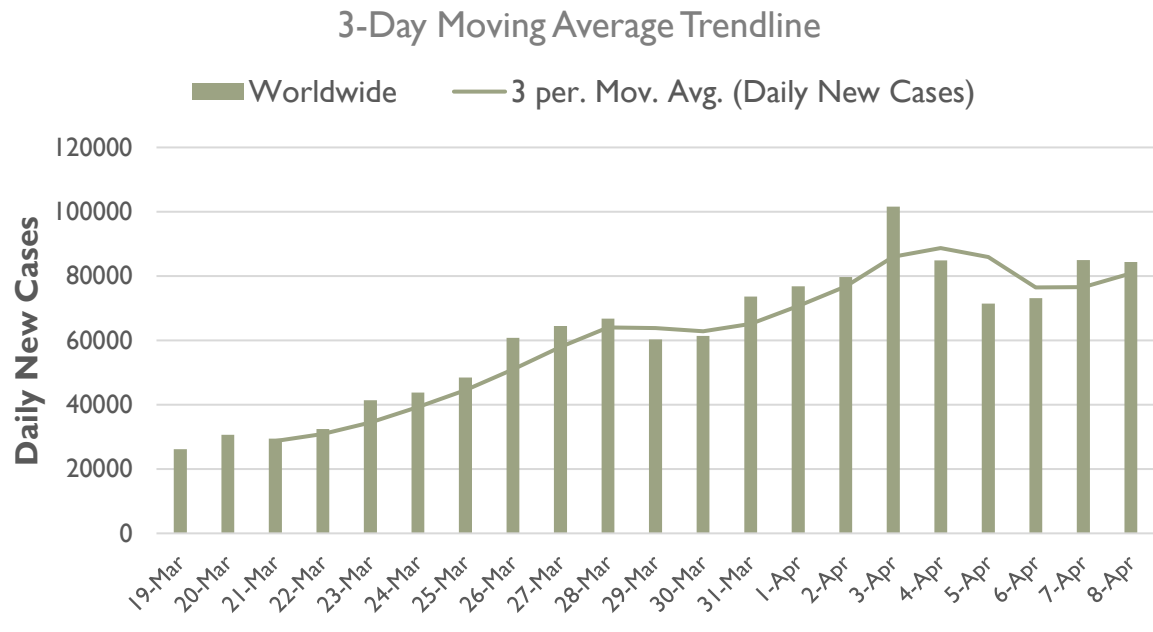
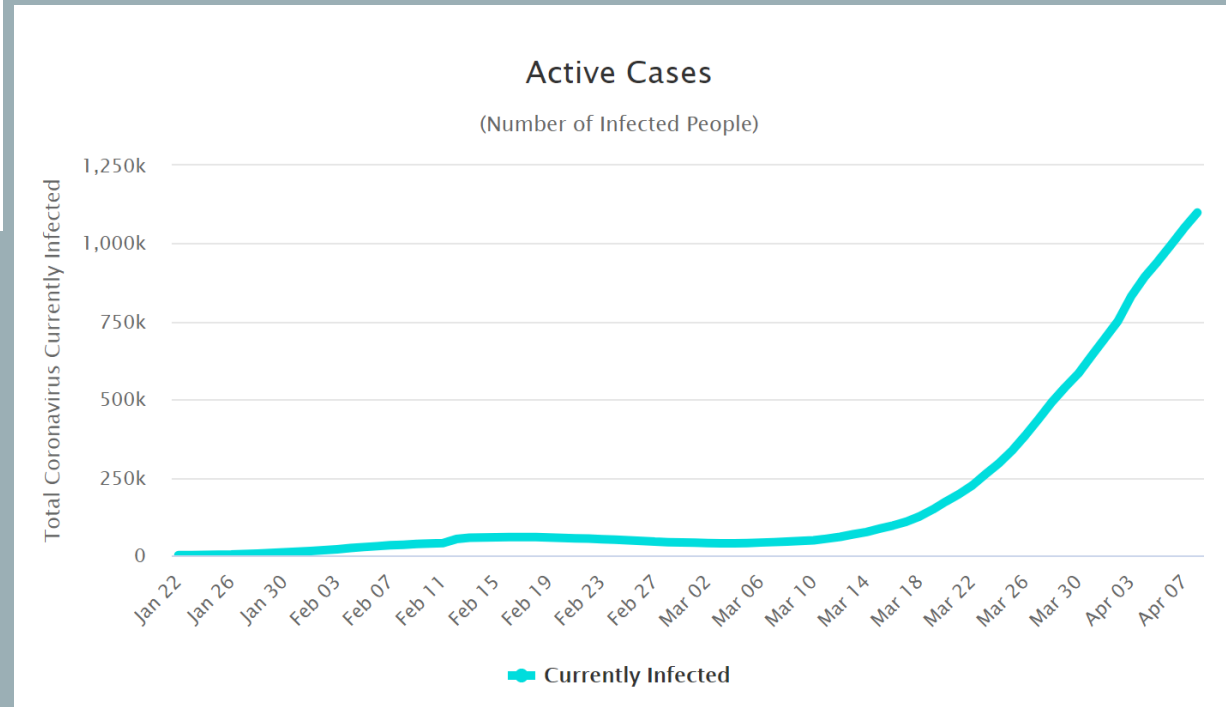
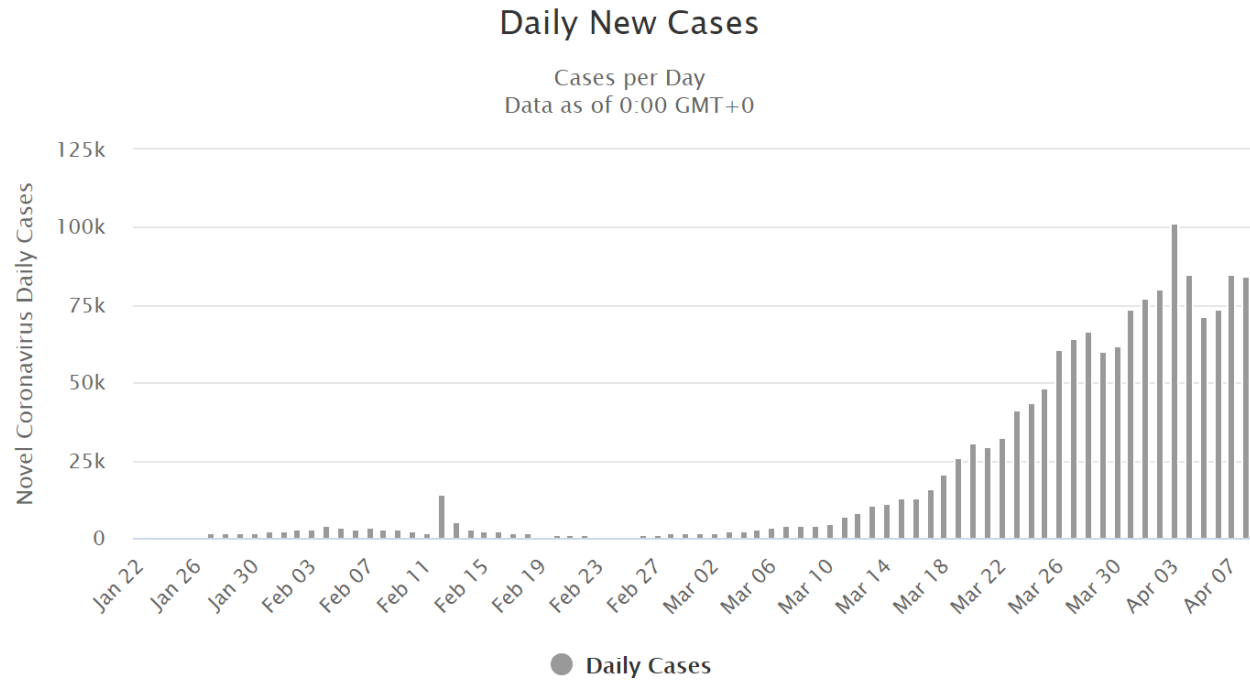


