

COVID-19 Dashboard

Issue # 86
Thursday, June 25, 2020

Measure	Desired Change	Yesterday in the U.S.
Number of Tests	Increase	>502,000
Test-Positivity Rate	Decline	7.7% test-positive on Friday; 5.0% for past 7 days
Number of Cases	Plateau	Cases increased 37.4%% week-over-week – concentrated in 6 states
Deaths % of Total Cases	Decline	5.05%
Number of Deaths / 1M Population	Plateau	375.5
Recoveries : Death	Increase	8.37

- Wednesday was a challenging day in the United States:
 - More new cases (38,386) were reported than on any single day since April 24
 - The rate of new daily infections per million population during the past week (98.4) is the highest for any comparable period since the pandemic began
 - The test-positive rate jumped to 7.7% (from 6.5% on Tuesday), the highest single-day rate since May 12
 - Nearly 1/2 of the population lives in a state we rate as High concern; just over 1/3 live in a state rated as Low concern
- California, Texas, Florida, Arizona, Georgia and North Carolina, in order, recorded the highest number of new cases during the past week - accounting for 56% of all new cases in the United States. The hardest-hit large countries in these states include:
 - Arizona: Maricopa (Phoenix), Pinal and Pima (Tucson)
 - California: Los Angeles, Riverside, San Bernardino
 - Florida: Collier (Naples), Pinellas (St. Petersburg), Orange (Orlando), Hillsborough (Tampa), Miami-Dade, Seminole, Palm Beach, Duval (Jacksonville) and Broward (Ft. Lauderdale)
 - South Carolina: Charleston, Horry (Myrtle Beach), Greenville and Richland (Columbia)
 - Texas: Lubbock, Travis (Austin), Harris (Houston), Bexar (San Antonio and Dallas)
- Sixteen states - Arizona, Arkansas, California, Florida, Georgia, Idaho, Mississippi, Missouri, Nevada, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Utah and Wyoming - are experiencing their highest rate of new infections since the beginning of the pandemic
- Despite the surging cases, the death rate continues to drop; it is now <5.05%. Of course, there is a latency period between infections and deaths. With cases beginning to surge 12 days ago, it is likely too early to see any uptick in the death rate from the recent surge

UNITED STATES & STATE-BY-STATE INFORMATION

STATE-BY-STATE OVERALL ASSESSMENT SCORECARD

State-By-State Overall Assessment Scorecard

"Strategic Guidance in an Era of Unprecedented Change"

Several factors should be considered when assessing where a state stands with its virus progression status:

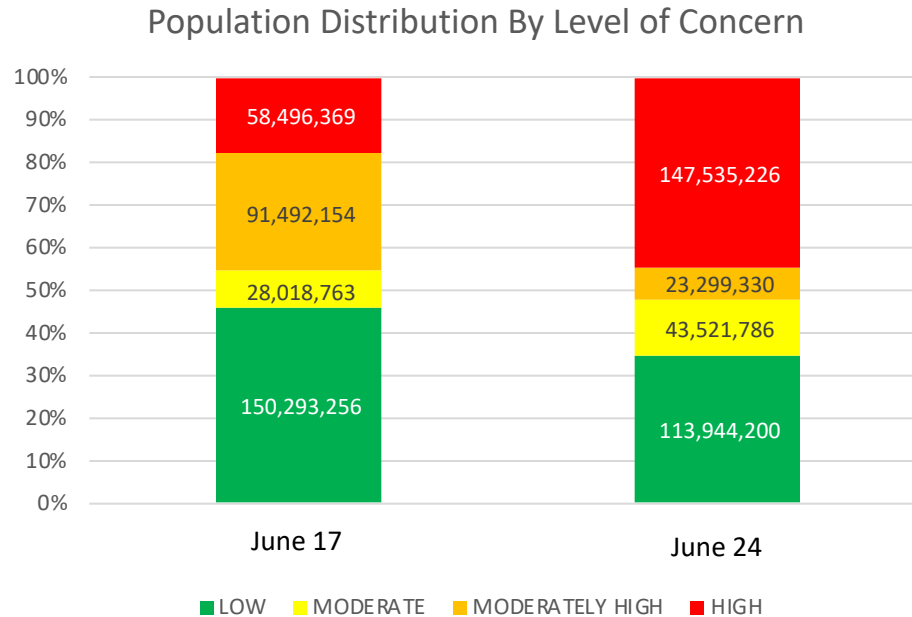
- Current rate of new infections, relative to its peak (is it declining or near its peak?)
- Test-positive rate
- Rate of change in cases
- Hospitalized patients v. its peak

We combined these criteria into a single score, reflective of our relative degree of concern of each state's current status (High, Moderately High, Moderate, Low)



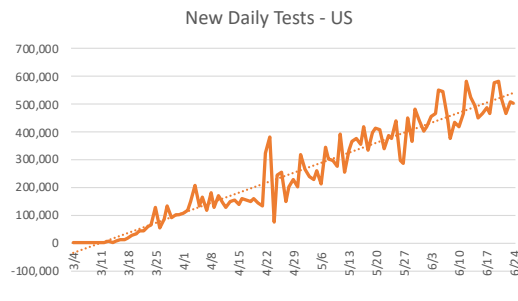
State-By-State Population Distribution By Level of Concern

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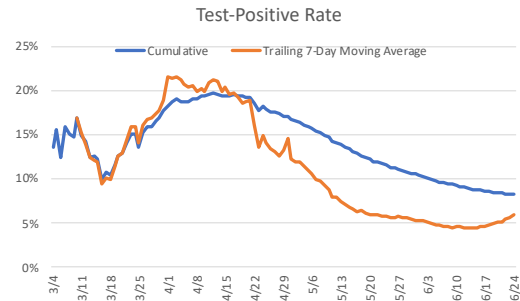


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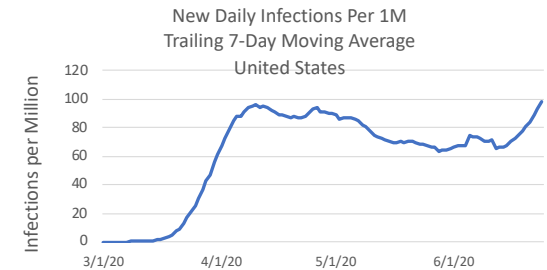
With significantly increased testing, the US is now meeting the WHO standard of <10% test-positives. This suggests that asymptomatic cases are being captured and that we have a better view of true infection rates. Further, new daily infections continue to decline; the death rate seems to have stabilized.



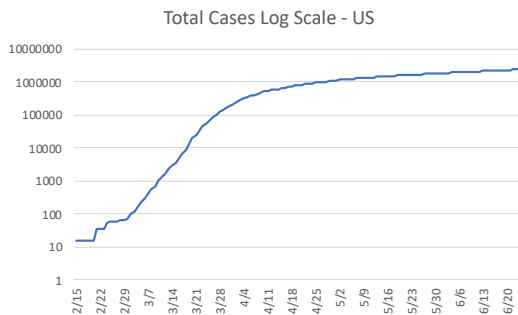
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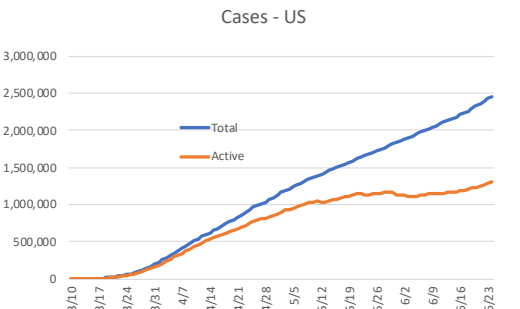
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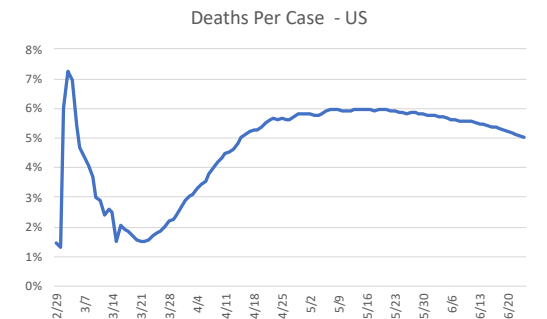
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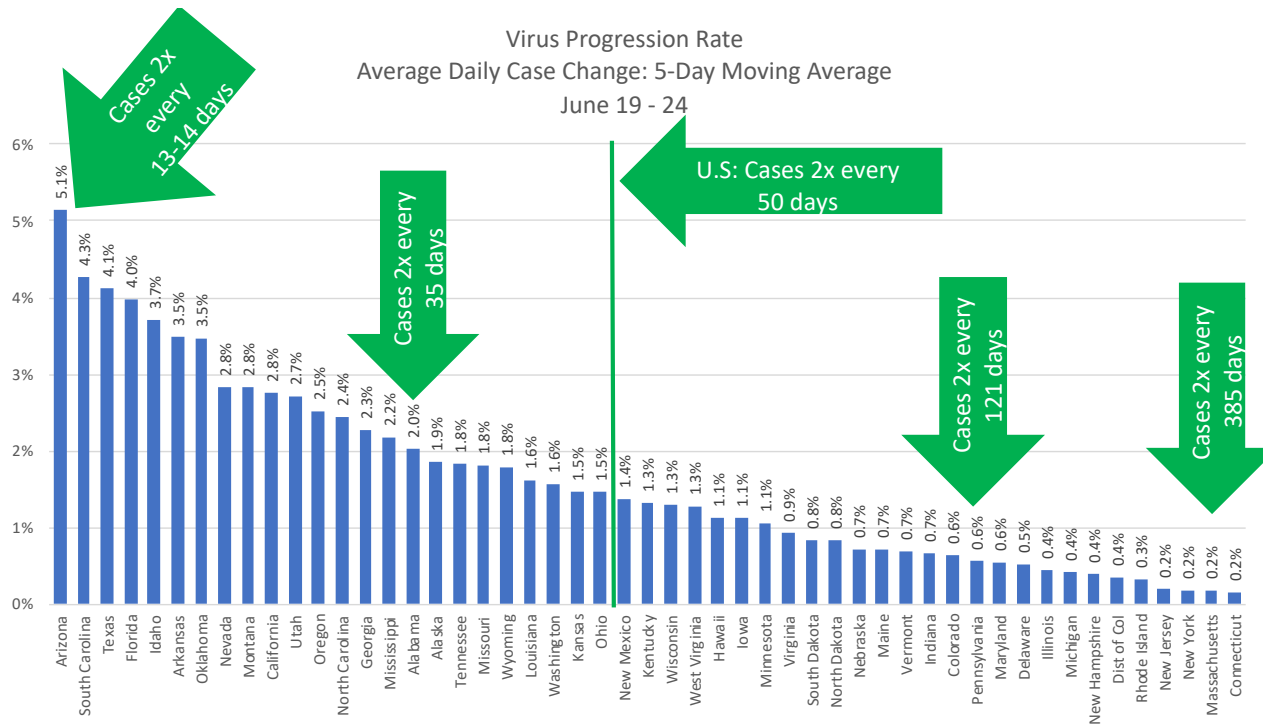


