COVID-19 Cases

As of Monday 4/13/2020, 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, Israel, 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/

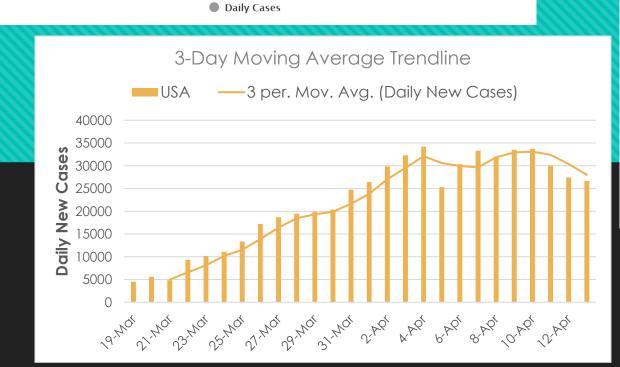
Daily New Cases in the United States

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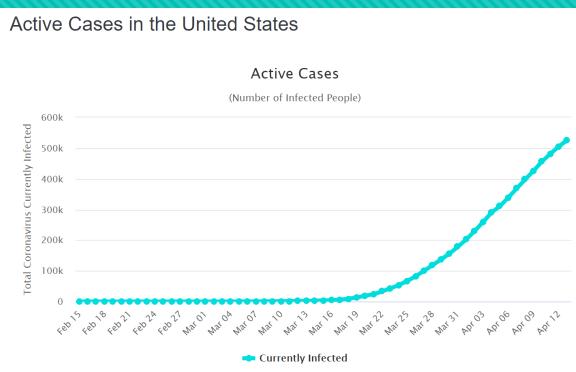
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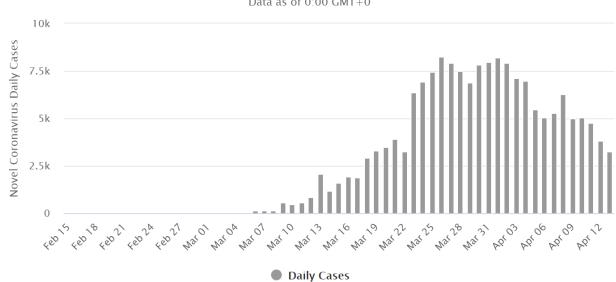
1. USA



Daily New Cases in Spain



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

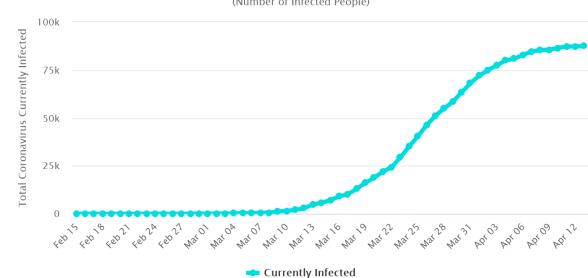


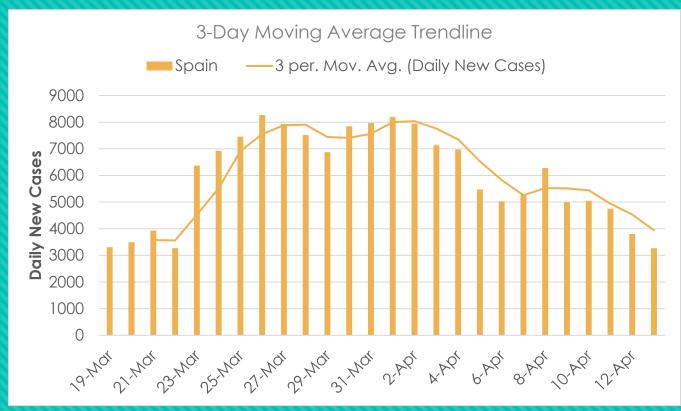
2. Spain





(Number of Infected People)



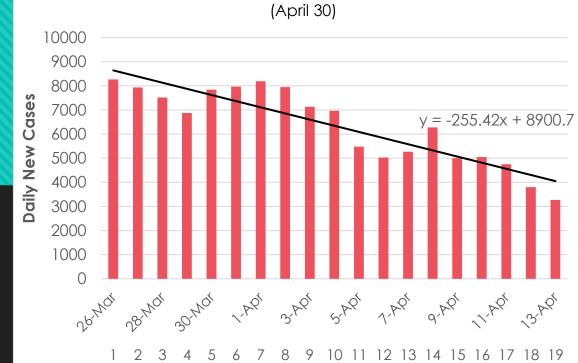


Trendlines for Spain



—Linear Trendline

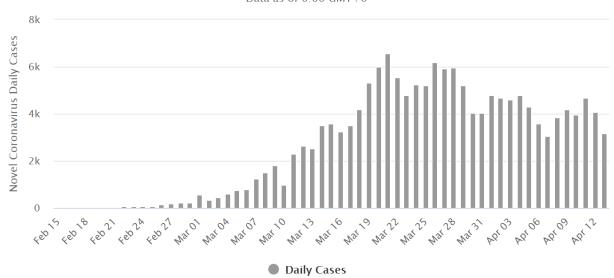
when y = 0; x = 35 (April 30)



Daily New Cases in Italy

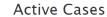
Daily New Cases

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

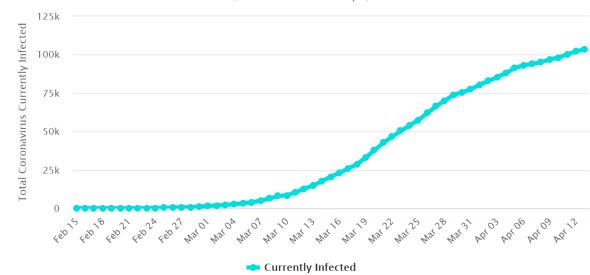


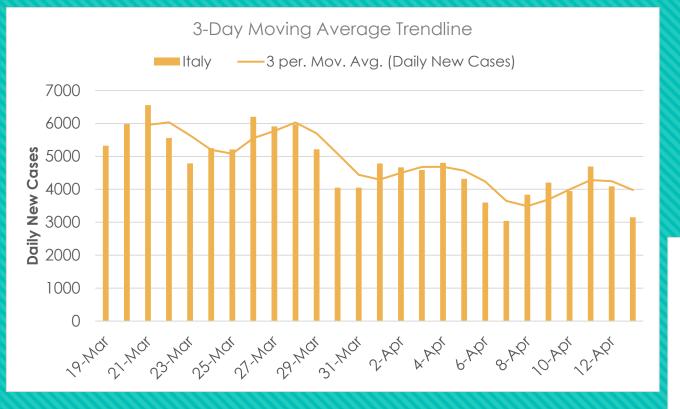
3. Italy

Active Cases in Italy



(Number of Infected People)





Trendlines for Italy

Italy Bar Chart of Daily New Cases from Peak till Today

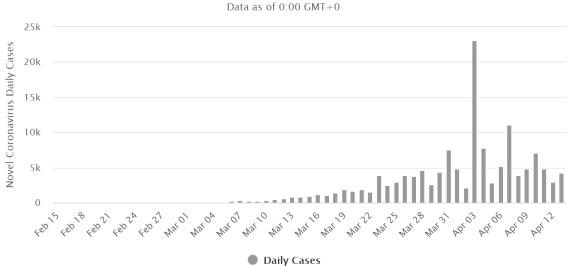
—Linear Trendline

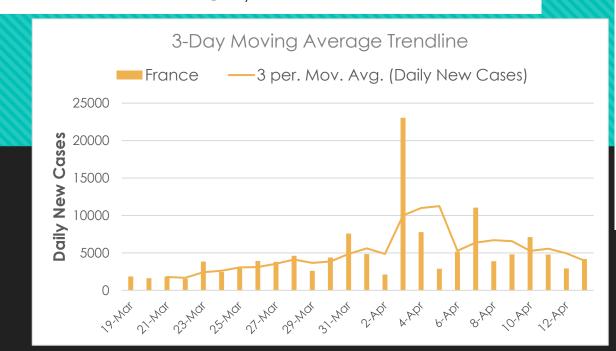
when y = 0; x = 59 (May 19)