Table I.a

GROWTH IN NEW CASES SINCE THE DAY BEFORE

	3/19	3/20	3/21	3/22	3/23	3/24	3/25	3/26	3/27	3/28	3/29	3/30	3/31	4/1	4/2	4/3	4/4	4/5	4/6	4/7	4/8
USA	1.591	1.235	0.862	1.936	1.089	1.091	1.204	1.290	1.085	1.041	1.024	1.022	1.216	1.070	1.128	1.081	1.059	0.740	1.198	1.099	0.958
Spain	1.124	1.056	1.123	0.834	1.946	1.087	1.077	1.109	0.959	0.947	0.915	1.141	1.015	1.029	0.970	0.898	0.977	0.786	0.918	1.047	1.192
Italy	1.265	1.125	1.095	0.848	0.861	1.096	0.993	1.191	0.953	1.011	0.873	0.776	1.001	1.180	0.976	0.982	1.048	0.898	0.834	0.844	1.262
Germany	1.011	1.513	0.556	0.997	1.667	0.941	1.101	1.527	1.048	0.984	0.695	0.939	1.106	1.254	1.104	0.934	0.775	0.817	0.807	1.319	1.314
France	1.325	0.869	1.142	0.844	2.462	0.638	1.196	1.339	0.971	1.211	0.564	1.684	1.732	0.641	0.435	10.898	0.338	0.371	1.792	2.139	0.351
China	1.15	1.051	1.122	0.848	2.000	0.603	1.426	0.821	0.982	0.833	0.000	---	0.456	0.972	0.886	0.613	1.579	1.300	0.821	1.938	1.016
Iran	0.878	1.183	0.781	1.064	1.373	1.249	1.252	1.083	1.225	1.051	0.943	1.098	0.976	0.961	0.962	0.944	0.943	0.970	0.916	0.919	0.956
UK	0.951	1.110	1.450	0.643	1.454	1.476	1.018	1.466	1.355	0.882	0.956	1.076	1.149	1.437	0.981	1.049	0.839	1.580	0.644	0.956	1.511
Switzerland	2.968	1.258	0.896	0.490	2.162	0.819	0.943	0.896	1.222	1.028	0.656	1.452	0.625	1.703	0.911	0.736	1.154	0.662	0.936	1.070	1.723
Austria	1.697	0.882	0.730	1.720	1.512	0.907	0.377	4.331	0.597	0.728	0.901	1.605	0.677	0.945	0.787	0.945	0.651	1.051	0.911	1.390	0.886
S Korea	1.634	0.572	1.690	0.667	0.653	1.188	1.316	1.040	0.875	1.604	0.719	0.743	1.603	0.808	0.881	0.966	1.093	0.862	0.580	1.000	1.128
Australia	1.135	1.075	0.837	3.729	0.518	1.547	0.835	1.042	0.877	0.784	2.054	0.563	1.020	0.941	0.933	0.526	0.686	2.083	0.725	0.641	0.688
Cyprus	1.000	0.889	1.125	1.222	1.909	0.381	1.000	1.750	1.143	1.063	2.059	0.457	2.000	1.813	0.621	1.111	0.750	0.667	0.950	1.526	1.103
Hawaii	3.333	1.100	1.000	0.727	2.500	0.700	0.429	1.833	1.273	2.214	0.774	1.208	0.690	1.700	0.794	1.259	0.941	0.625	0.800	1.438	1.087
Worldwide	1.271	1.174	0.960	1.102	1.275	1.058	1.107	1.254	1.061	1.035	0.903	1.019	1.199	1.043	1.037	1.274	0.835	0.842	1.024	1.161	0.993