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State-by-State Average Daily Case Growth

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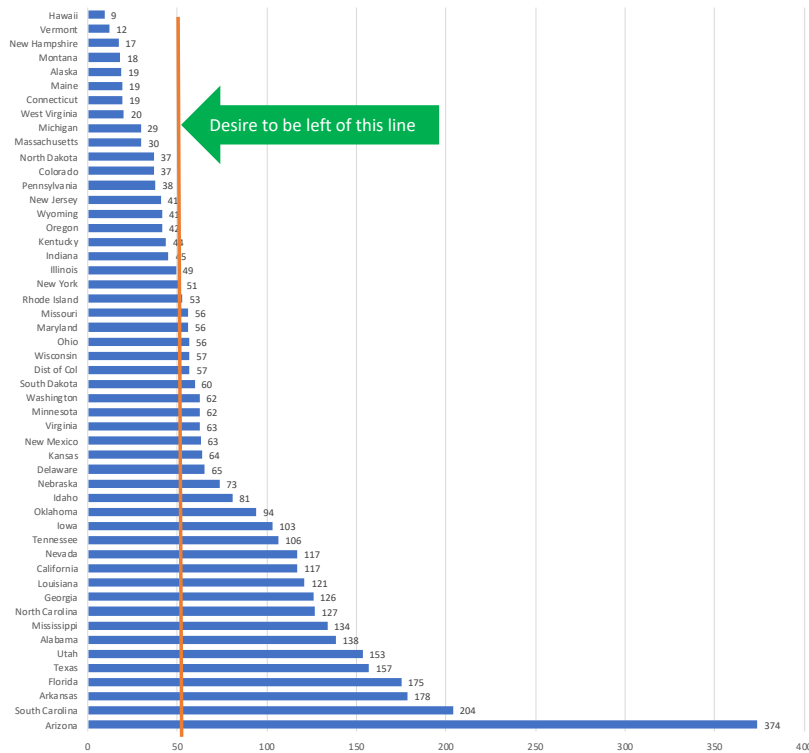
At the height of the epidemic, cases in some states were doubling every few days. Now, they would take from 13 – 444 days to double



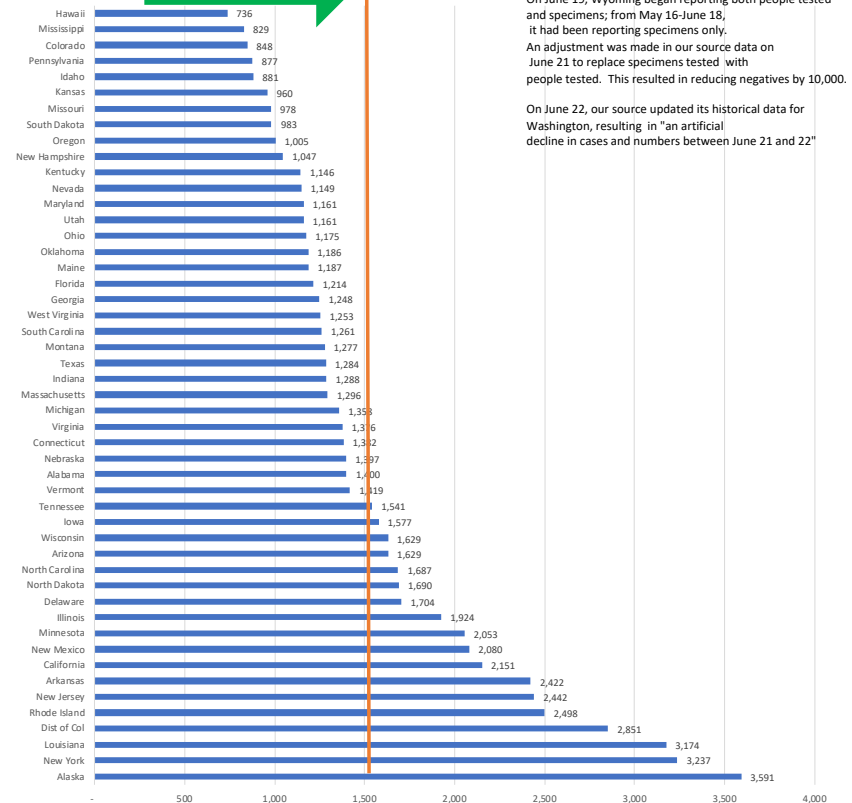
State-by-State New Daily Infections & Tests Per Capita

"Strategic Guidance in an Era of Unprecedented Change"

New Daily Infections Per 1 Million Population
By State
June 17 - 24



Daily Tests Per 1 Million Population
By State
June 17 - 24



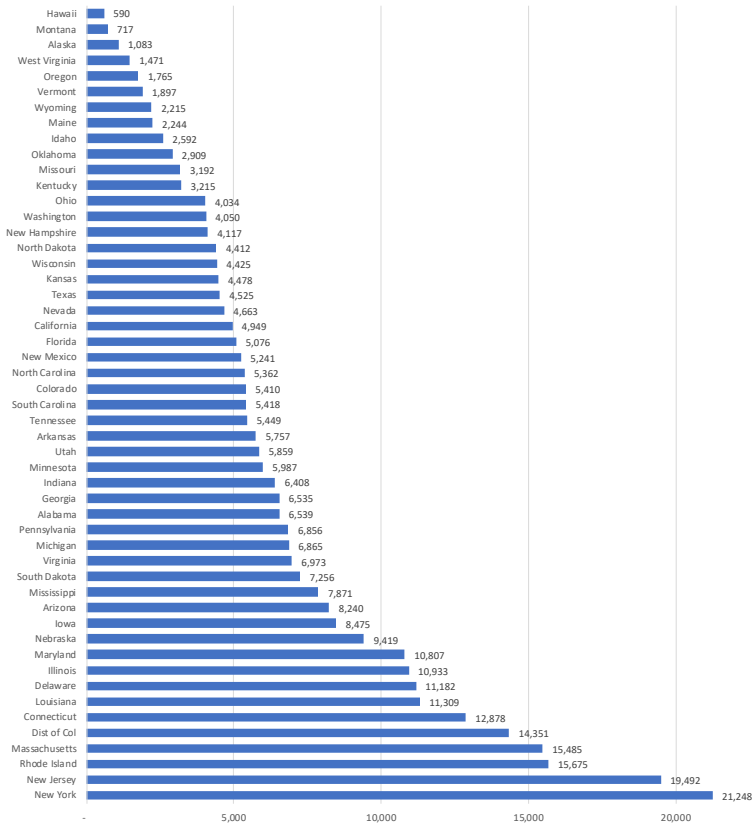
On June 19, Wyoming began reporting both people tested and specimens; from May 16-June 18, it had been reporting specimens only. An adjustment was made in our source data on June 21 to replace specimens tested with people tested. This resulted in reducing negatives by 10,000.

On June 22, our source updated its historical data for Washington, resulting in "an artificial" decline in cases and numbers between June 21 and 22"

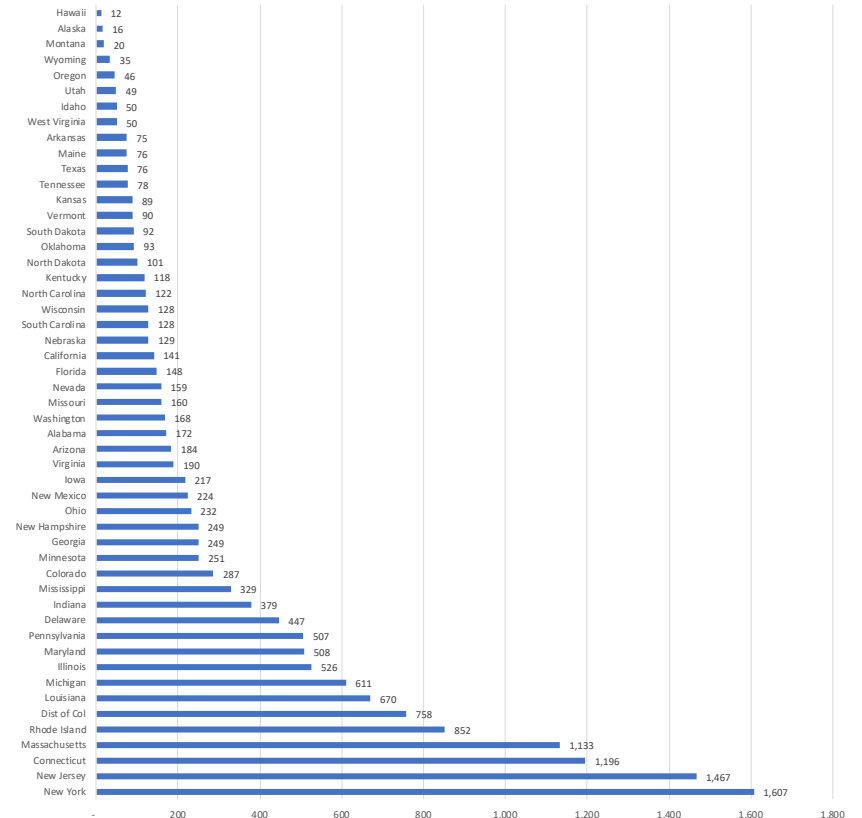
State-by-State Cases & Deaths Per Capita

"Strategic Guidance in an Era of Unprecedented Change"

Total Cases Per 1 Million Population
By State
As of June 24



Deaths Per 1 Million Population
By State
As of June 24



Which States Are Performing Sufficient Tests?