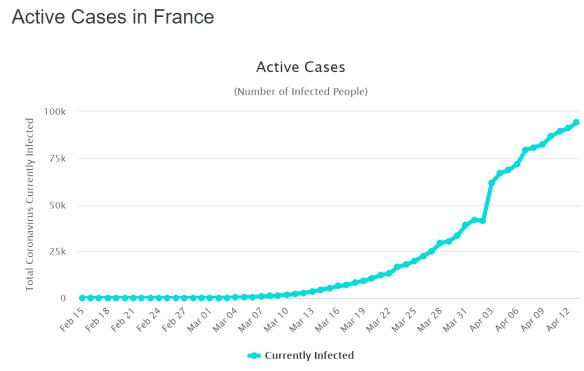
Daily New Cases in France

Cases per Day





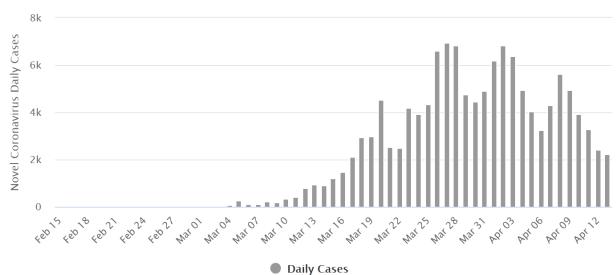
4. France



Daily New Cases in Germany

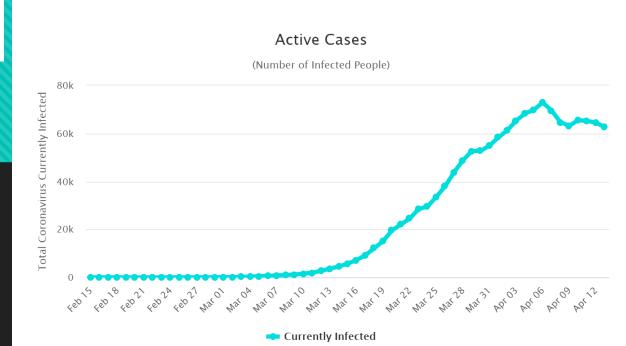
Daily New Cases

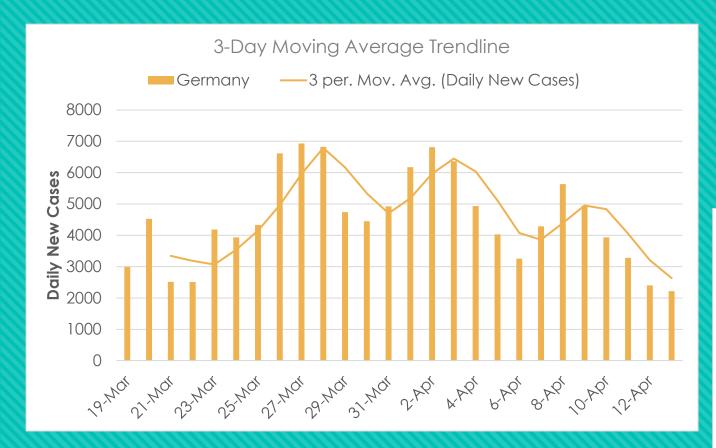
Cases per Day
Data as of 0:00 GMT+0



5. Germany







Trendlines for Germany



—Linear Trendline

when y = 0; x = 33 (April 29)

