

COVID-19 Dashboard

Issue # 56
Thursday, May 21, 2020

Day's Highlights

"Strategic Guidance in an Era of Unprecedented Change"

Measure	Desired Change	Yesterday in the U.S.
Number of Tests	Increase	~414,000 tests on Wednesday – 2 nd highest to-date
Test-Positivity Rate	Decline	5.2% for the day; 6.0% for past 7 days
Number of Cases	Plateau	New Cases down 2.9% week-over-week
Deaths % of Total Cases	Decline	6.0%
Number of Deaths / 1M Population	Plateau	286.8
Recoveries : Death	Increase	3.90

- Worldwide cases topped 5M yesterday. Placing that in perspective, other milestone dates:
 - 4 million cases: May 8
 - 3 million cases: April 27
 - 2 million cases: April 15
- Deaths in the U.S. are approaching 100,000 - this tragic milestone could be surpassed in the next 3-5 days
- Testing in the U.S. on Wednesday was nearly 414,000 - the 2nd most of any day yet (Sunday was the highest, at 421,000). The test-positive rate was 5.2% and has averaged less than 10% for the past two weeks. At a state level, the highest rate is 12% in Virginia. All-in-all, a significant improvement during the past few weeks.
- Cases per capita in the U.S. are nearly the level of Belgium, which currently is 4th among the hardest-hit countries in the world
- Florida and Wisconsin do not seem to be experiencing spikes in cases or positive tests, since relaxing their restrictions
- Infection rates continue to decline in most large metro areas:
 - Only 5 (of 64) Large Metro Areas in the U.S. have recorded their highest new daily infections per capita in the past few days - Hennepin and Ramsey counties, Minnesota; Maricopa county, Arizona; Orange country, California; and Richmond city, Virginia. Of these, Maricopa and Orange counties still report relatively low rates.
 - 19 Large Metro Areas reported 35 or fewer new daily infections per capita over the past 7 days
- At the state level, only Maine, Minnesota, North Dakota and Wisconsin recorded their highest new daily infections per capita yesterday; Arizona and North Carolina recorded their highest rate on Tuesday. Of these, only Minnesota's exceed 100. The remaining states are experiencing declining infection rates
- Internationally, Brazil, Chile, India, Mexico, Peru and Saudi Arabia recorded their highest new daily infections per capita yesterday. Brazil, as expected, moved up to 3rd in most cases worldwide.

COUNTRY-BY-COUNTRY INFORMATION

Countries Included

"Strategic Guidance in an Era of Unprecedented Change"

- 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
- Since that time, 14 countries have moved ahead of South Korea in total cases
- We continue to track the 30 countries, which still account for 89.0% of the nearly 5 million total cases worldwide
- Case and death information is sourced from the [worldometers.info](https://www.worldometers.info), which is accessed daily; analysis by Health Industry Advisor LLC

Country-by-Country Comparative Statistics

"Strategic Guidance in an Era of Unprecedented Change"