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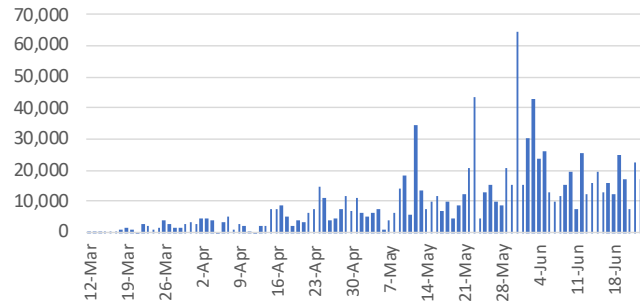
The [World Health Organization](#) suggested that the test-positive rate should be 10% or lower, for testing to be sufficient to assess the true prevalence of the virus. Several states failed to meet this guideline for the past week



UNDER-REPORTED RECOVERIES? POSSIBLE LAG IN STATE REPORTING

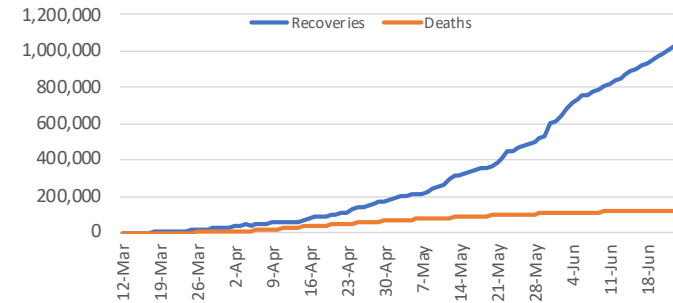
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New Daily Recoveries
United States



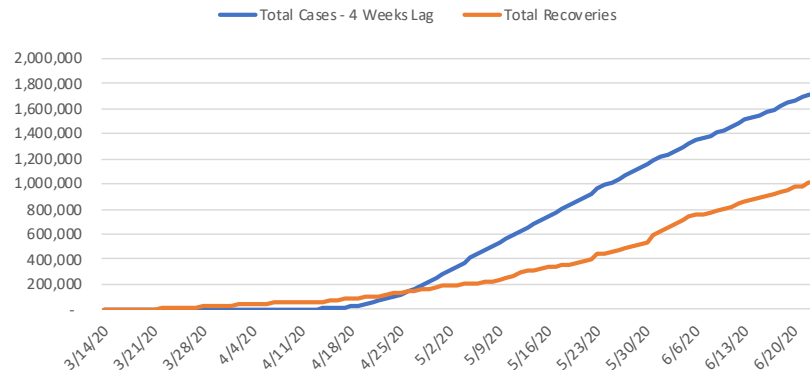
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Recoveries v. Deaths
United States



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Total Cases - 4-Week Lag v. Total Recoveries



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Which states seem to be lagging in reporting?

At this point, we should be expecting far more recoveries in the U.S.

Comparing the reported recoveries to Total Cases 4 weeks ago*, this shortfall is ~355-530k

* - 4 weeks is the presumed time from infection-onset to recovery referenced by many states

State	Recoveries	Expected Recoveries	
		Low	High
Alabama	18,866	12,826	14,429
Alaska	507	330	371
Arizona	7,936	13,810	15,536
Arkansas	11,568	5,022	5,649
California	52,996	81,244	91,400
Colorado	5,243	19,814	22,290
Connecticut	9,468	33,030	37,159
Delaware	6,598	7,277	8,186
District Of Columbia	1,182	6,725	7,565
Florida	21,159	42,107	47,371
Georgia	5,768	35,710	40,174
Hawaii	686	515	580
Idaho	3,610	2,185	2,458
Illinois	106,063	91,445	102,875
Indiana	32,571	25,950	29,193
Iowa	16,910	14,689	16,525
Kansas	8,039	7,530	8,471
Kentucky	3,706	7,262	8,169
Louisiana	39,792	30,803	34,654
Maine	2,490	1,710	1,923
Maryland	4,810	38,738	43,581
Massachusetts	91,404	75,376	84,798
Michigan	49,290	44,486	50,047
Minnesota	29,707	17,971	20,218
Mississippi	17,242	11,235	12,640
Missouri	4,035	10,250	11,532

State	Recoveries	Expected Recoveries	
		Low	High
Montana	571	385	433
Nebraska	12,099	10,381	11,678
Nevada	9,545	6,491	7,303
New Hampshire	4,358	3,429	3,857
New Jersey	38,971	126,254	142,036
New Mexico	4,984	5,802	6,527
New York	87,349	299,738	337,205
North Carolina	37,705	19,916	22,406
North Dakota	3,044	1,951	2,195
Ohio	10,710	26,798	30,147
Oklahoma	8,144	4,983	5,606
Oregon	2,631	3,230	3,634
Pennsylvania	66,531	58,922	66,287
Rhode Island	1,573	11,482	12,918
South Carolina	12,317	8,498	9,561
South Dakota	5,554	3,768	4,239
Tennessee	24,693	17,045	19,175
Texas	72,898	47,297	53,209
Utah	10,334	6,965	7,835
Vermont	930	777	874
Virginia	7,765	32,199	36,224
Washington	9,812	17,138	19,280
West Virginia	1,855	1,519	1,709
Wisconsin	20,121	13,170	14,816
Wyoming	966	688	774
United States	1,040,605	1,396,642	1,571,223

Low = 80% of Total Cases 4 week ago
High = 90% of Total Cases 4 week ago

- States seemingly up-to-date with reporting recoveries
- States only reporting ~ 1/2 expected recoveries
- States well-behind in reporting recoveries

VIRUS PROGRESSION: ROADMAP TO RECOVERY

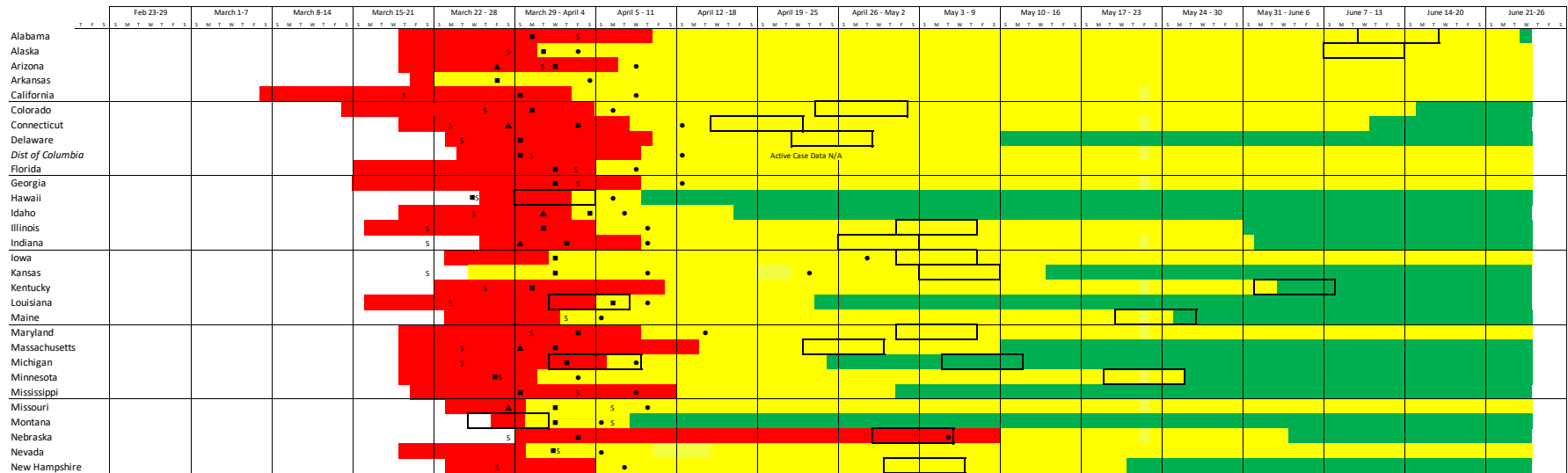
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The graphic on the following two pages illustrates when the state first recorded 100 total cases (start of the "contagion" phase); when growth stopped following an exponential pattern (start of the "containment" phase); and, when peak total cases were recorded (start of the "recovery" phase). It uses symbols to indicate when average daily case growth rates fell (and were sustained) below certain benchmarks, as well as when deaths stopped growing exponentially.

A state is not shaded green until active cases appear to have peaked.

State-by-State Virus Progression – 1 of 2

“Strategic Guidance in an Era of Unprecedented Change”



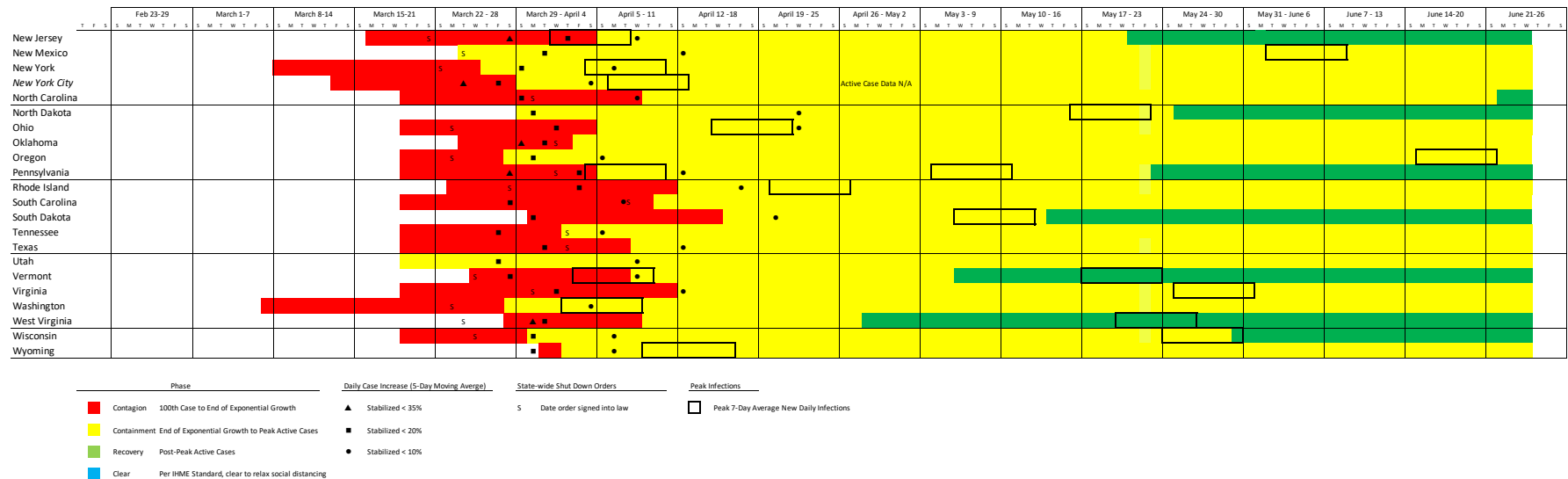
Note: Many states are in yellow because they fail to keep up-to-date in reporting recovered patients