Table 1.b

AVERAGE GROWTH OF LAST FIVE DAYS

	3/23-27	3/24-28	3/25-29	3/26-30	3/27-31	3/28-4/1	3/29-4/2	3/30-4/3	3/31-4/4	4/1-4/5	4/2-4/6	4/3-4/7	4/4-4/8
USA	1.152	1.142	1.129	1.092	1.077	1.074	1.092	1.103	1.111	1.016	1.041	1.035	1.011
Spain	1.236	1.036	1.002	1.014	0.996	1.009	1.014	1.011	0.978	0.932	0.910	0.925	0.984
Italy	1.019	1.049	1.004	0.961	0.923	0.968	0.961	0.983	1.037	1.017	0.948	0.921	0.977
Germany	1.257	1.120	1.071	1.039	0.954	0.996	1.019	1.067	1.035	0.977	0.887	0.930	1.006
France	1.321	1.071	1.056	1.154	1.232	1.166	1.011	3.078	2.809	2.537	2.767	3.107	0.998
China	1.166	0.933	0.812	0.659	0.568	0.565	0.578	0.732	0.901	1.070	1.040	1.250	1.331
Iran	1.236	1.172	1.111	1.080	1.059	1.006	0.988	0.988	0.957	0.956	0.947	0.938	0.941
UK	1.354	1.239	1.135	1.147	1.084	1.100	1.120	1.138	1.091	1.177	1.019	1.014	1.106
Switzerland	1.208	0.982	0.949	1.051	0.996	1.093	1.069	1.085	1.026	1.033	0.880	0.912	1.109
Austria	1.545	1.388	1.387	1.632	0.902	0.971	0.983	0.992	0.801	0.876	0.869	0.990	0.978
S Korea	1.014	1.205	1.111	0.996	1.109	1.095	0.951	1.000	1.070	0.922	0.876	0.900	0.933
Australia	0.964	1.017	1.118	1.064	1.060	1.072	1.102	0.797	0.821	1.034	0.991	0.932	0.965
Cyprus	1.237	1.067	1.403	1.294	1.344	1.478	1.390	1.200	1.259	0.992	0.820	1.001	0.999
Hawaii	1.347	1.290	1.305	1.461	1.232	1.317	1.033	1.130	1.077	1.064	0.884	1.013	0.978
Worldwide	1.151	1.103	1.072	1.054	1.043	1.040	1.040	1.115	1.078	1.006	1.003	1.027	0.971