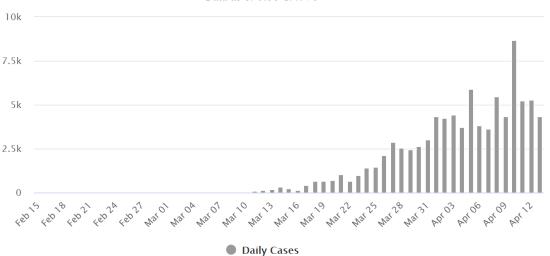


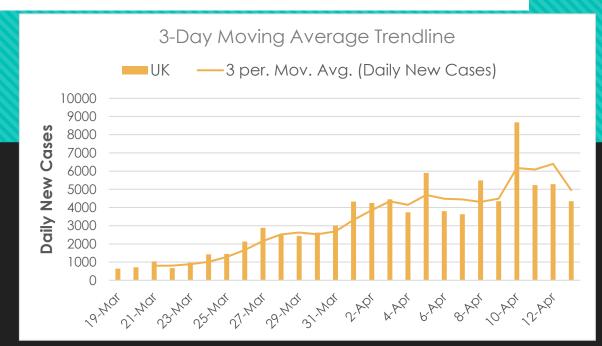
Daily New Cases in the United Kingdom

Novel Coronavirus Daily Cases

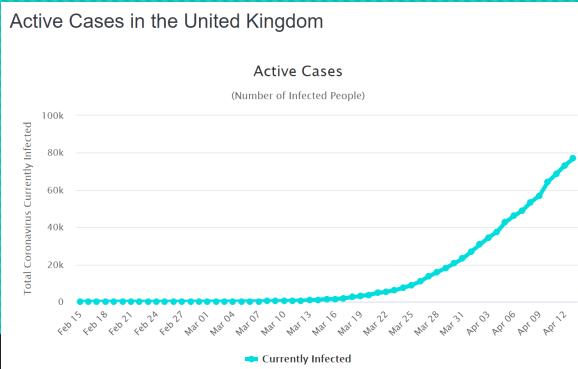


Cases per Day Data as of 0:00 GMT+0

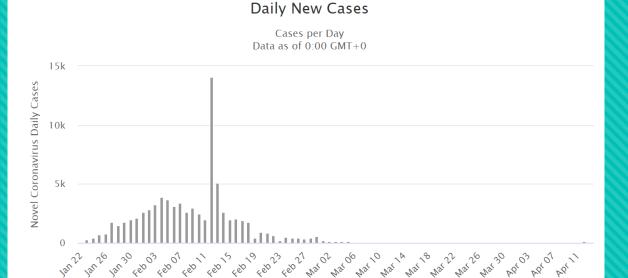


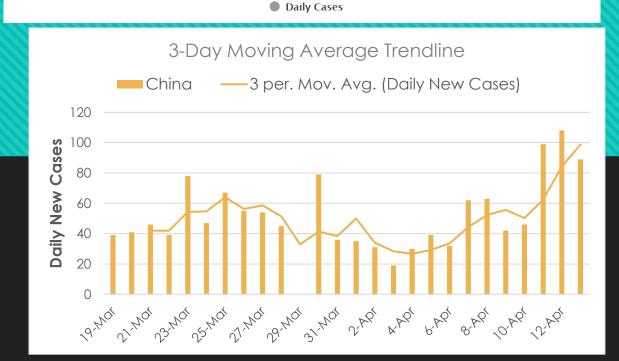


6. UK

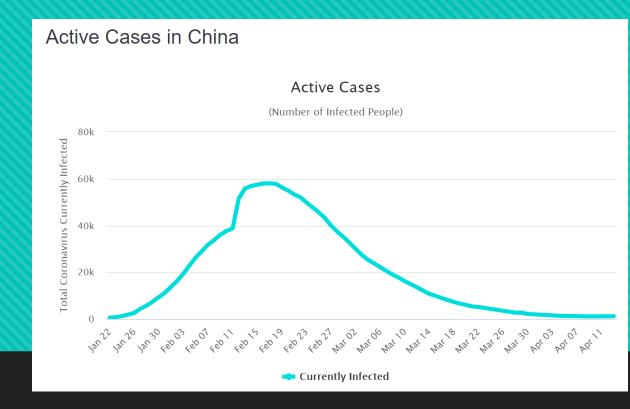


Daily New Cases in China





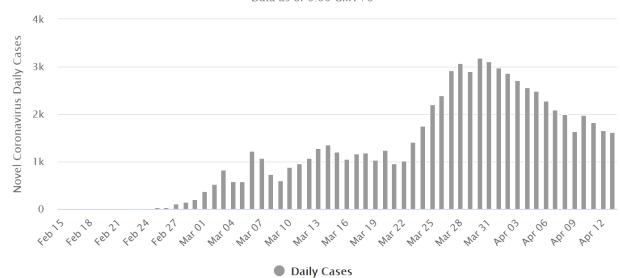
7. China



Daily New Cases in Iran

Daily New Cases

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



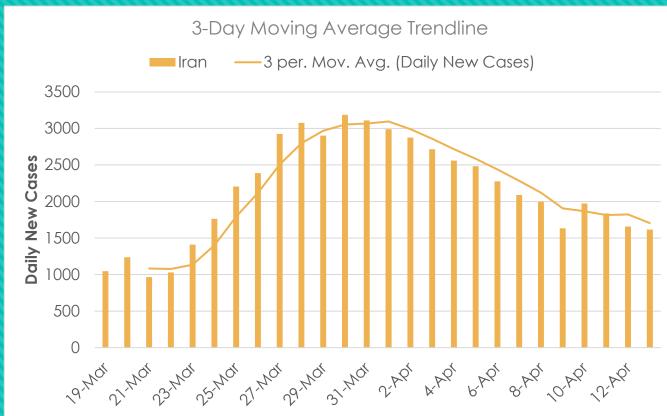
8. Iran

Active Cases in Iran



(Number of Infected People)



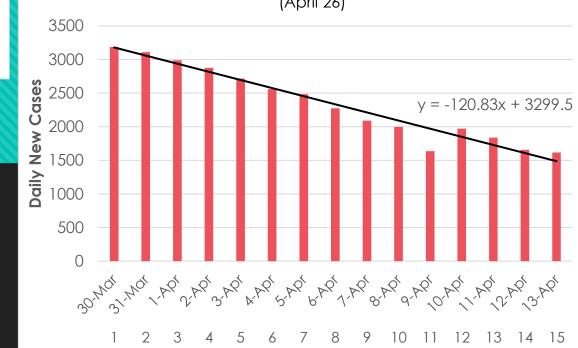


Trendlines for Iran



—Linear Trendline

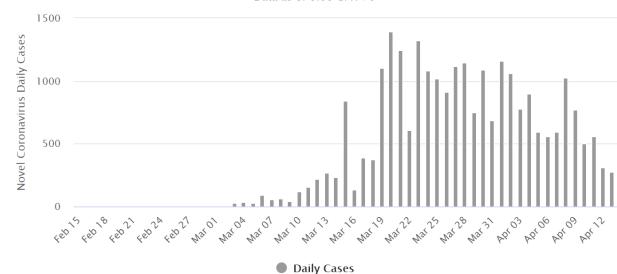
when y = 0; x = 27 (April 26)



Daily New Cases in Switzerland

Daily New Cases

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

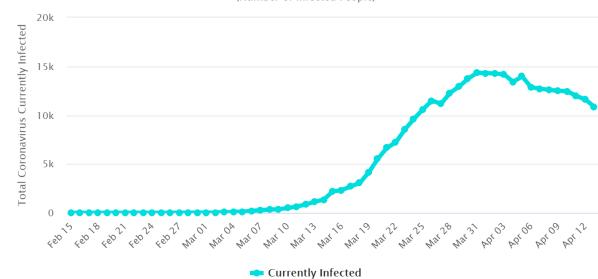


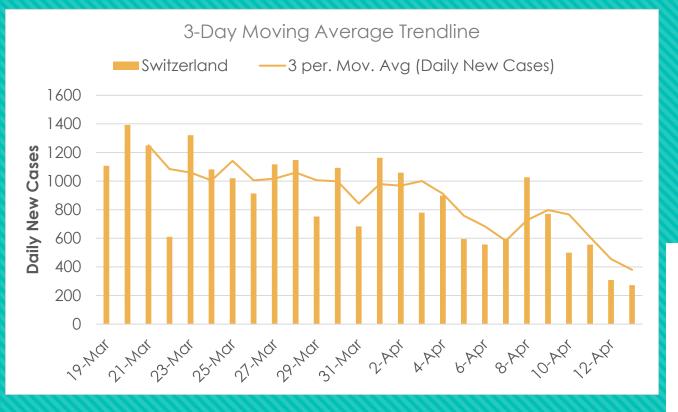
9. Switzerland





(Number of Infected People)





Trendlines for Switzerland

Switzerland Bar Chart of Daily New Cases from Peak till Today

—Linear Trendline

when y = 0; x = 40 (April 29)