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State-by-State Virus Progression – 2 of 2

“Strategic Guidance in an Era of Unprecedented Change”



Note: Many states are in yellow because they fail to keep up-to-date in reporting recovered patients

As of June 24

State	Total Cases	Rank	Cases per 1M Population	Rank2	Deaths	Rank3	Death Rate	Rank4	Deaths per 1 Million Population	Rank5	5-day Moving Average Case Growth Rate	Rank6	Tests per 1M Population Past 7 days	Rank7	New Daily Cases Per 1M Population (5-Day M.A.)	Rank8
Alabama	32,064	(21)	6,539.4	(19)	891	(25)	2.8%	(33)	181.7	(24)	2.0%	(16)	1,400	(20)	121.9	(9)
Alaska	792	(50)	1,082.6	(49)	12	(51)	1.5%	(46)	16.4	(50)	1.9%	(17)	3,591	(1)	19.9	(47)
Arizona	59,974	(12)	8,239.6	(13)	1,463	(18)	2.4%	(38)	201.0	(22)	5.1%	(1)	1,629	(15)	374.5	(1)
Arkansas	17,375	(31)	5,757.5	(24)	240	(39)	1.4%	(49)	79.5	(41)	3.5%	(6)	2,422	(7)	165.1	(3)
California	195,564	(2)	4,949.5	(31)	5,729	(7)	2.9%	(31)	145.0	(29)	2.8%	(10)	2,151	(8)	114.1	(12)
Colorado	31,155	(22)	5,410.0	(27)	1,667	(16)	5.4%	(12)	289.5	(15)	0.6%	(39)	848	(47)	36.0	(40)
Connecticut	45,913	(17)	12,877.8	(6)	4,287	(8)	9.3%	(1)	1,202.4	(3)	0.2%	(51)	1,382	(22)	22.0	(44)
Delaware	10,889	(38)	11,182.4	(8)	505	(32)	4.6%	(18)	518.6	(10)	0.5%	(42)	1,704	(12)	65.1	(20)
District Of Columbia	10,128	(39)	14,350.7	(5)	541	(30)	5.3%	(13)	766.6	(6)	0.4%	(46)	2,851	(4)	55.9	(26)
Florida	109,014	(6)	5,075.7	(30)	3,285	(9)	3.0%	(29)	152.9	(28)	4.0%	(4)	1,214	(32)	155.6	(4)
Georgia	69,381	(9)	6,534.6	(20)	2,698	(13)	3.9%	(23)	254.1	(17)	2.3%	(14)	1,248	(31)	115.7	(11)
Hawaii	835	(49)	589.7	(51)	17	(50)	2.0%	(41)	12.0	(51)	1.1%	(29)	736	(49)	8.0	(50)
Idaho	4,645	(43)	2,592.0	(43)	90	(44)	1.9%	(43)	50.2	(46)	3.7%	(5)	881	(45)	68.7	(18)
Illinois	138,540	(4)	10,932.9	(9)	6,770	(4)	4.9%	(15)	534.3	(9)	0.4%	(43)	1,924	(11)	47.2	(33)
Indiana	43,140	(18)	6,408.0	(21)	2,578	(14)	6.0%	(9)	382.9	(13)	0.7%	(38)	1,288	(26)	44.2	(34)
Iowa	26,740	(25)	8,475.2	(12)	693	(27)	2.6%	(36)	219.6	(21)	1.1%	(30)	1,577	(17)	100.4	(14)
Kansas	13,045	(35)	4,477.7	(34)	262	(37)	2.0%	(42)	89.9	(38)	1.5%	(23)	960	(44)	53.3	(27)
Kentucky	14,363	(33)	3,214.9	(40)	538	(31)	3.7%	(24)	120.4	(34)	1.3%	(26)	1,146	(39)	42.0	(36)
Louisiana	52,575	(15)	11,309.4	(7)	3,160	(10)	6.0%	(8)	679.7	(7)	1.6%	(21)	3,174	(3)	123.1	(8)
Maine	3,017	(45)	2,244.4	(44)	103	(42)	3.4%	(27)	76.6	(43)	0.7%	(36)	1,187	(33)	18.6	(48)
Maryland	65,337	(11)	10,807.2	(10)	3,108	(11)	4.8%	(16)	514.1	(12)	0.6%	(41)	1,161	(37)	61.4	(23)
Massachusetts	107,611	(7)	15,484.7	(4)	7,938	(3)	7.4%	(6)	1,142.2	(4)	0.2%	(50)	1,296	(25)	31.9	(42)
Michigan	68,555	(10)	6,864.5	(17)	6,114	(6)	8.9%	(2)	612.2	(8)	0.4%	(44)	1,358	(24)	27.6	(43)
Minnesota	33,763	(20)	5,986.7	(22)	1,432	(19)	4.2%	(21)	253.9	(18)	1.1%	(31)	2,053	(10)	65.5	(19)
Mississippi	23,424	(27)	7,870.6	(14)	1,011	(22)	4.3%	(20)	339.7	(14)	2.2%	(15)	829	(48)	131.8	(7)

As of June 24

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Missouri	19,588	(28)	3,191.6	(41)	1,001	(23)	5.1%	(14)	163.1	(26)	1.8%	(19)	978	(43)	53.0	(28)
Montana	766	(51)	716.7	(50)	21	(48)	2.7%	(34)	19.6	(49)	2.8%	(9)	1,277	(28)	17.2	(49)
Nebraska	18,221	(30)	9,419.4	(11)	257	(38)	1.4%	(48)	132.9	(30)	0.7%	(35)	1,397	(21)	78.4	(17)
Nevada	14,362	(34)	4,662.8	(32)	494	(33)	3.4%	(26)	160.4	(27)	2.8%	(8)	1,149	(38)	108.5	(13)
New Hampshire	5,598	(42)	4,117.1	(37)	347	(36)	6.2%	(7)	255.2	(16)	0.4%	(45)	1,047	(40)	21.7	(45)
New Jersey	173,132	(3)	19,492.0	(2)	13,129	(2)	7.6%	(4)	1,478.1	(2)	0.2%	(48)	2,442	(6)	43.6	(35)
New Mexico	10,990	(37)	5,241.2	(29)	480	(34)	4.4%	(19)	228.9	(20)	1.4%	(25)	2,080	(9)	61.7	(22)
New York	413,355	(1)	21,248.3	(1)	31,346	(1)	7.6%	(3)	1,611.3	(1)	0.2%	(49)	3,237	(2)	50.3	(31)
North Carolina	56,238	(14)	5,362.1	(28)	1,318	(20)	2.3%	(39)	125.7	(33)	2.4%	(13)	1,687	(14)	118.0	(10)
North Dakota	3,362	(44)	4,411.7	(36)	78	(46)	2.3%	(40)	102.4	(35)	0.8%	(34)	1,690	(13)	36.7	(39)
Ohio	47,151	(16)	4,033.8	(39)	2,779	(12)	5.9%	(10)	237.7	(19)	1.5%	(24)	1,175	(35)	50.4	(30)
Oklahoma	11,510	(36)	2,908.8	(42)	372	(35)	3.2%	(28)	94.0	(37)	3.5%	(7)	1,186	(34)	86.0	(16)
Oregon	7,444	(40)	1,764.9	(47)	195	(40)	2.6%	(35)	46.2	(47)	2.5%	(12)	1,005	(41)	39.8	(38)
Pennsylvania	87,776	(8)	6,856.4	(18)	6,584	(5)	7.5%	(5)	514.3	(11)	0.6%	(40)	877	(46)	35.7	(41)
Rhode Island	16,606	(32)	15,675.5	(3)	912	(24)	5.5%	(11)	860.9	(5)	0.3%	(47)	2,498	(5)	49.8	(32)
South Carolina	27,897	(24)	5,418.2	(26)	683	(28)	2.4%	(37)	132.7	(31)	4.3%	(2)	1,261	(29)	183.8	(2)
South Dakota	6,419	(41)	7,255.9	(15)	84	(45)	1.3%	(50)	95.0	(36)	0.8%	(33)	983	(42)	62.5	(21)
Tennessee	37,235	(19)	5,449.2	(25)	556	(29)	1.5%	(47)	81.4	(40)	1.8%	(18)	1,541	(18)	93.5	(15)
Texas	131,192	(5)	4,524.5	(33)	2,293	(15)	1.7%	(44)	79.1	(42)	4.1%	(3)	1,284	(27)	144.0	(6)
Utah	18,784	(29)	5,859.1	(23)	163	(41)	0.9%	(51)	50.8	(45)	2.7%	(11)	1,161	(36)	149.9	(5)
Vermont	1,184	(48)	1,897.5	(46)	56	(47)	4.7%	(17)	89.7	(39)	0.7%	(37)	1,419	(19)	7.6	(51)
Virginia	59,514	(13)	6,972.5	(16)	1,661	(17)	2.8%	(32)	194.6	(23)	0.9%	(32)	1,376	(23)	61.3	(24)
Washington	30,840	(23)	4,050.0	(38)	1,294	(21)	4.2%	(22)	169.9	(25)	1.6%	(22)	132	(50)	57.2	(25)
West Virginia	2,629	(46)	1,471.1	(48)	92	(43)	3.5%	(25)	51.5	(44)	1.3%	(28)	1,253	(30)	20.1	(46)
Wisconsin	25,763	(26)	4,424.8	(35)	757	(26)	2.9%	(30)	130.0	(32)	1.3%	(27)	1,629	(16)	52.3	(29)
Wyoming	1,282	(47)	2,215.1	(45)	20	(49)	1.6%	(45)	34.6	(48)	1.8%	(20)	(1,215)	(51)	40.7	(37)
United States	2,462,554		7,439.7		124,281		5.0%		375.5		1.4%		1,559		98.4	

U.S. COUNTY-BY-COUNTY INFORMATION

Case and Death Information By County For States With Increasing Infection Rates

“Strategic Guidance in an Era of Unprecedented Change”