As of May 20

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	Rank7	New Daily Infections Per 1M Population (5-Day M.A.)	Rank8
USA	1,592,723	(1)	4,812	(5)	94,936	(1)	6.0%	(14)	286.8	(9)	1.4%	(14)	42,680	(8)	70.1	(5)
Austria	16,353	(29)	1,816	(20)	633	(25)	3.9%	(20)	70.3	(18)	0.3%	(23)	39,710	(9)	5.6	(24)
Belgium	55,983	(16)	4,830	(4)	9,150	(7)	16.3%	(1)	789.5	(1)	0.5%	(18)	57,302	(4)	24.7	(14)
Brazil	293,357	(3)	1,380	(24)	18,894	(6)	6.4%	(12)	88.9	(16)	6.1%	(2)	3,462	(25)	70.0	(6)
Canada	80,142	(14)	2,123	(16)	6,031	(10)	7.5%	(10)	159.8	(12)	1.4%	(13)	33,567	(14)	29.8	(11)
Chile	53,617	(18)	2,805	(12)	544	(26)	1.0%	(27)	28.5	(22)	6.3%	(1)	18,346	(18)	143.8	(1)
China	82,965	(13)	58	(30)	4,634	(13)	5.6%	(16)	3.2	(29)	0.0%	(30)	N/A	N/A	0.0	(30)
Ecuador	34,854	(21)	1,976	(18)	2,888	(19)	8.3%	(9)	163.7	(11)	2.1%	(9)	5,301	(24)	35.4	(10)
France	181,575	(7)	2,782	(13)	28,132	(4)	15.5%	(2)	431.0	(5)	0.2%	(25)	21,218	(15)	7.7	(21)
Germany	178,531	(8)	2,131	(15)	8,270	(8)	4.6%	(18)	98.7	(14)	0.3%	(21)	37,585	(12)	7.6	(22)
India	112,028	(11)	81	(29)	3,434	(16)	3.1%	(21)	2.5	(30)	5.5%	(3)	1,548	(28)	3.5	(26)
Iran	126,949	(10)	1,511	(23)	7,183	(9)	5.7%	(15)	85.5	(17)	1.7%	(11)	8,022	(23)	24.2	(15)
Ireland	24,315	(26)	4,924	(3)	1,571	(21)	6.5%	(11)	318.1	(8)	0.3%	(24)	52,488	(5)	26.4	(12)
Israel	16,667	(27)	1,926	(19)	279	(28)	1.7%	(26)	32.2	(21)	0.1%	(29)	57,733	(3)	2.0	(27)
Italy	227,364	(6)	3,760	(6)	32,330	(3)	14.2%	(4)	534.7	(3)	0.3%	(22)	48,698	(6)	12.4	(19)
Japan	16,385	(28)	130	(28)	771	(24)	4.7%	(17)	6.1	(25)	0.2%	(26)	1,900	(26)	0.4	(29)
Mexico	54,346	(17)	422	(25)	5,666	(12)	10.4%	(7)	43.9	(20)	5.0%	(4)	1,271	(29)	17.8	(17)
Netherlands	44,447	(20)	2,594	(14)	5,748	(11)	12.9%	(5)	335.5	(7)	0.3%	(20)	16,809	(20)	10.3	(20)
Pakistan	45,898	(19)	208	(27)	985	(23)	2.1%	(25)	4.5	(27)	4.3%	(6)	1,631	(27)	6.9	(23)
Peru	104,020	(12)	3,155	(9)	3,024	(17)	2.9%	(22)	91.7	(15)	4.2%	(7)	19,156	(16)	120.1	(2)
Portugal	29,660	(24)	2,909	(11)	1,263	(22)	4.3%	(19)	123.9	(13)	0.7%	(17)	58,828	(2)	21.4	(16)
Russia	308,705	(2)	2,059	(17)	2,972	(18)	1.0%	(28)	19.8	(23)	3.3%	(8)	45,614	(7)	63.3	(7)
Saudi Arabia	62,545	(15)	1,797	(22)	339	(27)	0.5%	(29)	9.7	(24)	4.9%	(5)	14,457	(22)	72.7	(4)
Singapore	29,364	(25)	5,019	(2)	22	(30)	0.1%	(30)	3.8	(28)	1.8%	(10)	15,773	(21)	98.1	(3)
South Korea	11,110	(30)	217	(26)	263	(29)	2.4%	(24)	5.1	(26)	0.2%	(27)	38,371	(11)	0.4	(28)
Spain	279,524	(4)	5,979	(1)	27,888	(5)	10.0%	(8)	596.5	(2)	0.4%	(19)	64,977	(1)	25.8	(13)
Sweden	31,523	(22)	3,121	(10)	3,831	(15)	12.2%	(6)	379.3	(6)	1.5%	(12)	17,589	(19)	51.1	(8)
Switzerland	30,658	(23)	3,580	(8)	1,892	(20)	6.2%	(13)	220.9	(10)	0.1%	(28)	39,247	(10)	4.1	(25)
Turkey	152,587	(9)	1,809	(21)	4,222	(14)	2.8%	(23)	50.1	(19)	0.8%	(16)	18,874	(17)	16.0	(18)
UK	248,293	(5)	3,657	(7)	35,704	(2)	14.4%	(3)	525.9	(4)	1.0%	(15)	36,696	(13)	39.1	(9)

Note: China does not report test volumes

© 2020 [Health Industry Advisor LLC](#) analysis, using data from [Worldometers.info](#)

“Strategic Guidance in an Era of Unprecedented Change”