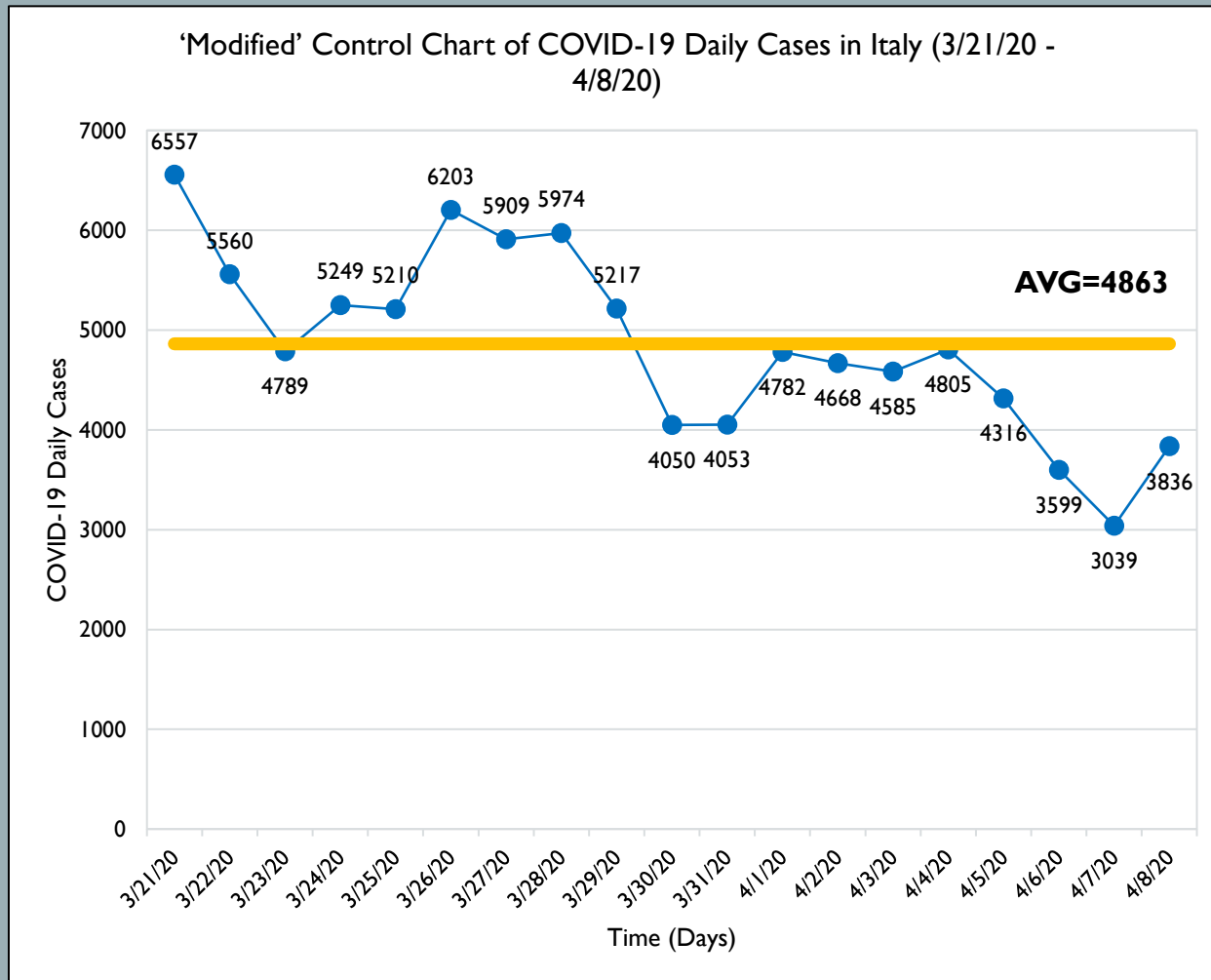
Table 2

RATIO OF THE AVERAGE NEW CASES OF RECENT THREE DAYS TO MAX DAILY PEAK

	3/22	3/23	3/24	3/25	3/26	3/27	3/28	3/29	3/30	3/31	4/1	4/2	4/3	4/4	4/5	4/6	4/7	4/8
USA	0.701	0.796	0.921	0.865	0.806	0.879	0.949	0.972	0.978	0.876	0.901	0.905	0.915	0.939	0.895	0.876	0.867	0.932
Spain	0.908	0.710	0.798	0.927	0.913	0.954	0.956	0.900	0.896	0.914	0.968	0.972	0.938	0.889	0.789	0.704	0.636	0.668
Italy	0.920	0.859	0.793	0.775	0.847	0.881	0.919	0.869	0.775	0.677	0.655	0.686	0.713	0.715	0.697	0.647	0.557	0.532
Germany	0.703	0.678	0.782	0.917	0.750	0.860	0.979	0.889	0.770	0.679	0.747	0.861	0.930	0.871	0.737	0.587	0.556	0.633
France	0.900	0.629	0.681	0.800	0.790	0.906	0.892	0.797	0.838	0.640	0.740	0.640	0.434	0.476	0.488	0.229	0.276	0.291
China	0.003	0.004	0.004	0.005	0.004	0.004	0.004	0.002	0.003	0.003	0.004	0.002	0.002	0.002	0.002	0.002	0.003	0.004
Iran	0.789	0.804	0.795	0.813	0.887	0.857	0.909	0.965	0.959	0.962	0.971	0.939	0.897	0.853	0.812	0.766	0.716	0.665
UK	0.777	0.859	0.715	0.883	0.784	0.747	0.873	0.909	0.878	0.893	0.767	0.892	0.975	0.931	0.796	0.759	0.753	0.730
Switzerland	0.778	0.761	0.721	0.819	0.722	0.730	0.761	0.722	0.716	0.605	0.703	0.695	0.718	0.655	0.544	0.491	0.418	0.522
Austria	0.793	0.682	0.856	0.750	0.614	0.609	0.677	0.474	0.485	0.482	0.485	0.381	0.339	0.270	0.233	0.195	0.217	0.225
S Korea	0.130	0.121	0.093	0.094	0.110	0.116	0.134	0.134	0.129	0.121	0.119	0.123	0.108	0.105	0.102	0.087	0.069	0.058
Australia	0.529	0.595	0.773	0.662	0.722	0.659	0.595	0.691	0.672	0.700	0.549	0.530	0.429	0.312	0.271	0.274	0.272	0.187
Cyprus	0.718	0.651	0.635	0.587	0.476	0.603	0.746	0.648	0.648	0.790	0.609	0.724	0.770	0.609	0.517	0.397	0.391	0.460
Hawaii	0.909	0.650	0.700	0.667	0.517	0.517	0.602	0.742	0.903	0.785	0.814	0.794	0.931	0.912	0.843	0.667	0.578	0.627
Worldwide	0.950	0.832	0.896	0.919	0.839	0.898	0.959	0.956	0.941	0.884	0.919	0.963	0.847	0.873	0.846	0.753	0.753	0.796