- On the following pages, case and death information¹ is presented by county/municipality in the United States
 - New York case and death information are reported on a combined basis for Bronx, Kings, New York, Queens and Richmond counties
 - Cities that are not otherwise part of a county are listed separately
- Counties are grouped according to the 2013 Rural/Urban classification from Center for Disease Control, [“NCHS Urban-Rural Classification Scheme for Counties”](#)³:
 - **Large Central Metro Areas** – Located in MSA of 1 million population that: 1) contain the entire population of the largest principal city of the MSA, or 2) are completely contained within the largest principal city of the MSA, or 3) contain at least 250,000 residents of any principal city in the MSA
 - **Large Fringe Metro Areas** – Located in in MSA of 1 million or more population
 - **Medium Metro Areas** – Located in in MSA of 250,000-999,999 population
 - **Small Metro Areas** – Located in MSAs of less than 250,000 population
 - **Micropolitan Areas** – Located in micropolitan statistical area
 - **Non-Core Areas** - not in micropolitan statistical areas data access website
- Population information is the 2019 official estimate from the US Census Bureau²

1. Data from [The New York Times](#), based on reports from state and local health agencies. Accessed May 10-20, 2020

2. “Annual Estimates of the Resident Population for Counties in the United States: April 1, 2010 to July 1, 2019 (CO-EST2019-ANNRES)”, Source: U.S. Census Bureau, Population Division, Release Date: March 2020. Accessed May 12, 2020

3. Urban-Rural Classification of counties from CDC’s [“NCHS Urban-Rural Classification Scheme for Counties”](#). Accessed May 19, 2020

"Strategic Guidance in an Era of Unprecedented Change"

Large Central, Large Fringe and Medium Metro Areas
Ranked By Highest Recent Daily Infection Rate

FIPS	County	State	2013 CDC Urban / Rural Classification	Total Cases	Cases Per 1M	Daily Inf Rate (Last 7- Day MA)	Peak Daily Inf Rate (Trailing 7- Day MA)	Highest Occured in Past 3 Days?	Total Deaths	Deaths Per 1M	Deaths / Case
4013	Maricopa	Arizona	1	33,883	7,798	431	431	yes	663	153	2.0%
4021	Pinal	Arizona	2	2,704	6,419	331	331	yes	51	121	1.9%
4019	Pima	Arizona	3	6,089	5,998	248	248	yes	247	243	4.1%

2013 Rural/Urban classification from Center for Disease Control, ["NCHS Urban-Rural Classification Scheme for Counties"](#)

Daily Infection Rates By County - California

"Strategic Guidance in an Era of Unprecedented Change"

Large Central, Large Fringe and Medium Metro Areas Ranked By Highest Recent Daily Infection Rate

FIPS	County	State	2013 CDC Urban / Rural Classification	Total Cases	Cases Per 1M	Daily Inf Rate (Last 7- Day MA)	Peak Daily Inf Rate (Trailing 7- Day MA)	Highest Occurred in Past 3 Days?	Total Deaths	Deaths Per 1M	Deaths / Case
6041	Marin	California	2	1,349	5,332	307	307	yes	18	71	1.3%
6107	Tulare	California	3	3,434	7,449	197	197	yes	116	252	3.4%
6037	Los Angeles	California	1	88,262	8,869	189	189	yes	3,171	319	3.6%
6065	Riverside	California	1	14,431	5,970	162	162	yes	431	178	3.0%
6077	San Joaquin	California	3	2,560	3,465	157	157	yes	48	65	1.9%
6071	San Bernardino	California	2	10,010	4,692	148	148	yes	234	110	2.3%
6099	Stanislaus	California	3	1,784	3,278	139	139	yes	37	68	2.1%
6019	Fresno	California	3	3,672	3,754	129	129	yes	70	72	1.9%
6047	Merced	California	3	710	2,645	128	134	yes	9	34	1.3%
6083	Santa Barbara	California	3	2,478	5,796	126	279		27	63	1.1%
6069	San Benito	California	2	185	3,020	114	121	yes	2	33	1.1%
6053	Monterey	California	3	1,341	3,211	112	112	yes	12	29	0.9%
6029	Kern	California	3	4,059	4,693	99	101	yes	66	76	1.6%
6111	Ventura	California	3	2,161	2,575	86	86	yes	43	51	2.0%
6059	Orange	California	1	10,737	3,414	79	84	yes	275	87	2.6%
6073	San Diego	California	1	11,357	3,499	69	69	yes	341	105	3.0%
6113	Yolo	California	2	366	1,737	68	68	yes	24	114	6.6%
6001	Alameda	California	1	5,161	3,150	57	5,161		121	74	2.3%
6095	Solano	California	3	865	1,986	57	67	yes	23	53	2.7%
6013	Contra Costa	California	2	2,454	2,150	54	54	yes	62	54	2.5%
6097	Sonoma	California	3	956	1,946	53	53	yes	5	10	0.5%
6079	San Luis Obispo	California	3	453	1,687	52	52	yes	1	4	0.2%
6067	Sacramento	California	1	2,373	1,559	52	52	yes	66	43	2.8%
6061	Placer	California	2	534	1,368	45	49		10	26	1.9%
6081	San Mateo	California	2	2,813	3,684	42	57		104	136	3.7%
6075	San Francisco	California	1	3,222	3,713	41	62		48	55	1.5%
6085	Santa Clara	California	1	3,727	1,950	35	42		155	81	4.2%
6087	Santa Cruz	California	3	322	1,227	34	34	yes	3	11	0.9%
6017	El Dorado	California	2	150	792	24	24	yes	-	-	0.0%

2013 Rural/Urban classification from Center for Disease Control, ["NCHS Urban-Rural Classification Scheme for Counties"](#)

“Strategic Guidance in an Era of Unprecedented Change”

Large Central, Large Fringe and Medium Metro Areas Ranked By Highest Recent Daily Infection Rate

FIPS	County	State	2013 CDC Urban / Rural Classification	Total Cases	Cases Per 1M	Daily Inf Rate (Last 7- Day MA)	Peak Daily Inf Rate (Trailing 7- Day MA)	Highest Occurred in Past 3 Days?	Total Deaths	Deaths Per 1M	Deaths / Case
12085	Martin	Florida	3	1,611	10,249	286	332		22	140	1.4%
12021	Collier	Florida	3	3,375	9,003	246	252		65	173	1.9%
12103	Pinellas	Florida	1	4,033	4,206	225	225	yes	129	135	3.2%
12095	Orange	Florida	1	5,501	4,068	218	218	yes	50	37	0.9%
12057	Hillsborough	Florida	1	6,176	4,365	217	217	yes	119	84	1.9%
12086	Miami-Dade	Florida	1	26,821	9,856	214	214	yes	902	331	3.4%
12081	Manatee	Florida	3	2,013	5,155	194	203	yes	127	325	6.3%
12117	Seminole	Florida	2	1,451	3,125	189	189	yes	16	34	1.1%
12099	Palm Beach	Florida	2	11,178	7,631	187	201		476	325	4.3%
12031	Duval	Florida	1	3,202	3,444	167	167	yes	62	67	1.9%
12011	Broward	Florida	2	11,744	6,065	166	166	yes	377	195	3.2%
12105	Polk	Florida	3	2,279	3,287	147	148	yes	78	113	3.4%
12071	Lee	Florida	3	3,744	5,021	140	177		149	200	4.0%
12069	Lake	Florida	2	795	2,257	120	120	yes	21	60	2.6%
12111	St. Lucie	Florida	3	1,249	3,928	120	153		42	132	3.4%
12097	Osceola	Florida	2	1,147	3,150	110	110	yes	23	63	2.0%
12041	Gilchrist	Florida	3	86	5,058	109	504	yes	-	-	0.0%
12001	Alachua	Florida	3	760	2,960	109	109	yes	11	43	1.4%
12033	Escambia	Florida	3	1,244	4,176	107	107	yes	43	144	3.5%
12101	Pasco	Florida	2	954	1,791	106	106	yes	17	32	1.8%
12109	St. Johns	Florida	2	510	2,029	101	103	yes	7	28	1.4%
12127	Volusia	Florida	3	1,301	2,440	89	89	yes	53	99	4.1%
12115	Sarasota	Florida	3	1,031	2,451	82	82	yes	95	226	9.2%
12009	Brevard	Florida	3	918	1,557	75	76	yes	17	29	1.9%
12039	Gadsden	Florida	3	328	7,556	66	362		6	138	1.8%
12073	Leon	Florida	3	595	2,139	58	58	yes	8	29	1.3%
12065	Jefferson	Florida	3	38	2,930	55	165		4	308	10.5%
12089	Nassau	Florida	2	126	1,479	54	54	yes	1	12	0.8%
12113	Santa Rosa	Florida	3	355	2,050	48	48	yes	9	52	2.5%
12035	Flagler	Florida	3	244	2,194	46	72		5	45	2.0%
12053	Hernando	Florida	2	206	1,091	45	45	yes	5	26	2.4%
12019	Clay	Florida	2	511	2,384	45	59		33	154	6.5%
12003	Baker	Florida	2	42	1,644	45	78	yes	4	157	9.5%
12083	Marion	Florida	3	424	1,210	40	40	yes	10	29	2.4%
12129	Wakulla	Florida	3	41	1,376	29	34		1	34	2.4%

2013 Rural/Urban classification from Center for Disease Control, [“NCHS Urban-Rural Classification Scheme for Counties”](#)

"Strategic Guidance in an Era of Unprecedented Change"

Large Central, Large Fringe and Medium Metro Areas
Ranked By Highest Recent Daily Infection Rate

FIPS	County	State	2013 CDC Urban / Rural Classification	Total Cases	Cases Per 1M	Daily Inf Rate (Last 7- Day MA)	Peak Daily Inf Rate (Trailing 7- Day MA)	Highest Occured in Past 3 Days?	Total Deaths	Deaths Per 1M	Deaths / Case
45051	Horry	South Carolina	3	2,191	6,450	376	376	yes	42	124	1.9%
45019	Charleston	South Carolina	3	2,252	5,701	370	370	yes	20	51	0.9%
45077	Pickens	South Carolina	3	572	4,865	299	299	yes	4	34	0.7%
45017	Calhoun	South Carolina	3	74	5,145	278	358	yes	1	70	1.4%
45055	Kershaw	South Carolina	3	571	8,772	241	241	yes	15	230	2.6%
45039	Fairfield	South Carolina	3	266	12,067	220	363		21	953	7.9%
45059	Laurens	South Carolina	3	270	4,166	218	218	yes	4	62	1.5%
45045	Greenville	South Carolina	3	3,827	7,608	214	244		75	149	2.0%
45079	Richland	South Carolina	3	2,796	7,290	178	187		80	209	2.9%
45015	Berkeley	South Carolina	3	695	3,210	177	177	yes	20	92	2.9%
45063	Lexington	South Carolina	3	1,560	5,339	168	175		43	147	2.8%
45057	Lancaster	South Carolina	2	346	3,710	133	136	yes	10	107	2.9%
45035	Dorchester	South Carolina	3	423	2,670	132	132	yes	3	19	0.7%
45023	Chester	South Carolina	2	152	4,754	121	152		1	31	0.7%
45081	Saluda	South Carolina	3	187	9,222	120	268		1	49	0.5%
45083	Spartanburg	South Carolina	3	1,257	4,114	108	121		42	137	3.3%
45091	York	South Carolina	2	886	3,283	106	110	yes	11	41	1.2%
45007	Anderson	South Carolina	3	483	2,449	95	95	yes	10	51	2.1%
45087	Union	South Carolina	3	62	2,305	69	80	yes	-	-	0.0%
45037	Edgefield	South Carolina	3	71	2,924	59	76		2	82	2.8%
45003	Aiken	South Carolina	3	281	1,682	35	38	yes	9	54	3.2%