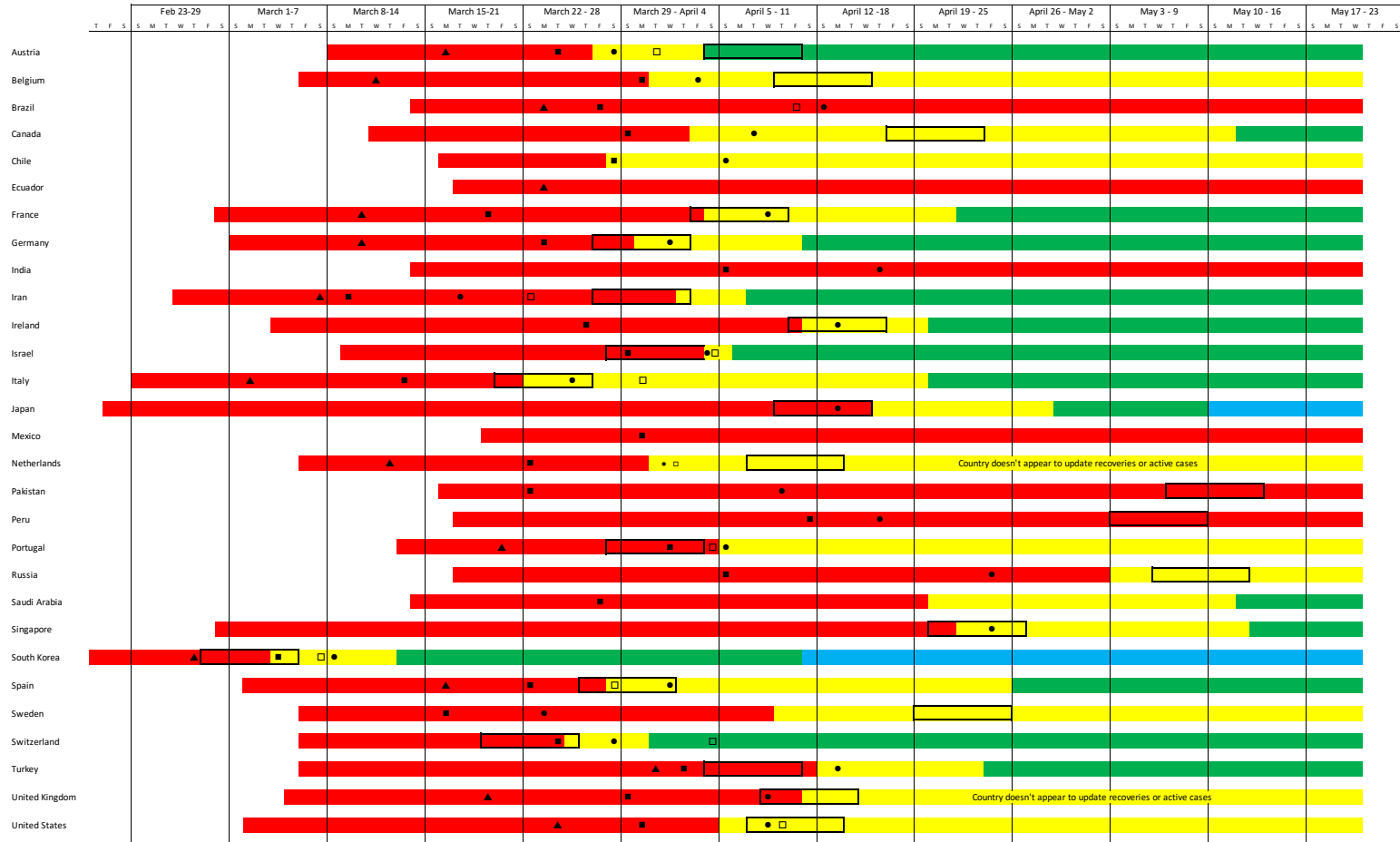
This graphic on the following page illustrates when the country first recorded 100 total cases (start of the “contagion” phase); when growth stopped following an exponential pattern (start of the “containment” phase); and, when peak total cases were recorded (start of the “recovery” phase). It uses symbols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

Legend:

Phase		Daily Case Increase (5-Day Moving Average)	Death Rate
	Contagion 100th Case to End of Exponential Growth	 Stabilized < 35%	 No Longer Increasing Exponentially
	Containment End of Exponential Growth to Peak Active Cases	 Stabilized < 20%	
	Recovery Post-Peak Active Cases	 Stabilized < 10%	<u>Peak Infections</u>
	Clear Per IHME Standard, clear to relax social distancing		 Peak 7-Day Average New Daily Infections

Country-by-Country Virus Progression

"Strategic Guidance in an Era of Unprecedented Change"



© 2020 [Health Industry Advisor LLC](#) analysis, using data from [worldometers.info](#)

Country-By-Country Listing of Countries By Total Cases

"Strategic Guidance in an Era of Unprecedented Change"

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. These countries have moved up:

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

The original 30 still account for 89% of all cases worldwide.

			Total Cases					
Rank	Country	15-May	Rank	Country	6-May	Rank	Country	27-Apr
1	USA	1,592,723	1	USA	1,263,092	1	USA	1,010,356
2	Russia	308,705	2	Spain	253,682	2	Spain	229,422
3	Brazil	293,357	3	Italy	214,457	3	Italy	199,414
4	Spain	279,524	4	UK	201,101	4	France	165,842
5	UK	248,293	5	France	174,191	5	Germany	158,758
6	Italy	227,364	6	Germany	168,162	6	UK	157,149
7	France	181,575	7	Russia	165,929	7	Turkey	112,261
8	Germany	178,531	8	Turkey	131,744	8	Iran	91,472
9	Turkey	152,587	9	Brazil	126,611	9	Russia	87,147
10	Iran	126,949	10	Iran	101,650	10	China	82,830
11	India	112,028	11	China	82,883	11	Brazil	66,501
12	Peru	104,020	12	Canada	63,496	12	Canada	48,500
13	China	82,965	13	Peru	54,817	13	Belgium	46,687
14	Canada	80,142	14	India	52,987	14	Netherlands	38,245
15	Saudi Arabia	62,545	15	Belgium	50,781	15	India	29,451
16	Belgium	55,983	16	Netherlands	41,319	16	Switzerland	29,164
17	Mexico	54,346	17	Saudi Arabia	31,938	17	Peru	28,669
18	Chile	53,617	18	Switzerland	30,060	18	Portugal	24,070
19	Pakistan	45,898	19	Ecuador	29,420	19	Ecuador	23,240
20	Netherlands	44,447	20	Portugal	26,182	20	Ireland	19,648
22	Ecuador	34,854	21	Mexico	26,025	21	Sweden	18,926
24	Sweden	31,523	22	Sweden	23,918	22	Saudi Arabia	18,811
25	Switzerland	30,658	23	Pakistan	23,214	23	Israel	15,555
26	Portugal	29,660	24	Chile	23,048	24	Austria	15,274
27	Singapore	29,364	25	Ireland	22,248	25	Mexico	14,677
30	Ireland	24,315	26	Singapore	20,198	26	Singapore	14,423
38	Israel	16,667	29	Israel	16,310	27	Pakistan	13,915
39	Japan	16,385	31	Austria	15,684	28	Chile	13,813
40	Austria	16,353	32	Japan	15,253	29	Japan	13,614
45	S. Korea	11,110	38	S. Korea	10,806	35	South Korea	10,738
	Others	556,923		Others	356,176		Others	263,943
	World	5,083,411		World	3,817,382		World	3,062,515