COVID-19
'MODIFIED' CONTROL CHART ANALYSIS

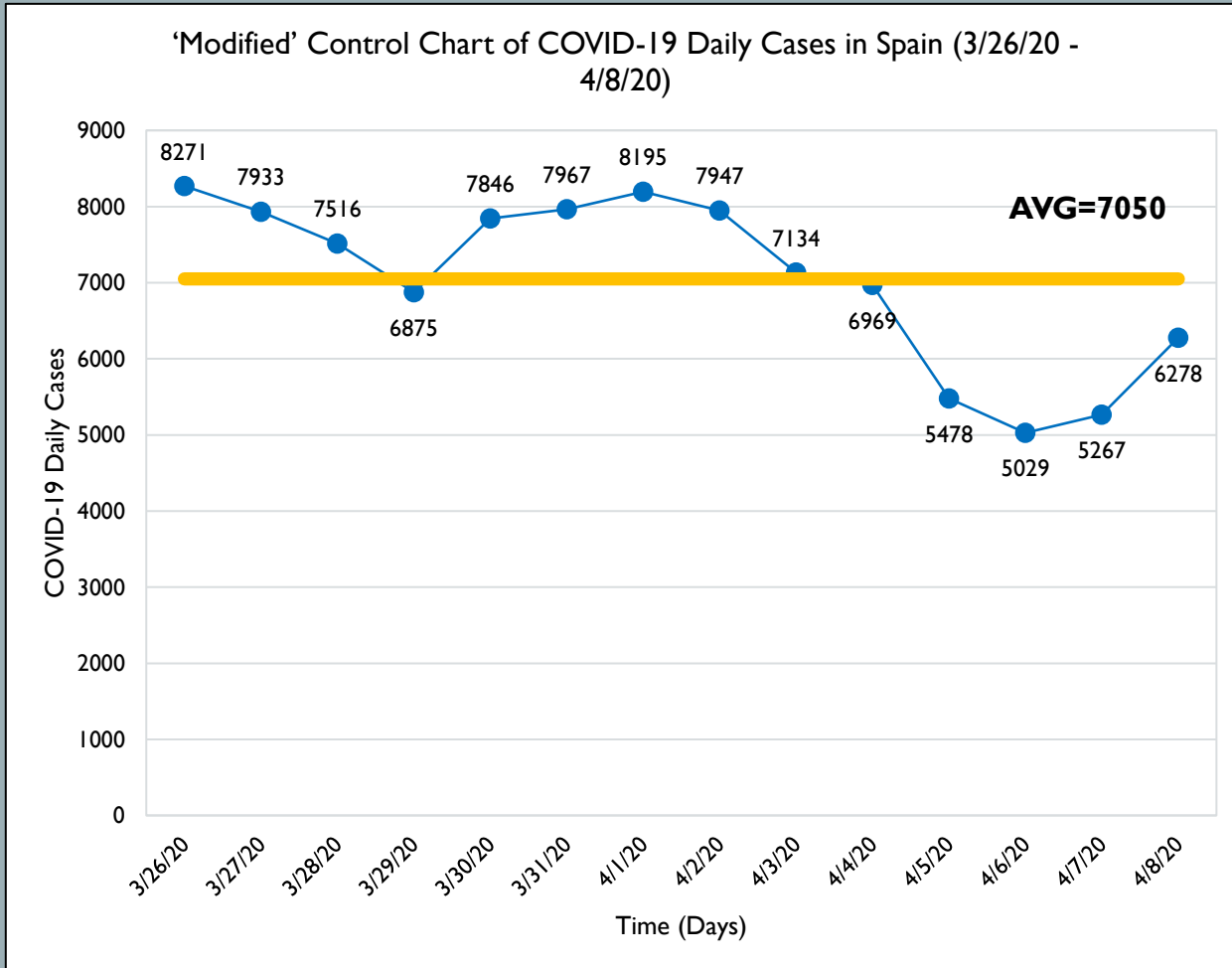
Italy



'Modified' Control Chart Analysis:

- Two points, out of three successive points, are on the same side of the centerline in Zone A or beyond.
 - The last three points (from 4/6/20 to 4/8/20) are below the control line, which suggests a good 'out-of-control' pattern for COVID-19 cases in Italy.
- Four points, out of five successive points, are on the same side of the centerline in Zone B or beyond.
 - The last five points (from 4/4/20 to 4/8/20) are all below the control line, which suggests an 'out-of-control' pattern for COVID-19 cases in Italy. A good 'out-of-control' sign.
- Nine successive points are on one side of the centerline.
 - The last nine points (from 3/31/20 to 4/8/20) are all on one side (below the centerline). This good 'out-of-control' pattern suggests that the daily COVID-19 cases in Italy are stabilizing in a positive direction.