2013 Rural/Urban classification from Center for Disease Control, ["NCHS Urban-Rural Classification Scheme for Counties"](#)

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Large Central, Large Fringe and Medium Metro Areas Ranked By Highest Recent Daily Infection Rate

FIPS	County	State	2013 CDC Urban / Rural Classification	Total Cases	Cases Per 1M	Daily Inf Rate (Last 7- Day MA)	Peak Daily Inf Rate (Trailing 7- Day MA)	Highest Occurred in Past 3 Days?	Total Deaths	Deaths Per 1M	Deaths / Case
48209	Hays	Texas	2	2,001	9,332	605	656	yes	5	23	0.2%
48055	Caldwell	Texas	2	275	6,655	407	407	yes	1	24	0.4%
48303	Lubbock	Texas	3	1,547	5,228	286	286	yes	51	172	3.3%
48167	Galveston	Texas	2	2,040	6,137	285	285	yes	40	120	2.0%
48187	Guadalupe	Texas	2	417	2,583	214	214	yes	1	6	0.2%
48453	Travis	Texas	1	6,596	5,378	213	213	yes	114	93	1.7%
48201	Harris	Texas	1	24,421	5,255	206	206	yes	335	72	1.4%
48029	Bexar	Texas	1	7,479	3,851	191	200	yes	100	51	1.3%
48071	Chambers	Texas	2	181	4,296	180	197	yes	2	47	1.1%
48091	Comal	Texas	2	419	2,848	174	174	yes	7	48	1.7%
48355	Nueces	Texas	3	813	2,286	170	170	yes	6	17	0.7%
48061	Cameron	Texas	3	1,647	3,921	160	160	yes	49	117	3.0%
48113	Dallas	Texas	1	17,744	6,818	159	159	yes	324	124	1.8%
48309	McLennan	Texas	3	1,311	421	131	131	yes	5	20	1.2%
48039	Brazoria	Texas	2	1,814	5,054	127	230	yes	19	53	1.0%
48141	El Paso	Texas	3	4,677	5,677	126	126	yes	122	148	2.6%
48157	Fort Bend	Texas	2	3,176	4,064	124	133	yes	50	64	1.6%
48491	Williamson	Texas	2	1,498	2,668	121	121	yes	32	57	2.1%
48439	Tarrant	Texas	1	9,386	4,562	121	121	yes	211	103	2.2%
48479	Webb	Texas	3	948	3,481	121	133	yes	22	81	2.3%
48199	Hardin	Texas	3	194	3,424	119	119	yes	5	88	2.6%
48231	Hunt	Texas	2	258	2,753	111	130	yes	5	53	1.9%
48013	Atascosa	Texas	2	79	1,586	106	106	yes	2	40	2.5%
48215	Hidalgo	Texas	3	1,882	2,196	105	128	yes	23	27	1.2%
48291	Liberty	Texas	2	196	2,422	104	106	yes	3	37	1.5%
48245	Jefferson	Texas	3	1,447	6,060	101	378	yes	32	134	2.2%
48015	Austin	Texas	2	56	1,884	96	96	yes	-	-	0.0%
48021	Bastrop	Texas	2	369	4,369	95	115	yes	4	47	1.1%
48027	Bell	Texas	3	875	2,532	93	93	yes	11	32	1.3%
48339	Montgomery	Texas	2	1,737	2,963	92	92	yes	34	58	2.0%
48325	Medina	Texas	2	251	5,174	88	427	yes	2	41	0.8%
48361	Orange	Texas	3	155	1,875	83	83	yes	3	36	1.9%
48121	Denton	Texas	2	2,302	2,718	83	83	yes	36	43	1.6%
48473	Waller	Texas	2	119	2,428	79	79	yes	-	-	0.0%
48011	Armstrong	Texas	3	3	1,637	78	78	yes	-	-	0.0%
48085	Collin	Texas	1	2,359	2,359	70	79	yes	38	38	1.6%
48409	San Patricio	Texas	3	80	1,210	69	69	yes	-	-	0.0%
48493	Wilson	Texas	2	76	1,534	66	66	yes	5	101	6.6%
48139	Ellis	Texas	2	539	3,041	65	73	yes	19	107	3.5%
48145	Falls	Texas	3	25	1,626	65	74	yes	-	-	0.0%
48019	Bandera	Texas	2	16	712	57	57	yes	-	-	0.0%
48351	Newton	Texas	3	11	847	55	55	yes	-	-	0.0%
48281	Lampasas	Texas	3	19	907	55	61	yes	-	-	0.0%
48375	Potter	Texas	3	2,838	25,170	51	1,302	yes	39	346	1.4%
48107	Crosby	Texas	3	9	1,580	50	100	yes	1	176	11.1%
48305	Lynn	Texas	3	23	3,953	49	319	yes	1	172	4.3%
48099	Coryell	Texas	3	321	5,121	48	194	yes	2	32	0.6%
48251	Johnson	Texas	2	328	1,950	42	58	yes	4	24	1.2%
48257	Kaufman	Texas	2	374	2,947	39	88	yes	4	32	1.1%
48259	Kendall	Texas	2	47	1,042	35	35	yes	-	-	0.0%
48381	Randall	Texas	3	793	5,943	32	264	yes	6	45	0.8%
48397	Rockwall	Texas	2	231	2,316	26	49	yes	16	160	6.9%
48367	Parker	Texas	2	138	1,009	23	26	yes	1	7	0.7%
48007	Arañas	Texas	3	10	429	18	18	yes	-	-	0.0%
48497	Wise	Texas	2	63	936	15	25	yes	-	74	7.9%
48221	Hood	Texas	2	36	603	2	19	yes	4	67	11.1%
48065	Carson	Texas	3	6	1,002	-	72	yes	-	-	0.0%
48359	Oldham	Texas	3	4	2,124	-	76	yes	1	531	25.0%

2013 Rural/Urban classification from Center for Disease Control, [“NCHS Urban-Rural Classification Scheme for Counties”](#)

COUNTRY-BY-COUNTRY INFORMATION

Countries Included

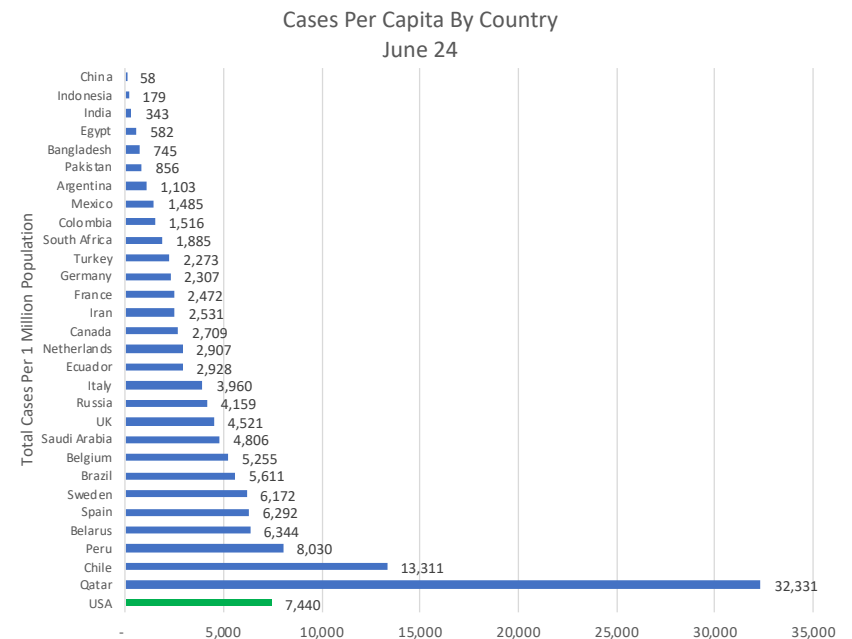
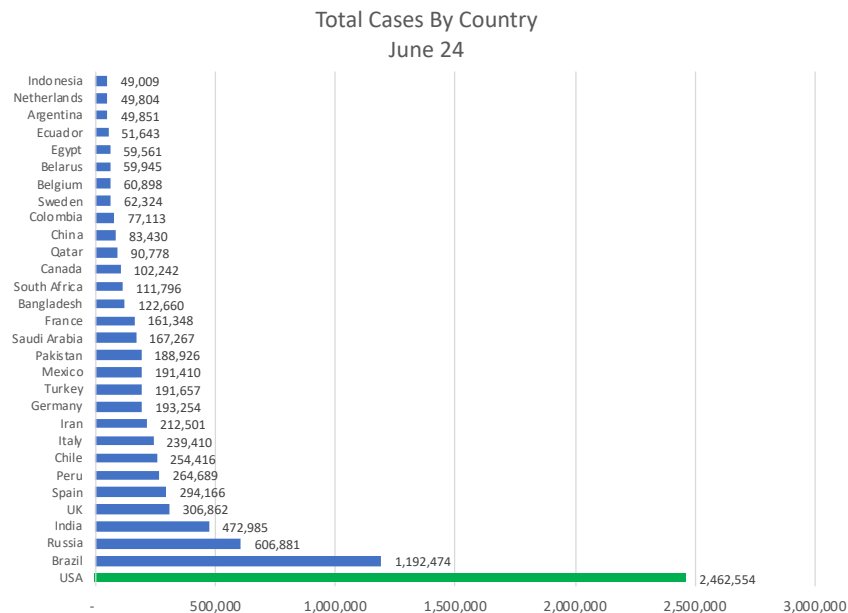
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- In Mid-March, we began tracking the twenty countries with the most coronavirus cases; in mid-April, we expanded it to the thirty countries with the most cases
- We now have visibility to all 213 countries and 2 conveyances that have at least 1 coronavirus case
- Case and death information is sourced from the worldometers.info, the Center for Systems Science and Engineering (CSSE) at Johns Hopkins University and the New York Times, each of which are accessed daily; analysis by Health Industry Advisor LLC