30 countries' share

89.0%

90.7%

91.4%

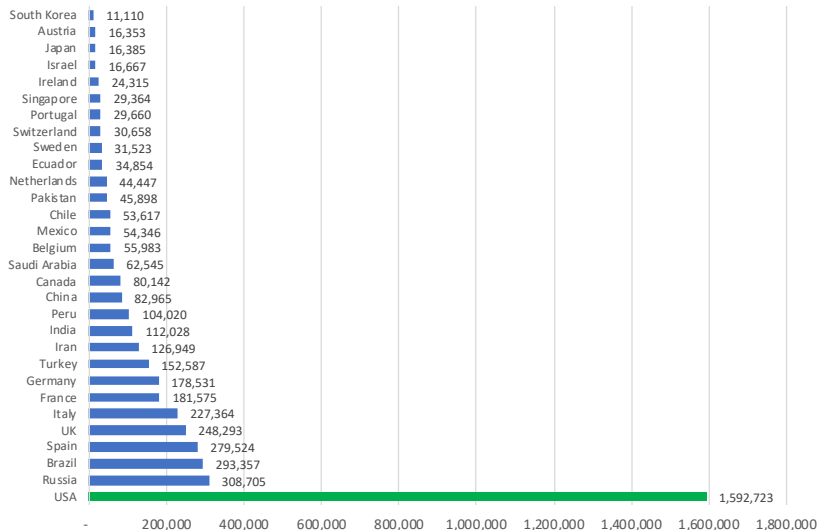
Country-by-Country Cases & Cases Per Capita

"Strategic Guidance in an Era of Unprecedented Change"

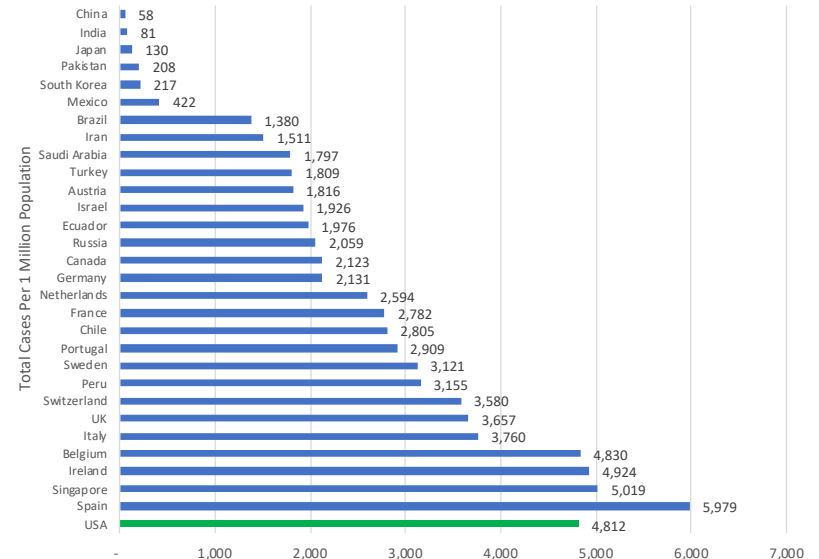
Brazil, Chile, India, Mexico, Pakistan, Peru, Russia and Saudi Arabia are moving up in the ranks of most cases; Austria, Israel, Japan and South Korea are dropping

Cases per capita remain the highest in European countries, Singapore and the US.