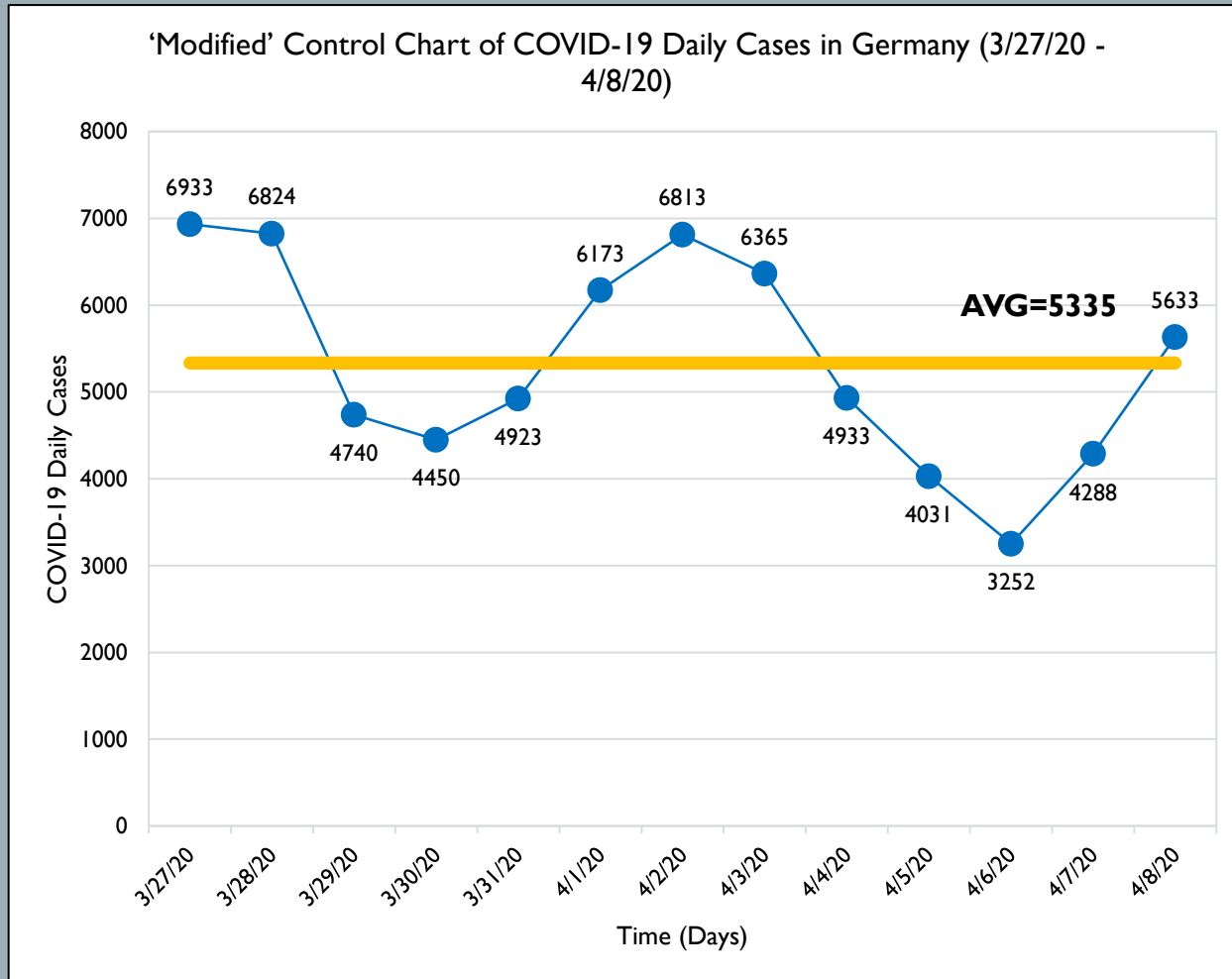
Spain



'Modified' Control Chart Analysis:

- Two points, out of three successive points, are on the same side of the centerline in Zone A or beyond.
 - The last three points (from 4/6/20 to 4/8/20) are below the control line, which suggests a good 'out-of-control' pattern for COVID-19 cases in Spain. Also, the regressed trend line from 3/26/20 has a downward slope.
- Four points, out of five successive points, are on the same side of the centerline in Zone B or beyond.
 - The last five points (from 4/4/20 to 4/8/20) are all below the control line, which suggests an 'out-of-control' pattern for COVID-19 cases in Spain. A good 'out-of-control' sign.