Country-by-Country Cases & Cases Per Capita

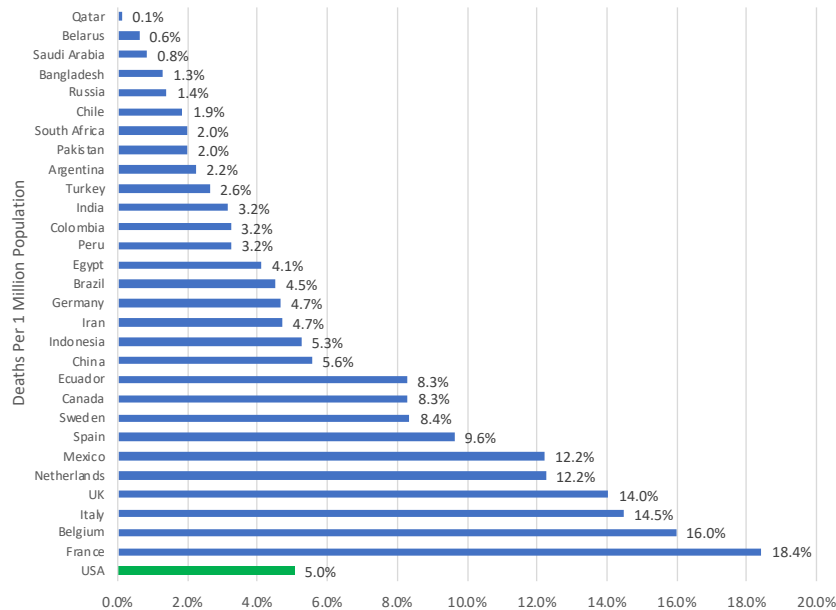
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Countries Ranked 1-30 In Total Cases

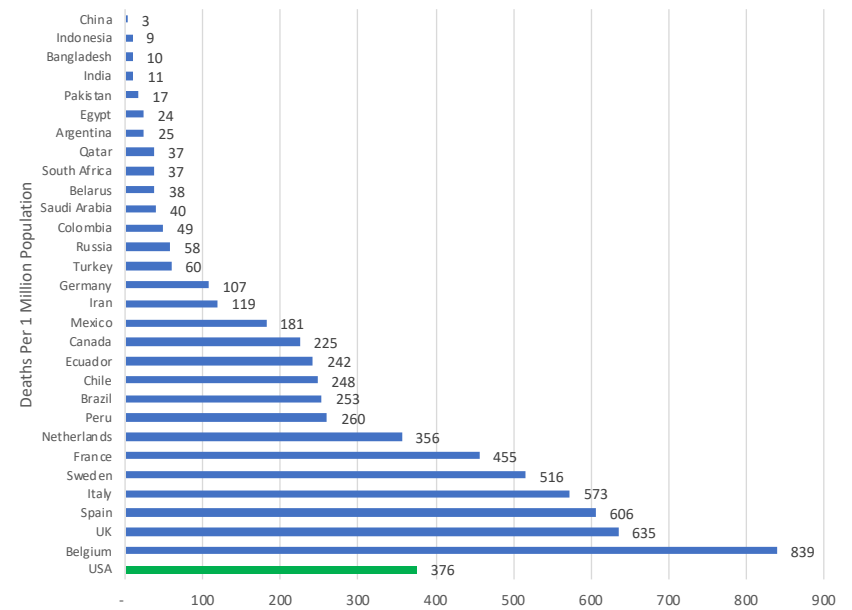


Countries Ranked 1-30 In Total Cases

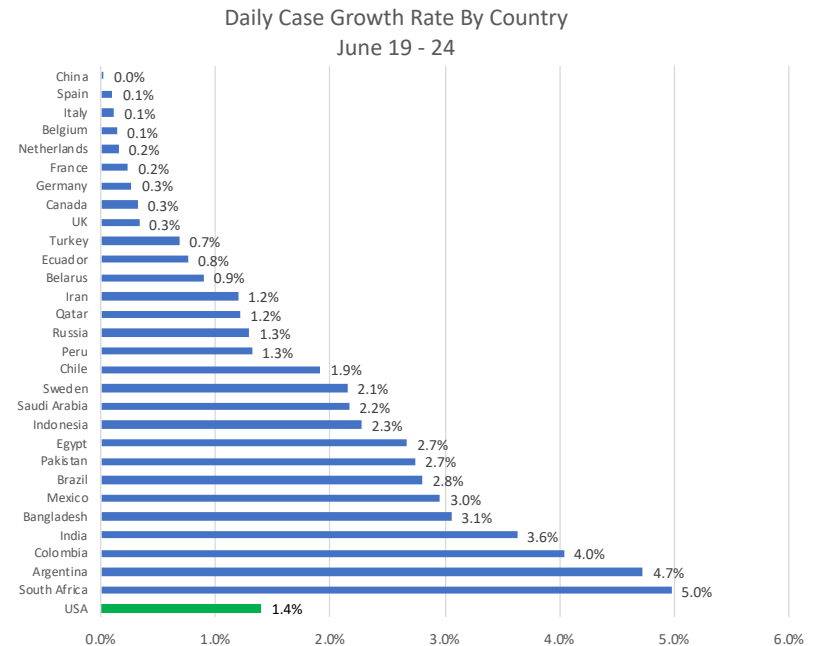
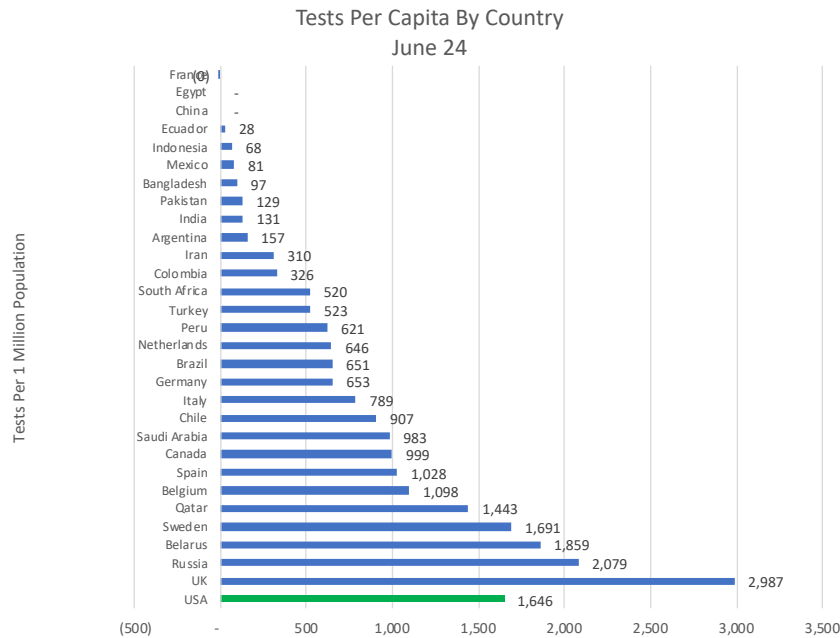
Death Rate By Country
June 24



Deaths Per Capita By Country
June 24



Countries Ranked 1-30 In Total Cases

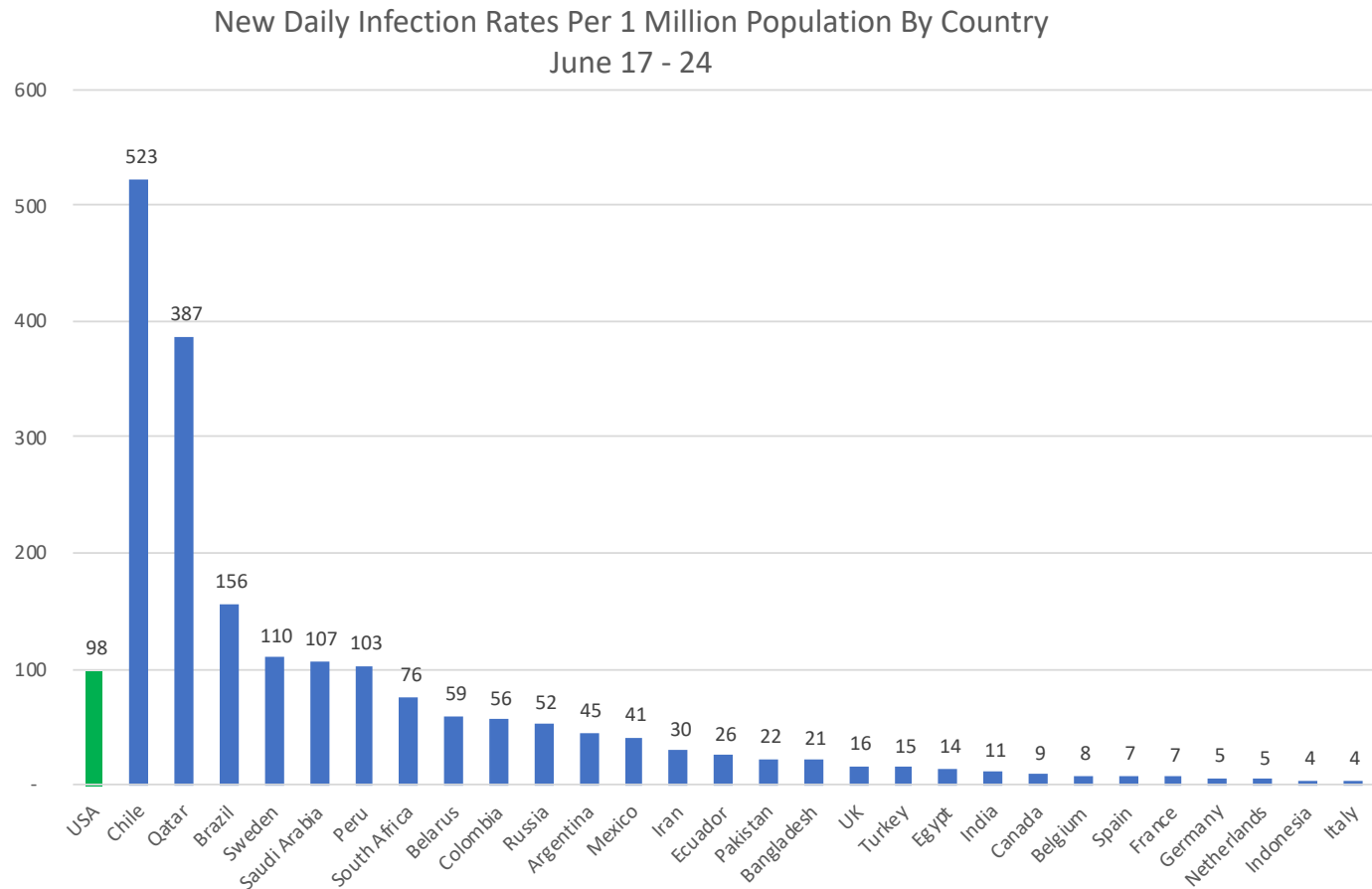


Daily Tests Per Capita For Past Week

Daily Case Growth – 5-Day Moving Average

Country-by-Country New Daily Infection Rates

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Country-By-Country Listing of Countries By Total Cases