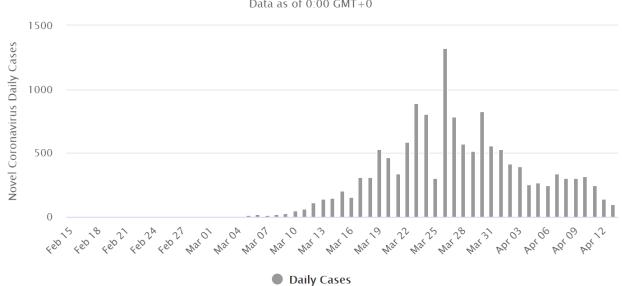


1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25

Daily New Cases in Austria

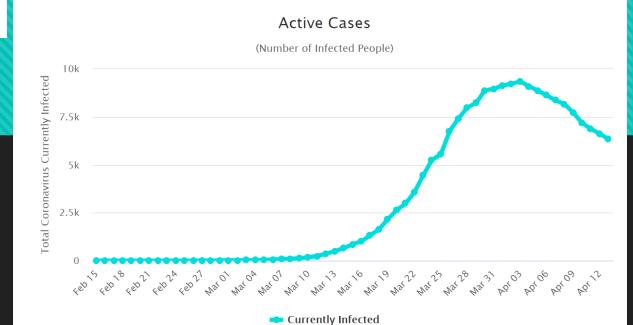
Daily New Cases

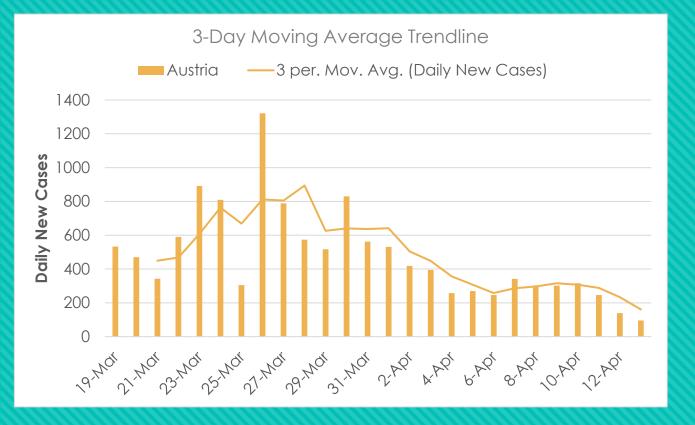
Cases per Day Data as of 0:00 GMT+0



Austria





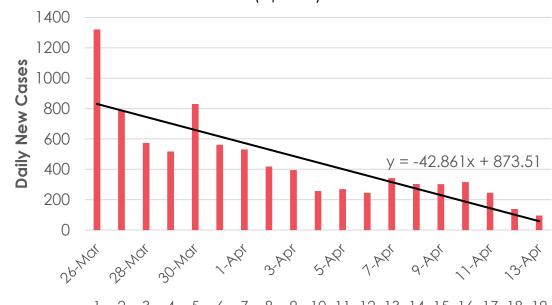


Trendlines for Austria



Linear Trendline when y = 0; x = 20

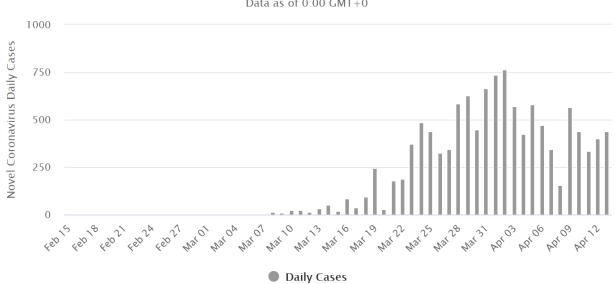
(April 15)



Daily New Cases in Israel



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

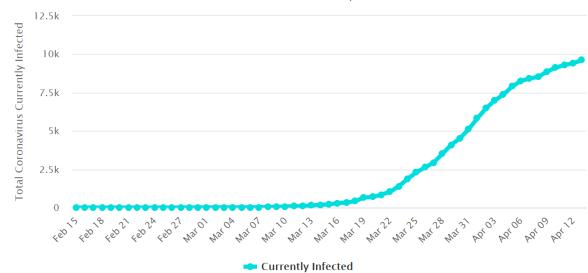


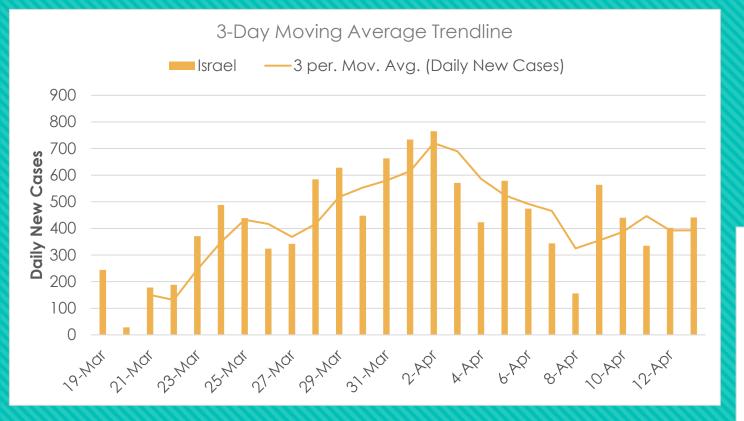
Israel

Active Cases in Israel

Active Cases

(Number of Infected People)



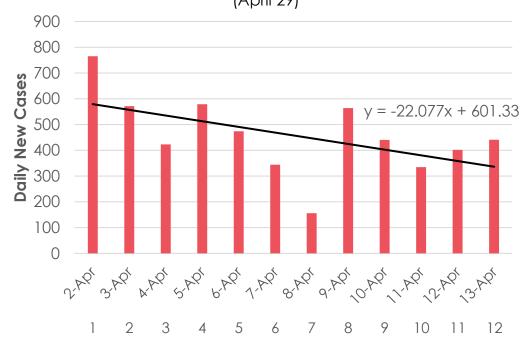


Trendlines for Israel

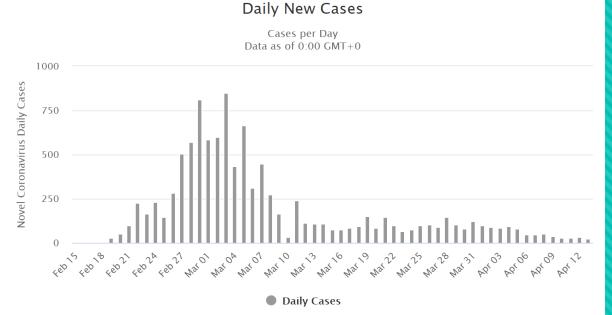


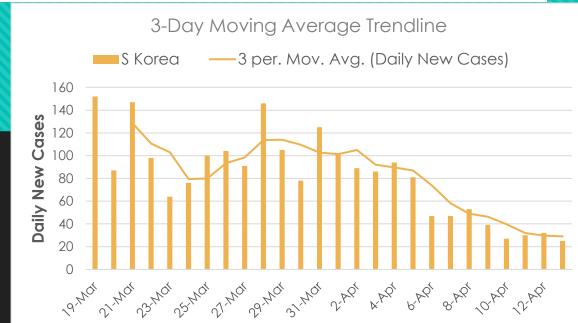
—Linear Trendline

when y = 0; x = 27 (April 29)

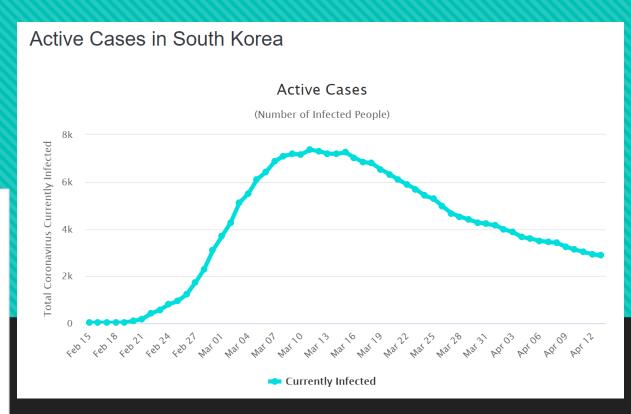


Daily New Cases in South Korea





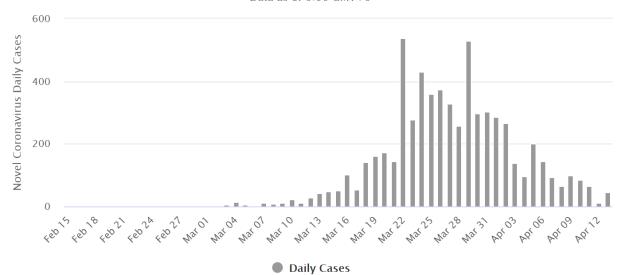
South Korea



Daily New Cases in Australia

Daily New Cases

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

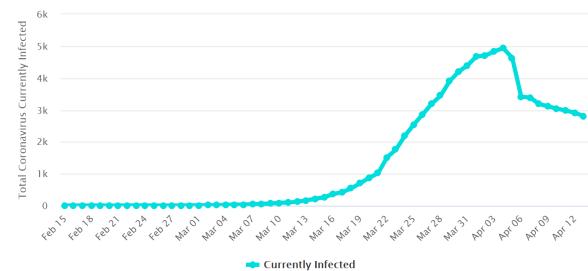


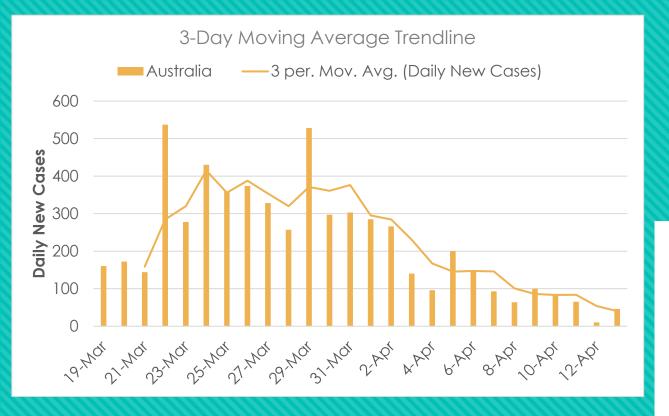
Australia

Active Cases in Australia



(Number of Infected People)