Germany

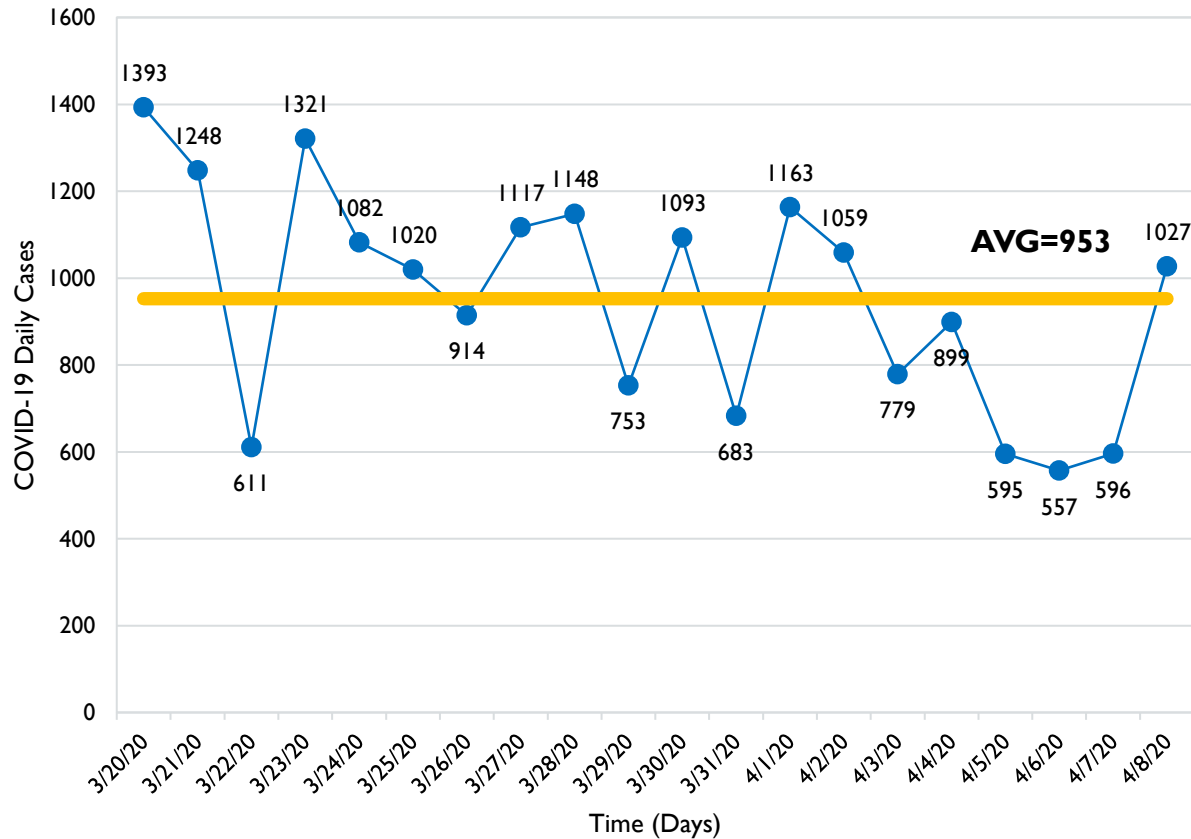


'Modified' Control Chart Analysis:

- Two points, out of three successive points, are on the same side of the centerline in Zone A or beyond.
 - Three points (from 4/5/20 to 4/7/20) are below the control line, which suggests a good 'out-of-control' pattern for COVID-19 cases in Germany. Also, a linear trend line with a downward slope can be observed from 3/27/20.
- Four points, out of five successive points, are on the same side of the centerline in Zone B or beyond.
 - Four points (from 4/4/20 to 4/7/20) are all below the control line, which suggests an 'out-of-control' pattern for COVID-19 cases in Germany. A good 'out-of-control' sign.

Switzerland

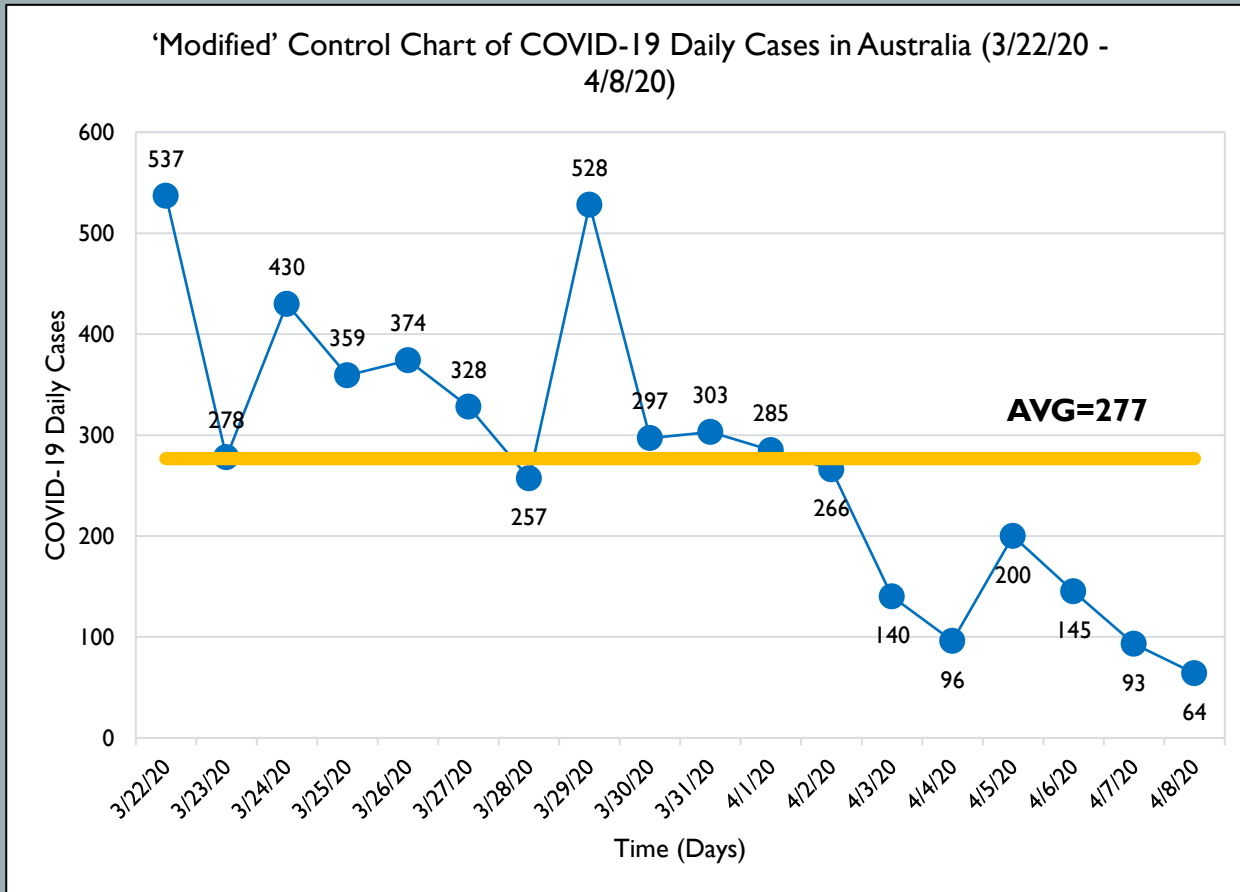
'Modified' Control Chart of COVID-19 Daily Cases in Switzerland (3/20/20 - 4/8/20)



'Modified' Control Chart Analysis:

- Two points, out of three successive points, are on the same side of the centerline in Zone A or beyond.
 - Three points (from 4/5/20 to 4/7/20) are below the control line, which suggests a good 'out-of-control' pattern for COVID-19 cases in Switzerland.
- Four points, out of five successive points, are on the same side of the centerline in Zone B or beyond.
 - Four points (from 4/4/20 to 4/7/20) are all below the control line, which suggests an 'out-of-control' pattern for COVID-19 cases in Switzerland. A good 'out-of-control' sign.