Total Cases By Country
May 20



Cases Per Capita By Country
May 20

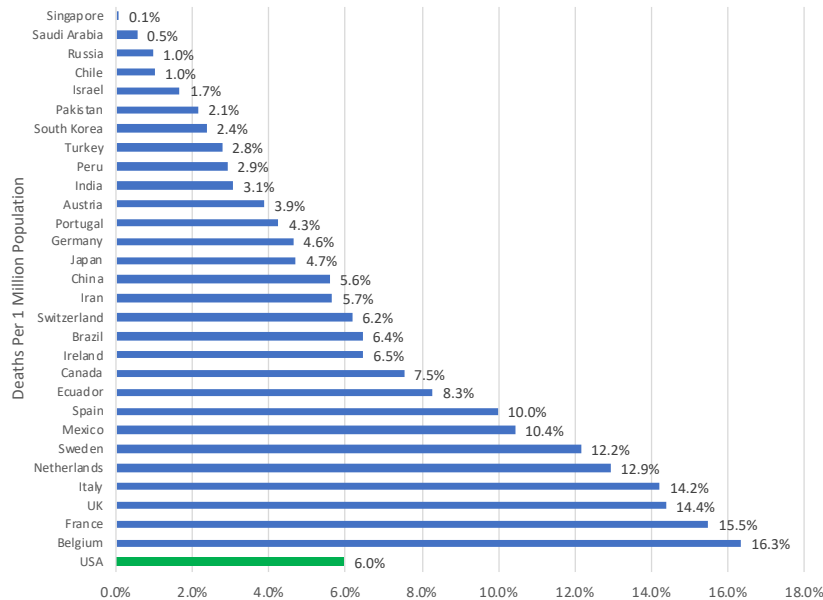


Deaths Per Cases & Per Capita

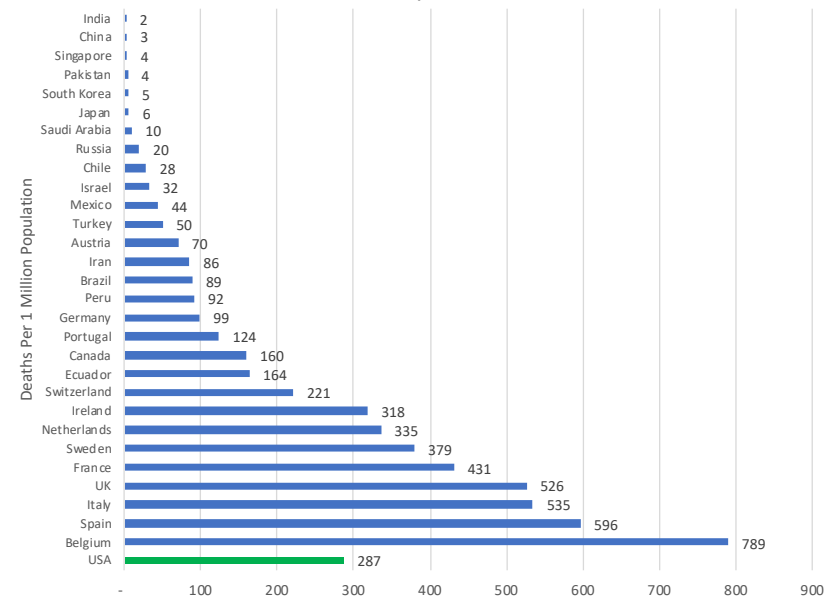
"Strategic Guidance in an Era of Unprecedented Change"

Death rates per case and per capita are the highest in Belgium, France, Italy and the UK. Rates in the US are in the middle of this group of countries

Death Rate By Country
May 20



Deaths Per Capita By Country
May 20



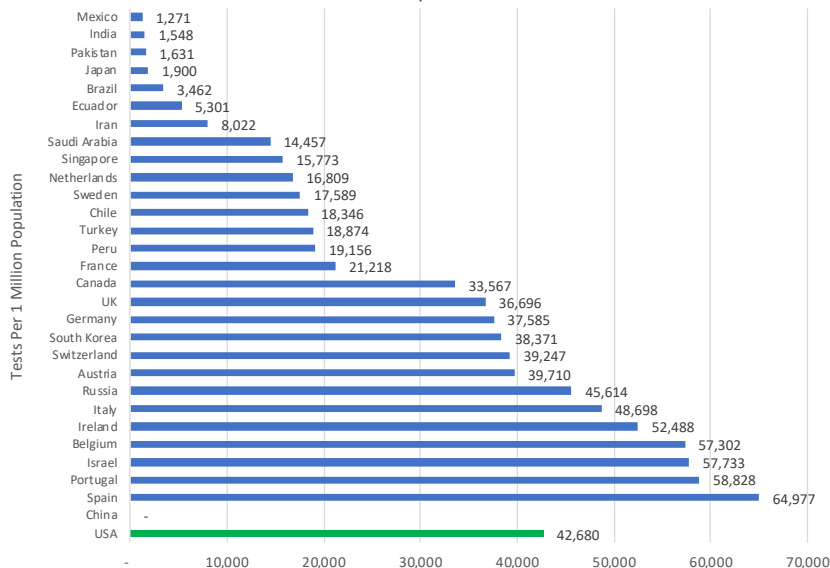
Country-by-Country Tests Per Capita & Case Growth Rate