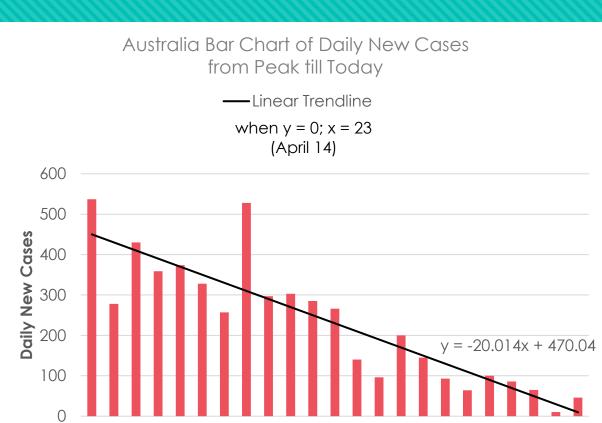


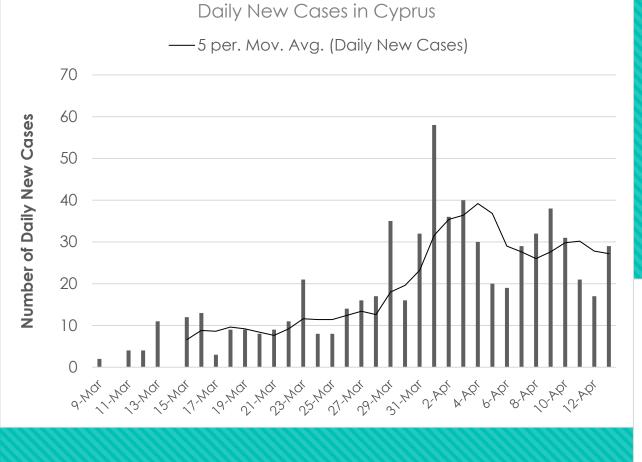


Trendlines for Australia

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10 11 12 13 14 15 16 17 18 19 20 21 22 23

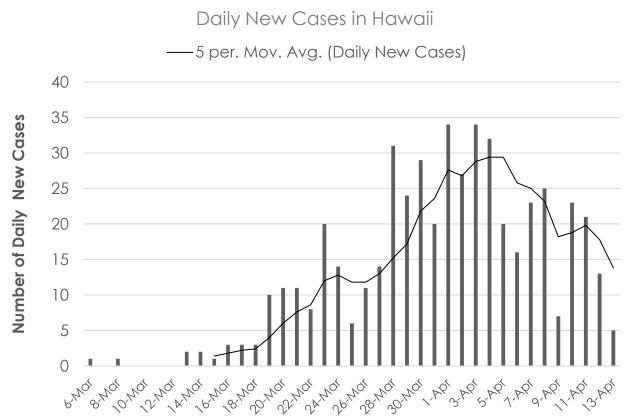




Hawaii

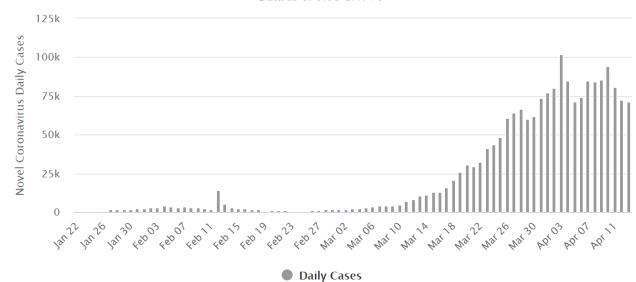
Cyprus

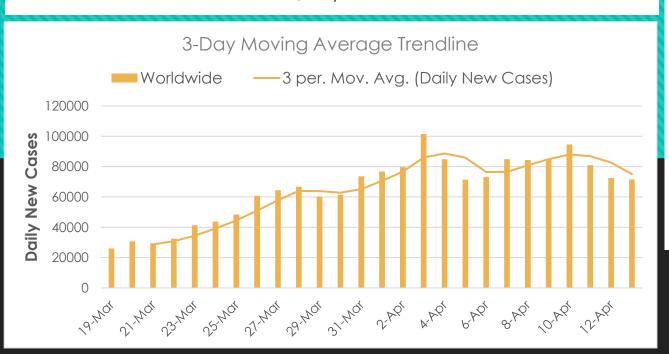
Correlation, r (Between Cyprus and Hawaii) = 0.590 r is significant at a = 5%



Daily New Cases

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





Worldwide

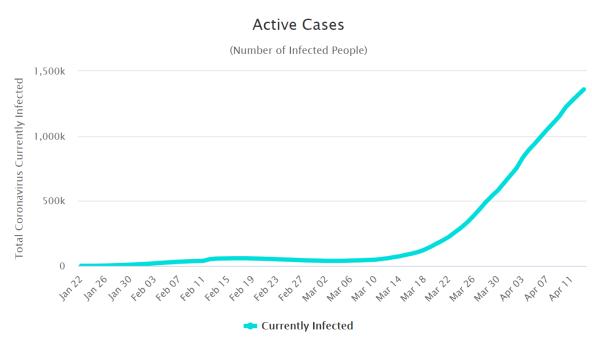


Table 1.a

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	4/9	4/10	4/11	4/12	4/13
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	1.050	1.006	0.889	0.914	0.972
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	0.797	1.010	0.941	0.800	0.859
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	1.096	0.940	1.188	0.872	0.771
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	1.237	1.484	0.672	0.614	1.426
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	0.877	0.797	0.834	0.732	0.923
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	0.791	1.998	0.603	1.011	0.821
China	1.147	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	0.667	1.095	2.152	1.091	0.824
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	0.818	1.207	0.932	0.902	0.976
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	0.751	0.649	1.112	0.554	0.886
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	0.997	1.046	0.778	0.565	0.691
Israel	2.542	0.115	6.357	1.056	1.973	1.315	0.900	0.738	1.056	1.708	1.075	0.713	1.480	1.107	1.042	0.746	0.741	1.369	0.819	0.726	0.453	3.615	0.780	0.761	1.200	1.097
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	0.736	0.692	1.111	1.067	0.781
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	1.563	0.860	0.756	0.154	4.600
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	1.188	0.816	0.677	0.810	1.706
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	0.280	3.286	0.913	0.619	0.385
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	1.010	1.111	0.856	0.896	0.987

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	4/5-4/9	4/6-4/10	4/7-4/11	4/8-4/12	4/9-4/13
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	1.009	1.062	1.001	0.964	0.966
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	0.948	0.993	0.997	0.948	0.881
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	0.987	0.995	1.066	1.072	0.973
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	1.178	1.400	1.176	0.871	1.086
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	1.027	1.023	1.028	0.911	0.833
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	1.096	1.180	1.172	1.183	1.045
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	1.148	1.107	1.374	1.204	1.166
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	0.916	0.963	0.966	0.963	0.967
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	1.028	1.026	1.061	0.958	0.790
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	1.047	1.046	1.020	0.855	0.815
Israel	1.196	1.143	1.095	1.058	1.206	1.217	1.084	1.018	1.023	1.001	0.943	0.880	0.821	1.396	1.279	1.267	1.362	1.491
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	0.861	0.827	0.933	0.947	0.877
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	1.140	0.895	0.902	0.804	1.586
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	1.087	1.117	1.062	0.919	1.039
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	0.846	1.378	1.401	1.237	1.096
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	1.006	1.060	1.026	0.973	0.972