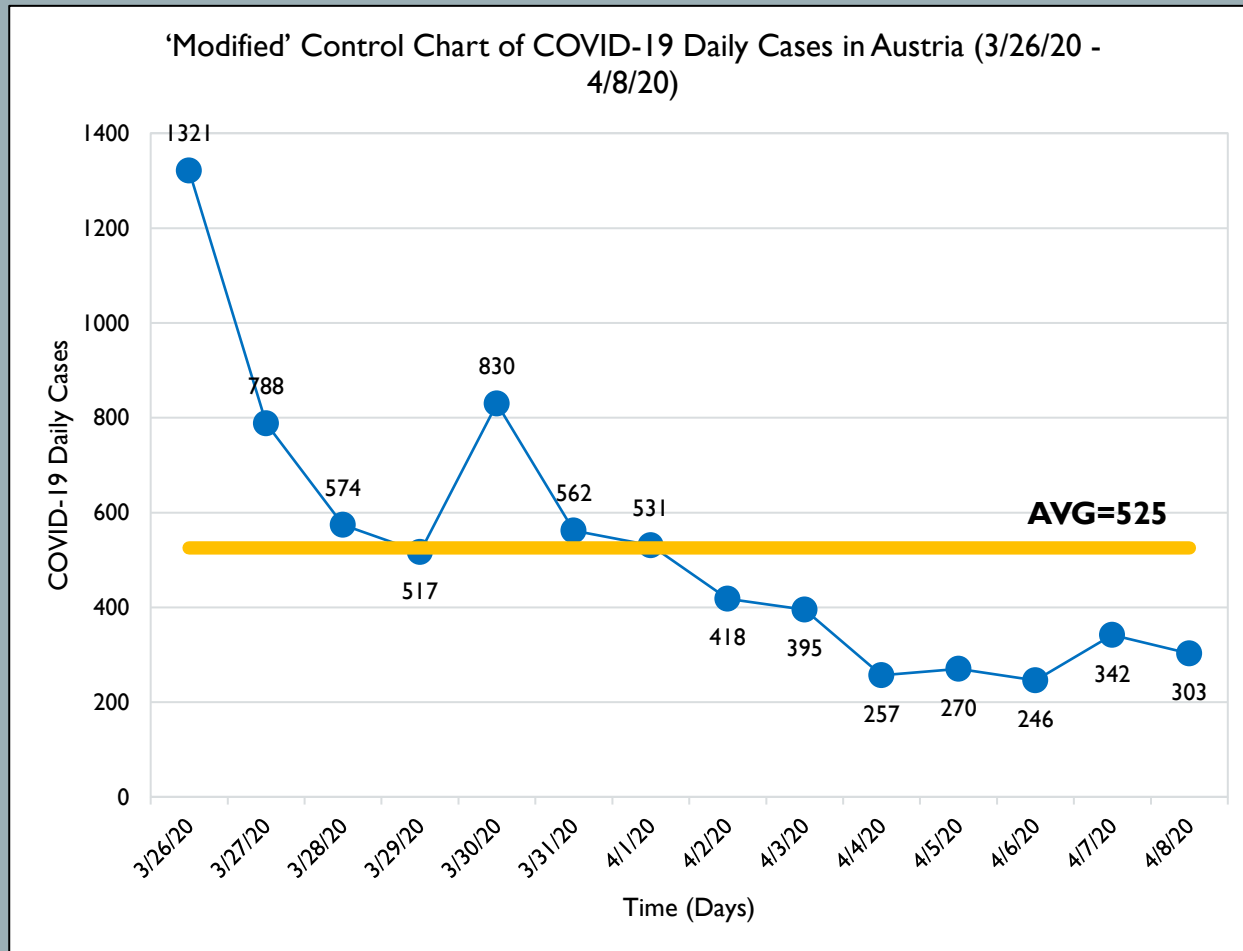
Australia



'Modified' Control Chart Analysis:

- Two points, out of three successive points, are on the same side of the centerline in Zone A or beyond.
 - The last three points (from 4/6/20 to 4/8/20) are below the control line, which suggests an 'out-of-control' pattern for COVID-19 cases in Australia. This is a good pattern. Also, the linear trend line has a downward slope.
- Four points, out of five successive points, are on the same side of the centerline in Zone B or beyond.
 - The last five points (from 4/4/20 to 4/8/20) are all below the control line, which suggests an 'out-of-control' pattern for COVID-19 cases in Australia. A good 'out-of-control' sign. Also, a linear trend line with a downward slope can be observed from 3/22/20.

Austria



'Modified' Control Chart Analysis:

- Two points, out of three successive points, are on the same side of the centerline in Zone A or beyond.
 - The last three points (from 4/6/20 to 4/8/20) are below the control line, which suggests an 'out-of-control' pattern for COVID-19 cases in Austria. This is a good 'out-of-control' pattern.
- Four points, out of five successive points, are on the same side of the centerline in Zone B or beyond.
 - The last five points (from 4/4/20 to 4/8/20) are all below the control line, which suggests an 'out-of-control' pattern for COVID-19 cases in Austria. A good 'out-of-control' sign. Also, a linear trend line with a downward slope can be observed from 3/26/20.