"Strategic Guidance in an Era of Unprecedented Change"

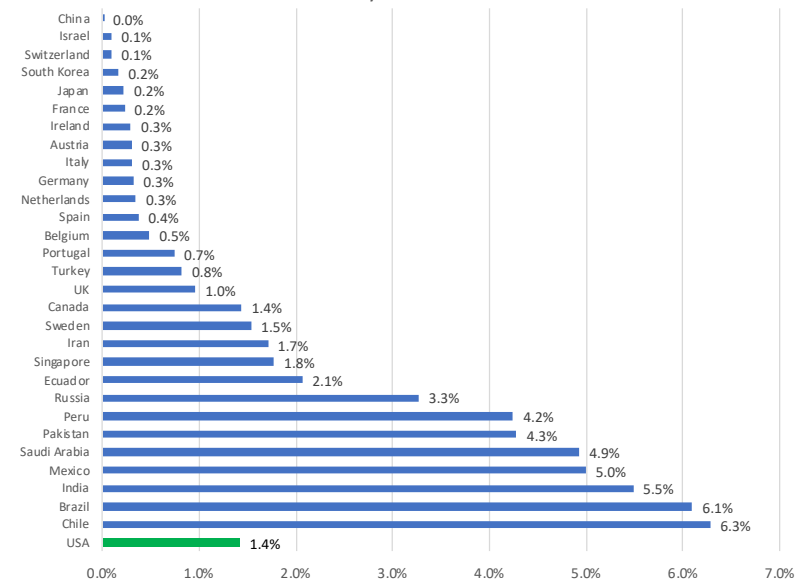
Testing per capita varies widely among these countries. The US, while ramping up testing over the past several weeks, still lags that of many European countries.

Case growth among the hardest-hit countries has fallen sharply over the past month; relatively high in Brazil, Chile, India, Mexico, Peru and Saudi Arabia

Tests Per Capita By Country
May 20



Daily Case Growth Rate By Country
May 16 - 20



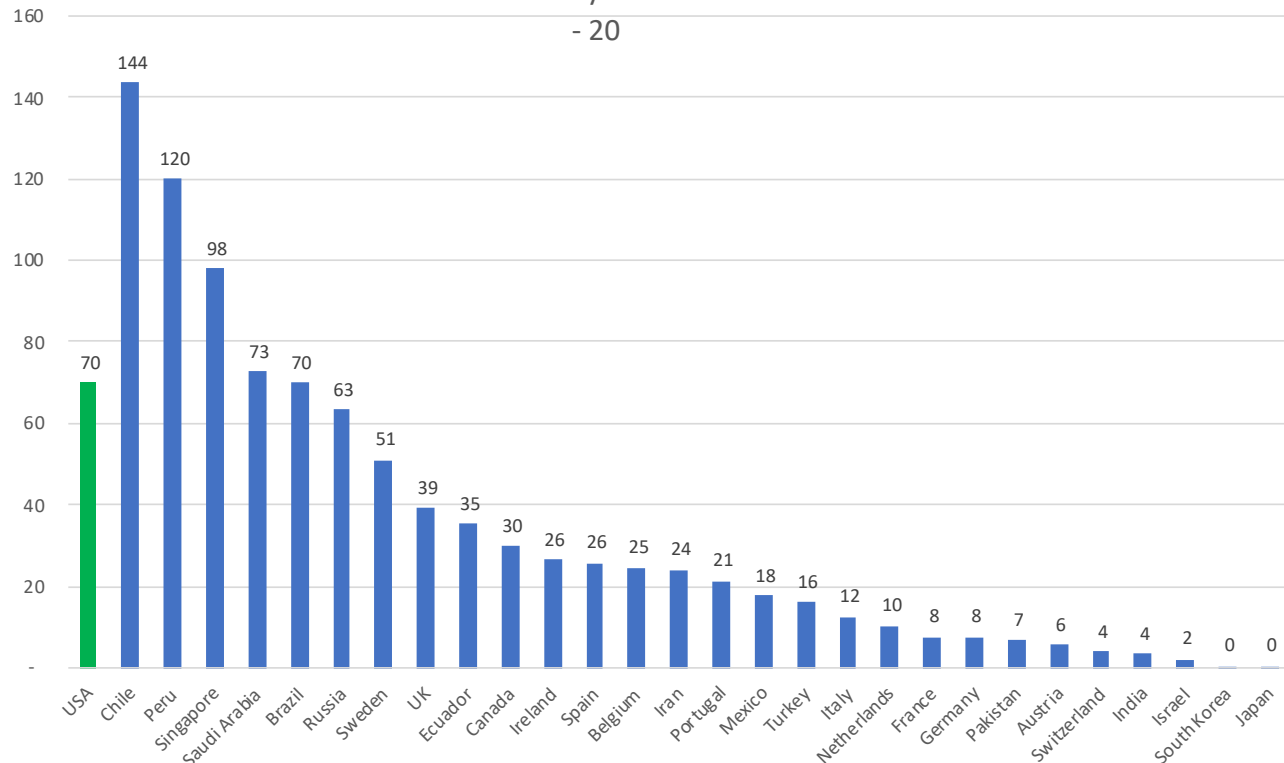
Country-by-Country New Daily Infection Rate

"Strategic Guidance in an Era of Unprecedented Change"

New Daily Infection Rates Per 1 Million Population By Country

May 14

- 20



New daily infection rates are declining in most of the hardest-hit countries. Singapore is high but, declining.