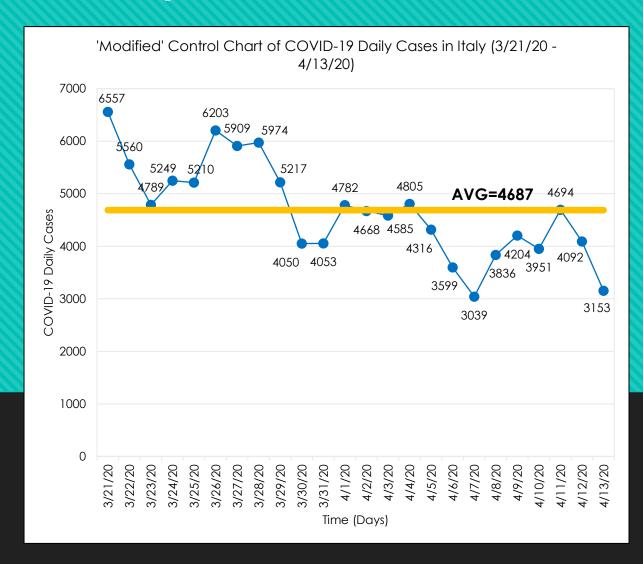
<u>Table 2</u>

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	4/9	4/10	4/11	4/12	4/13
USA									-		-	-	-	-	0.895	0.876	-	0.932	0.963	0.967	0.948	0.889	0.819
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	0.667	0.658	0.597	0.548	0.477
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	0.563	0.610	0.653	0.648	0.607
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	0.285	0.228	0.241	0.215	0.172
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	0.714	0.698	0.584	0.462	0.380
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	0.761	0.711	0.701	0.737	0.571
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	0.004	0.004	0.004	0.006	0.007
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	0.598	0.586	0.569	0.572	0.535
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	0.573	0.550	0.437	0.326	0.272
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	0.239	0.232	0.218	0.177	0.121
Israel	0.538	0.662	0.715	0.887	0.855	0.755	0.713	0.825	0.881	0.874	0.838	0.942	0.902	0.766	0.685	0.643	0.609	0.424	0.464	0.505	0.583	0.513	0.513
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	0.054	0.047	0.038	0.035	0.034
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	0.160	0.155	0.156	0.100	0.075
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	0.569	0.580	0.517	0.397	0.385
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	0.539	0.539	0.500	0.559	0.382
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	0.836	0.867	0.856	0.814	0.739

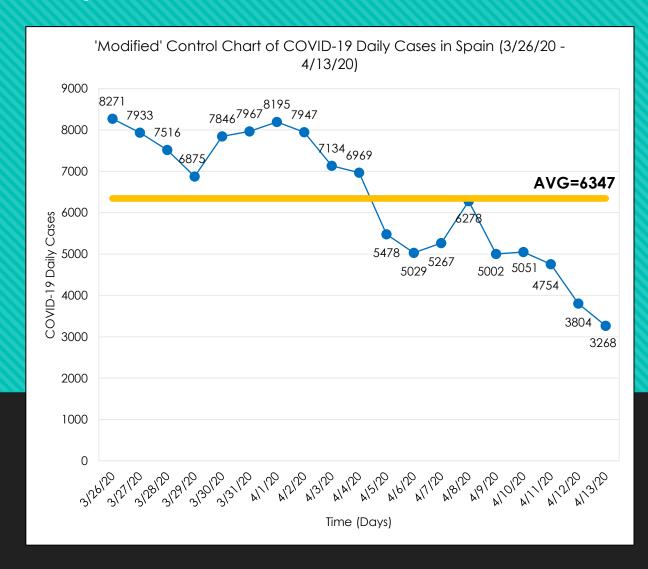
COVID-19 'MODIFIED' Control Chart Analysis

Italy



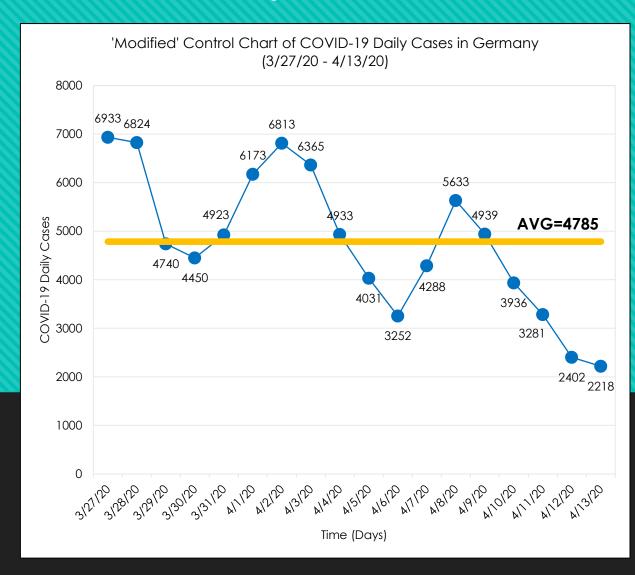
- Two points, out of three successive points, are on the same side of the centerline in Zone A or beyond.
 - o The last two points (4/11/20 and 4/13/20) are below the control line, which suggests a good 'out-of-control' pattern for COVID-19 cases in Italy. The linear trend line has a remarkable downward slope.
- Four points, out of five successive points, are on the same side of the centerline in Zone B or beyond.
 - Four points (4/9/20 4/10/20 and 4/12/20 4/13/20) 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 nine consecutive points (3/21/20 3/29/20) are all on one side (above) of the centerline. This was not a good 'out-of-control' pattern.

Spain



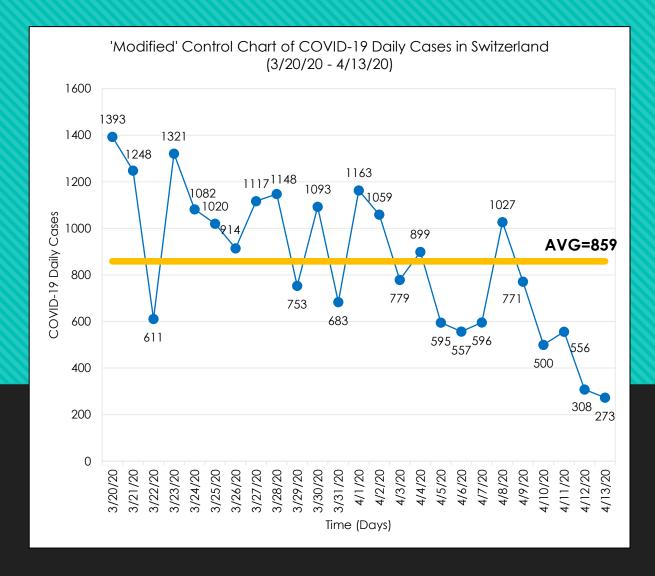
- Two points, out of three successive points, are on the same side of the centerline in Zone A or beyond.
 - The last three points (4/11/20 4/13/20) are below the control line, which suggests a good 'out-of-control' pattern for COVID-19 cases in Spain. The linear trend line has a remarkable downward slope.
- Four points, out of five successive points, are on the same side of the centerline in Zone B or beyond.
 - o The last five points (4/9/20 4/13/20) 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. The linear trend line has a remarkable downward slope.
- Nine successive points are on one side of the centerline.
 - Nine consecutive points (4/5/20 4/13/20) are all on one side (below) of the centerline. This good 'out-of-control' pattern suggests that the daily COVID-19 cases in Spain are stabilizing in a positive direction.