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Countries making large upward movements are highlighted

When we first expanded our tracking to 30 countries in mid-April, they represented the most countries with cases in the world. Since that time, Austria, Israel, Japan and South Korea have dropped in the rankings. Among the countries that have moved up:

- Afghanistan
- Argentina
- Bangladesh
- Belarus
- Columbia
- Denmark
- Dominican Republic
- Indonesia
- Kuwait
- Poland
- Qatar
- Panama
- Philippines
- Romania
- South Africa
- UAE
- Ukraine

The original 30 still account for 84.3% of all cases worldwide.

		Total Cases						
Rank	Country	24-Jun	Rank	Country	6-May	Rank	Country	27-Apr
1	USA	2,462,554	1	USA	1,263,092	1	USA	1,010,356
2	Brazil	1,192,474	2	Spain	253,682	2	Spain	229,422
3	Russia	606,881	3	Italy	214,457	3	Italy	199,414
4	India	472,985	4	UK	201,101	4	France	128,339
5	UK	306,862	5	France	174,191	5	Germany	158,758
6	Spain	294,166	6	Germany	168,162	6	UK	157,149
7	Peru	264,689	7	Russia	165,929	7	Turkey	112,261
8	Chile	254,416	8	Turkey	131,744	8	Iran	91,472
9	Italy	239,410	9	Brazil	126,611	9	Russia	87,147
10	Iran	212,501	10	Iran	101,650	10	China	82,830
11	Germany	193,254	11	China	82,883	11	Brazil	66,501
12	Turkey	191,657	12	Canada	63,496	12	Canada	48,500
13	Mexico	191,410	13	Peru	54,817	13	Belgium	46,687
14	Pakistan	188,926	14	India	52,987	14	Netherlands	38,245
15	Saudi Arabia	167,267	15	Belgium	50,781	15	India	29,451
16	France	161,348	16	Netherlands	41,319	16	Switzerland	29,164
19	Canada	102,242	17	Saudi Arabia	31,938	17	Peru	28,669
21	China	83,430	18	Switzerland	30,060	18	Portugal	24,070
23	Sweden	62,324	19	Ecuador	29,420	19	Ecuador	23,240
24	Belgium	60,898	20	Portugal	26,182	20	Ireland	19,648
27	Ecuador	51,643	21	Mexico	26,025	21	Sweden	18,926
29	Netherlands	49,804	22	Sweden	23,918	22	Saudi Arabia	18,811
32	Singapore	42,623	23	Pakistan	23,214	23	Israel	15,555
34	Portugal	40,104	24	Chile	23,048	24	Austria	15,274
40	Switzerland	31,376	25	Ireland	22,248	25	Mexico	14,677
45	Ireland	25,396	26	Singapore	20,198	26	Singapore	14,423
48	Israel	22,044	29	Israel	16,310	27	Pakistan	13,915
52	Japan	18,024	31	Austria	15,684	28	Chile	13,813
53	Austria	17,449	32	Japan	15,253	29	Japan	13,614
62	S. Korea	12,535	38	S. Korea	10,806	35	South Korea	10,738
	Others	1,498,790		Others	356,176		Others	301,446
	World	9,519,482			3,817,382		World	3,062,515

Country-by-Country Comparative Statistics

"Strategic Guidance in an Era of Unprecedented Change"

Top 30 Countries By Total Cases
As of June 24

Country	Total Cases	Rank	Cases per 1M Population	Rank2	Deaths	Rank3	Death Rate	Rank4	Deaths per 1 Million Population	Rank5	5-day Moving Average Case Growth Rate	Rank6	Tests per 1M Population - Past 7 Days	Rank7	New Daily Infections Per 1M Population (7-Day M.A.)	Rank8
USA	2,462,554	(1)	7,440	(4)	124,281	(1)	5.0%	(13)	375.5	(7)	1.4%	(14)	1,646	(5)	98.4	(7)
Brazil	1,192,474	(2)	5,611	(8)	53,874	(2)	4.5%	(16)	253.5	(10)	2.8%	(7)	651	(14)	156.1	(3)
Russia	606,881	(3)	4,159	(12)	8,513	(13)	1.4%	(26)	58.3	(18)	1.3%	(16)	2,079	(2)	52.5	(11)
India	472,985	(4)	343	(28)	14,907	(8)	3.2%	(20)	10.8	(27)	3.6%	(4)	131	(22)	10.9	(21)
UK	306,862	(5)	4,521	(11)	43,081	(3)	14.0%	(4)	634.7	(2)	0.3%	(22)	2,987	(1)	16.0	(18)
Spain	294,166	(6)	6,292	(6)	28,327	(6)	9.6%	(7)	605.9	(3)	0.1%	(29)	1,028	(8)	7.3	(24)
Peru	264,689	(7)	8,030	(3)	8,586	(12)	3.2%	(18)	260.5	(9)	1.3%	(15)	621	(16)	103.1	(6)
Chile	254,416	(8)	13,311	(2)	4,731	(18)	1.9%	(25)	247.5	(11)	1.9%	(13)	907	(11)	523.0	(1)
Italy	239,410	(9)	3,960	(13)	34,644	(4)	14.5%	(3)	573.0	(4)	0.1%	(28)	789	(12)	3.7	(29)
Iran	212,501	(10)	2,531	(17)	9,996	(9)	4.7%	(14)	119.0	(15)	1.2%	(18)	310	(20)	29.7	(14)
Germany	193,254	(11)	2,307	(19)	9,003	(11)	4.7%	(15)	107.5	(16)	0.3%	(24)	653	(13)	5.2	(26)
Turkey	191,657	(12)	2,273	(20)	5,025	(17)	2.6%	(21)	59.6	(17)	0.7%	(21)	523	(17)	15.1	(19)
Mexico	191,410	(13)	1,485	(23)	23,377	(7)	12.2%	(6)	181.3	(14)	3.0%	(6)	81	(25)	40.5	(13)
Pakistan	188,926	(14)	856	(25)	3,755	(21)	2.0%	(23)	17.0	(26)	2.7%	(8)	129	(23)	22.1	(16)
Saudi Arabia	167,267	(15)	4,806	(10)	1,387	(27)	0.8%	(28)	39.9	(20)	2.2%	(11)	983	(10)	106.9	(5)
France	161,348	(16)	2,472	(18)	29,731	(5)	18.4%	(1)	455.5	(6)	0.2%	(25)	0	(30)	6.9	(25)
Bangladesh	122,660	(17)	745	(26)	1,582	(26)	1.3%	(27)	9.6	(28)	3.1%	(5)	97	(24)	21.0	(17)
South Africa	111,796	(18)	1,885	(21)	2,205	(25)	2.0%	(24)	37.2	(22)	5.0%	(1)	520	(18)	75.6	(8)
Canada	102,242	(19)	2,709	(16)	8,484	(14)	8.3%	(9)	224.8	(13)	0.3%	(23)	999	(9)	9.0	(22)
Qatar	90,778	(20)	32,331	(1)	104	(30)	0.1%	(30)	37.0	(23)	1.2%	(17)	1,443	(6)	386.9	(2)
China	83,430	(21)	58	(30)	4,634	(19)	5.6%	(11)	3.2	(30)	0.0%	(30)	0	(28)	0.0	(30)
Colombia	77,113	(22)	1,516	(22)	2,491	(23)	3.2%	(19)	49.0	(19)	4.0%	(3)	326	(19)	56.4	(10)
Sweden	62,324	(23)	6,172	(7)	5,209	(16)	8.4%	(8)	515.8	(5)	2.1%	(12)	1,691	(4)	109.8	(4)
Belgium	60,898	(24)	5,255	(9)	9,722	(10)	16.0%	(2)	838.9	(1)	0.1%	(27)	1,098	(7)	8.1	(23)
Belarus	59,945	(25)	6,344	(5)	362	(29)	0.6%	(29)	38.3	(21)	0.9%	(19)	1,859	(3)	59.2	(9)
Egypt	59,561	(26)	582	(27)	2,450	(24)	4.1%	(17)	24.0	(25)	2.7%	(9)	0	(28)	14.4	(20)
Ecuador	51,643	(27)	2,928	(14)	4,274	(20)	8.3%	(10)	242.3	(12)	0.8%	(20)	28	(27)	25.5	(15)
Argentina	49,851	(28)	1,103	(24)	1,116	(28)	2.2%	(22)	24.7	(24)	4.7%	(2)	157	(21)	45.2	(12)
Netherlands	49,804	(29)	2,907	(15)	6,097	(15)	12.2%	(5)	355.8	(8)	0.2%	(26)	646	(15)	5.0	(27)
Indonesia	49,009	(30)	179	(29)	2,573	(22)	5.3%	(12)	9.4	(29)	2.3%	(10)	68	(26)	4.0	(28)

Note: China does not report test volumes

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VIRUS PROGRESSION BY COUNTRY

Country-by-Country Virus Progression – Original 30 Hardest-Hit Countries

“Strategic Guidance in an Era of Unprecedented Change”

This graphic illustrates when the country first recorded 100 total cases (start of the “contagion” phase); when growth stopped following an exponential pattern (start of the “containment” phase); and, when peak total cases were recorded (start of the “recovery” phase). It uses symbols to indicate when average daily case growth rates fell (and were sustained) below certain benchmarks, as well as when deaths stopped growing exponentially.