Even in countries with newly-emerging virus-spread - Brazil, India, Mexico and Saudi Arabia - infection rates appear relatively low. Chile and Peru are the exceptions.

UNITED STATES & STATE-BY-STATE INFORMATION

State-by-State Comparative Statistics

“Strategic Guidance in an Era of Unprecedented Change”

As of May 20

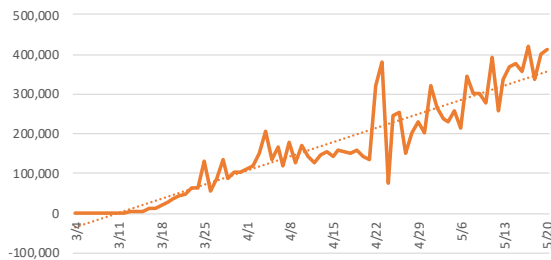
State	Total Cases	Rank	Cases per 1M Population	Rank2	Deaths	Rank3	Death Rate	Rank4	Deaths per 1 Million Population	Rank5	5-day Moving Average Case Growth Rate	Rank6	Tests per 1M Population Past 7 days	Rank7	New Daily Cases Per 1M Population (5-Day M.A.)	Rank8
Alabama	12,744	(26)	2,599.1	(28)	517	(25)	4.1%	(30)	105.4	(25)	2.3%	(11)	818	(39)	59.6	(24)
Alaska	402	(51)	549.5	(49)	10	(51)	2.5%	(43)	13.7	(50)	0.7%	(47)	1,249	(20)	3.7	(48)
Arizona	14,897	(23)	2,046.7	(35)	747	(20)	5.0%	(18)	102.6	(27)	2.5%	(9)	740	(44)	53.4	(27)
Arkansas	5,003	(39)	1,657.8	(41)	107	(40)	2.1%	(46)	35.5	(45)	2.3%	(10)	1,091	(28)	36.3	(35)
California	85,885	(5)	2,173.6	(34)	3,512	(8)	4.1%	(29)	88.9	(29)	2.3%	(12)	1,137	(24)	46.9	(31)
Colorado	22,797	(17)	3,958.7	(18)	1,299	(16)	5.7%	(11)	225.6	(14)	1.4%	(37)	511	(50)	57.6	(26)
Connecticut	39,017	(12)	10,943.6	(5)	3,529	(7)	9.0%	(2)	989.8	(3)	1.6%	(33)	1,914	(4)	166.8	(7)
Delaware	8,194	(32)	8,414.8	(7)	310	(32)	3.8%	(34)	318.4	(12)	2.1%	(17)	1,564	(12)	182.2	(3)
District of Columbia	7,551	(35)	10,699.3	(6)	407	(28)	5.4%	(14)	576.7	(5)	1.9%	(22)	1,773	(7)	195.7	(2)
Florida	47,471	(9)	2,210.2	(33)	2,096	(11)	4.4%	(26)	97.6	(28)	1.5%	(35)	1,175	(21)	33.7	(38)
Georgia	39,801	(11)	3,748.6	(20)	1,697	(14)	4.3%	(28)	159.8	(16)	1.6%	(32)	1,736	(8)	58.9	(25)
Hawaii	643	(49)	454.1	(50)	17	(48)	2.6%	(41)	12.0	(51)	0.2%	(51)	801	(40)	0.5	(51)
Idaho	2,506	(43)	1,398.4	(43)	77	(42)	3.1%	(39)	43.0	(43)	1.0%	(44)	434	(51)	14.5	(45)
Illinois	100,418	(3)	7,924.5	(8)	4,525	(6)	4.5%	(22)	357.1	(10)	2.1%	(18)	1,729	(9)	177.2	(5)
Indiana	29,274	(16)	4,348.3	(16)	1,864	(12)	6.4%	(8)	276.9	(13)	1.9%	(23)	884	(36)	80.7	(17)
Iowa	15,620	(22)	4,950.8	(14)	393	(29)	2.5%	(42)	124.6	(23)	2.1%	(16)	1,133	(26)	105.5	(11)
Kansas	8,504	(31)	2,919.0	(23)	202	(36)	2.4%	(44)	69.3	(36)	1.5%	(34)	666	(47)	48.9	(29)
Kentucky	8,167	(33)	1,828.0	(38)	376	(30)	4.6%	(21)	84.2	(31)	1.9%	(24)	1,386	(17)	34.8	(37)
Louisiana	35,316	(13)	7,596.8	(9)	2,608	(9)	7.4%	(4)	561.0	(6)	0.9%	(46)	1,477	(13)	81.6	(16)