Germany



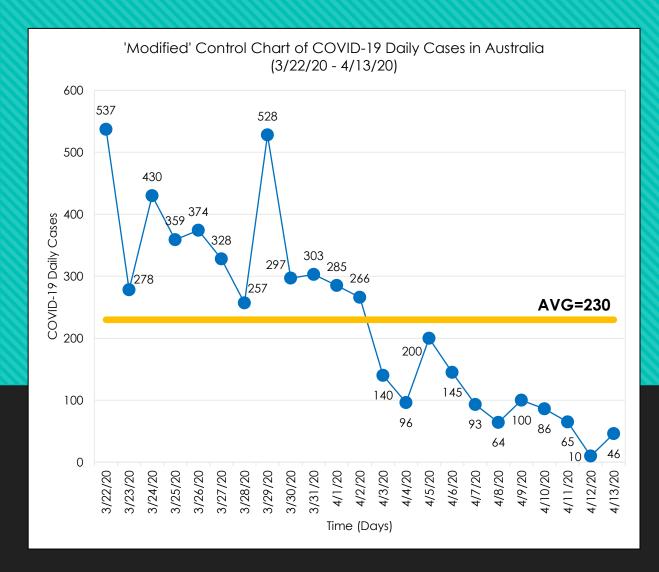
- Two points, out of three successive points, are on the same side of the centerline in Zone A or beyond.
 - The last three points (4/11/20 4/13/20) are below the control line, which suggests a good 'out-of-control' pattern for COVID-19 cases in Germany. The linear trend line has a downward slope.
- Four points, out of five successive points, are on the same side of the centerline in Zone B or beyond.
 - The last four points (4/10/20 4/13/20) 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. The linear trend line has a remarkable downward slope.

Switzerland



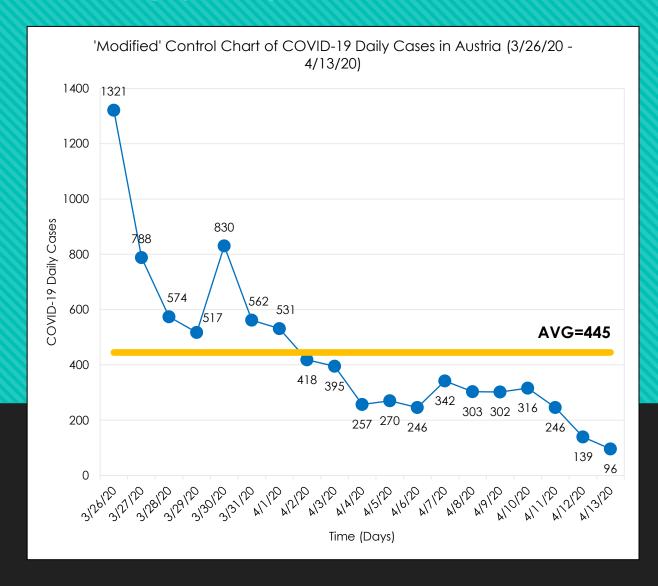
- Two points, out of three successive points, are on the same side of the centerline in Zone A or beyond.
 - The last three points (4/11/20 and 4/13/20) are below the control line, which suggests a good 'out-of-control' pattern for COVID-19 cases in Switzerland.
- Four points, out of five successive points, are on the same side of the centerline in Zone B or beyond.
 - The last five points (4/9/20 4/13/20) 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. The linear trend line has a remarkable downward slope.

Australia



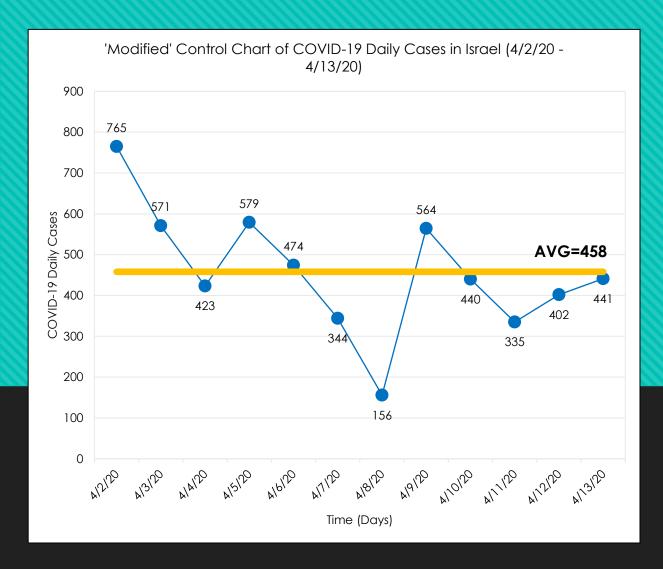
- Two points, out of three successive points, are on the same side of the centerline in Zone A or beyond.
 - The last three points (4/11/20 4/13/20) are below the control line, which suggests a good 'out-of-control' pattern for COVID-19 cases in Australia.
- Four points, out of five successive points, are on the same side of the centerline in Zone B or beyond.
 - The last five points (4/9/20 4/13/20) 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.
- Nine successive points are on one side of the centerline.
 - Nine consecutive points (4/5/20 4/13/20) are all on one side (below) of the centerline. This good 'out-of-control' pattern suggests that the daily COVID-19 cases in Australia are stabilizing in a positive direction.

Austria



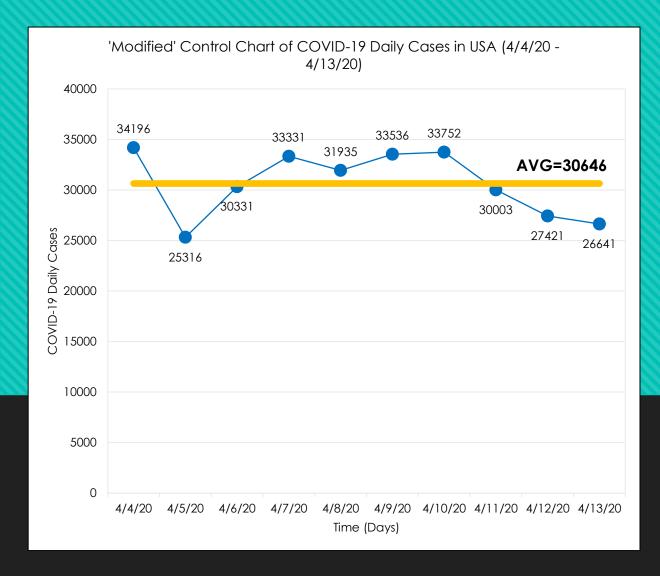
- Two points, out of three successive points, are on the same side of the centerline in Zone A or beyond.
 - The last three points (4/11/20 4/13/20) are below the control line, which suggests a good 'out-of-control' pattern for COVID-19 cases in Austria. The linear trend line has a remarkable downward slope.
- Four points, out of five successive points, are on the same side of the centerline in Zone B or beyond.
 - o The last five points (4/9/20 4/13/20) 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. The linear trend line has a remarkable downward slope.
- Nine successive points are on one side of the centerline.
 - Nine consecutive points (4/5/20 4/13/20) are all on one side (below) of the centerline. This good 'out-of-control' pattern suggests that the daily COVID-19 cases in Austria are stabilizing in a positive direction.

Israel



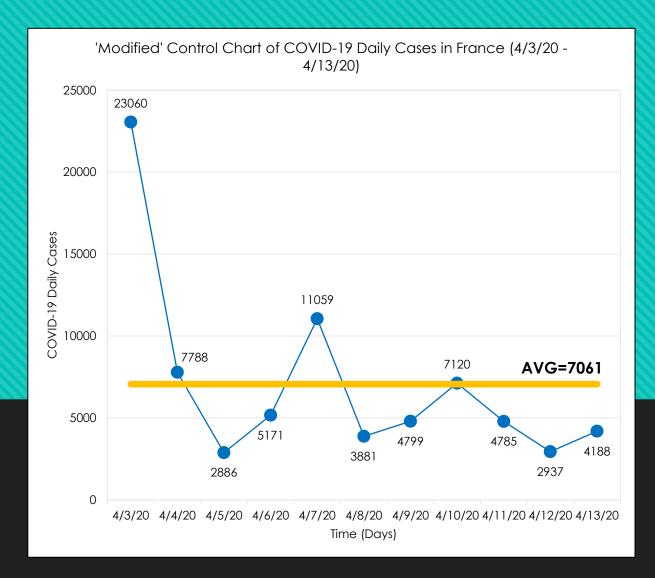
- Two points, out of three successive points, are on the same side of the centerline in Zone A or beyond.
 - o The last three points (4/11/20 4/13/20) are below the control line, which suggests a good 'out-of-control' pattern for COVID-19 cases in Israel.
- Four points, out of five successive points, are on the same side of the centerline in Zone B or beyond.
 - o The last four points (4/10/20 4/13/20) are all below the control line, which suggests an 'out-of-control' pattern for COVID-19 cases in Israel. A good 'out-of-control' sign.

USA



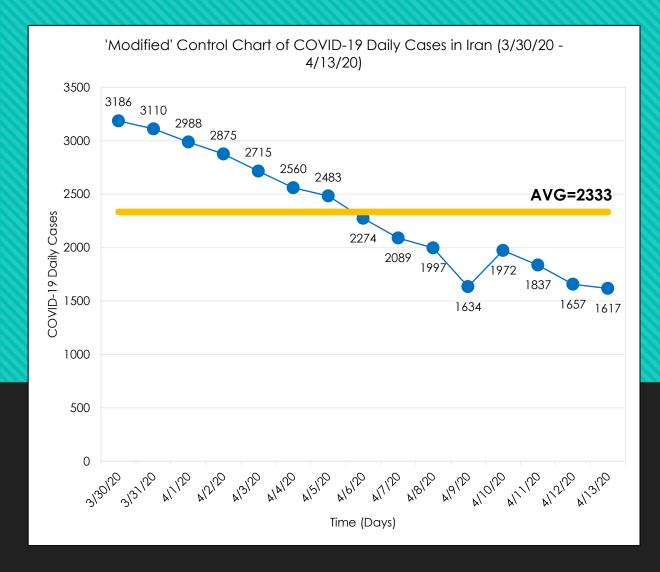
- Two points, out of three successive points, are on the same side of the centerline in Zone A or beyond.
 - The last three points (4/11/20 4/13/20) are below the control line, which suggests a good 'out-of-control' pattern for COVID-19 cases in USA. The linear trend line has a downward slope.
- Four points, out of five successive points, are on the same side of the centerline in Zone B or beyond.
 - Four points (4/7/20 4/10/20) are above the control line, which suggests a bad 'out-of-control' pattern for COVID-19 cases in USA. However, the downward slope after 4/10/20 suggests that daily cases are trending towards a positive direction.

France



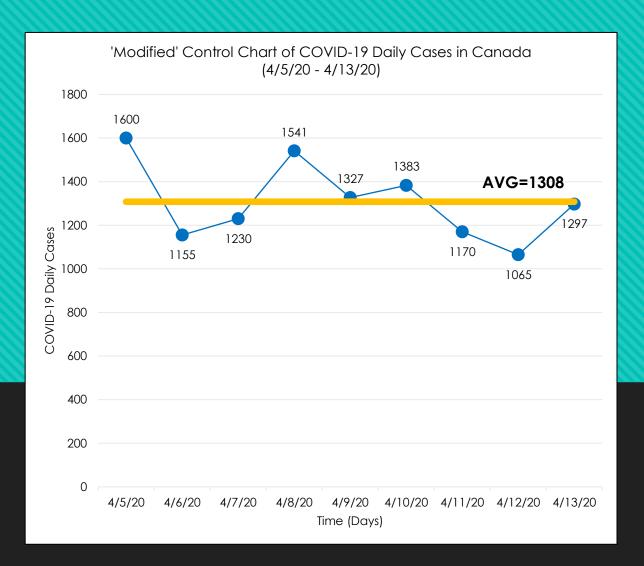
- Two points, out of three successive points, are on the same side of the centerline in Zone A or beyond.
 - The last three points (4/11/20 4/13/20) are below the control line, which suggests a good 'out-of-control' pattern for COVID-19 cases in France.
- Four points, out of five successive points, are on the same side of the centerline in Zone B or beyond.
 - o Four points (4/9/20 and 4/11/20 4/13/20) are all below the control line, which suggests an 'out-of-control' pattern for COVID-19 cases in France. A good 'out-of-control' sign.

Iran



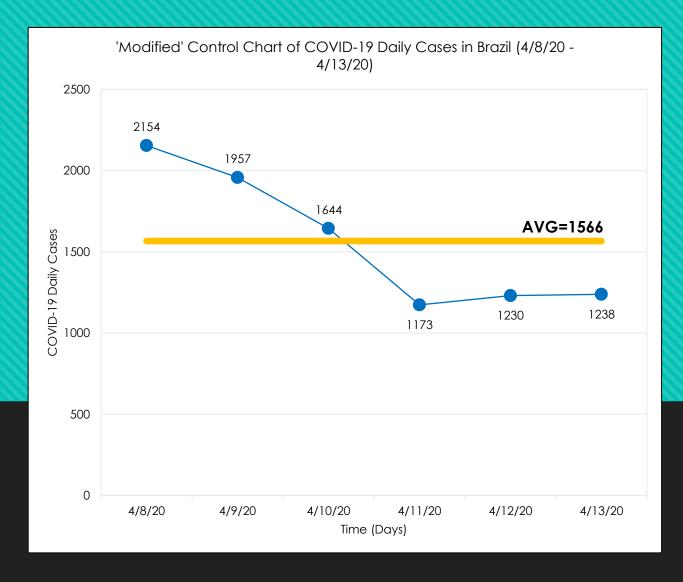
- Two points, out of three successive points, are on the same side of the centerline in Zone A or beyond.
 - The last three points (4/11/20 4/13/20) are below the control line, which suggests a good 'out-of-control' pattern for COVID-19 cases in Iran. The linear trend line has a remarkable downward slope since 3/30/20.
- Four points, out of five successive points, are on the same side of the centerline in Zone B or beyond.
 - o The last five points (4/9/20 4/13/20) are all below the control line, which suggests an 'out-of-control' pattern for COVID-19 cases in Iran. A good 'out-of-control' sign.
- There are six consecutive points, increasing or decreasing.
 - Six consecutive points (4/2/20 4/8/20) are decreasing, which indicates a good 'out-of-control' sign.

Canada



- Two points, out of three successive points, are on the same side of the centerline in Zone A or beyond.
 - o The last three points (4/11/20 4/13/20) are below the control line, which suggests a good 'out-of-control' pattern for COVID-19 cases in Canada. Also, a linear trend line with a downward slope can be observed from 4/5/20.

Brazil



- Two points, out of three successive points, are on the same side of the centerline in Zone A or beyond.
 - The last three points (4/11/20 4/13/20) are below the control line, which suggests a good 'out-of-control' pattern for COVID-19 cases in Brazil. Also, a linear trend line with a downward slope can be observed from 4/5/20.