Maine	1,819	(45)	1,353.2	(46)	73	(43)	4.0%	(32)	54.3	(39)	2.6%	(8)	1,452	(14)	32.3	(39)
Maryland	42,323	(10)	7,000.5	(10)	2,123	(10)	5.0%	(17)	351.2	(11)	2.7%	(6)	987	(31)	177.5	(4)
Massachusetts	88,970	(4)	12,802.4	(3)	6,066	(3)	6.8%	(7)	872.9	(4)	1.3%	(40)	1,643	(11)	174.2	(6)
Michigan	53,009	(7)	5,307.9	(13)	5,060	(4)	9.5%	(1)	506.7	(8)	1.1%	(42)	1,843	(5)	66.1	(20)
Minnesota	17,670	(21)	3,133.2	(21)	786	(19)	4.4%	(24)	139.4	(19)	4.4%	(1)	1,148	(23)	120.4	(10)
Mississippi	11,967	(27)	4,021.0	(17)	570	(23)	4.8%	(20)	191.5	(15)	2.1%	(19)	990	(30)	90.1	(14)
Missouri	11,513	(28)	1,875.9	(37)	644	(22)	5.6%	(12)	104.9	(26)	1.4%	(39)	881	(37)	27.0	(42)
Montana	478	(50)	447.2	(51)	16	(49)	3.3%	(37)	15.0	(49)	0.5%	(48)	785	(41)	2.1	(50)
Nebraska	11,122	(29)	5,749.6	(11)	338	(39)	1.2%	(49)	71.3	(35)	2.6%	(7)	1,655	(10)	151.2	(8)
Nevada	7,166	(36)	2,326.5	(31)	373	(31)	5.2%	(16)	121.1	(24)	1.6%	(30)	1,136	(25)	35.8	(36)
New Hampshire	3,868	(41)	2,844.7	(24)	190	(37)	4.9%	(19)	139.7	(18)	2.2%	(13)	1,436	(16)	59.8	(23)
New Jersey	152,096	(2)	17,123.7	(2)	10,747	(2)	7.1%	(6)	1,209.9	(2)	0.9%	(45)	1,446	(15)	148.5	(9)
New Mexico	6,317	(37)	3,012.6	(22)	283	(35)	4.5%	(23)	135.0	(21)	2.2%	(14)	2,177	(2)	64.9	(21)
New York	364,249	(1)	18,724.0	(1)	28,758	(1)	7.9%	(3)	1,478.3	(1)	0.5%	(49)	1,813	(6)	98.4	(13)
North Carolina	20,261	(18)	1,931.8	(36)	726	(21)	3.6%	(36)	69.2	(37)	3.0%	(3)	915	(34)	53.3	(28)
North Dakota	2,095	(44)	2,749.1	(25)	49	(46)	2.3%	(45)	64.3	(38)	3.5%	(2)	1,922	(3)	84.0	(15)
Ohio	29,436	(15)	2,518.2	(29)	1,781	(13)	6.1%	(9)	152.4	(17)	1.8%	(27)	778	(42)	45.3	(32)
Oklahoma	5,532	(38)	1,398.0	(40)	299	(34)	5.4%	(13)	75.6	(34)	1.7%	(29)	1,272	(19)	24.5	(43)
Oregon	3,801	(42)	901.2	(47)	144	(38)	3.8%	(33)	34.1	(46)	1.4%	(38)	615	(48)	13.0	(46)
Pennsylvania	68,151	(6)	5,323.5	(12)	4,822	(5)	7.1%	(5)	376.7	(9)	1.2%	(41)	523	(49)	66.3	(19)
Rhode Island	13,356	(25)	12,607.6	(4)	538	(24)	4.0%	(31)	507.9	(7)	1.8%	(25)	3,048	(1)	205.1	(1)
South Carolina	9,175	(30)	1,782.0	(39)	407	(28)	4.4%	(25)	79.0	(33)	1.8%	(28)	1,163	(22)	31.8	(40)
South Dakota	4,177	(40)	4,721.6	(15)	46	(47)	1.1%	(51)	52.0	(40)	1.4%	(36)	734	(45)	71.9	(18)
Tennessee	18,532	(20)	2,712.1	(26)	309	(33)	1.7%	(47)	45.2	(42)	1.8%	(26)	1,277	(18)	45.2	(33)
Texas	51,651	(8)	1,781.3	(40)	1,423	(15)	2.8%	(40)	49.1	(41)	2.0%	(20)	901	(35)	40.1	(34)
Utah	7,710	(34)	2,404.9	(30)	90	(41)	1.2%	(50)	28.1	(47)	2.2%	(15)	1,019	(29)	48.6	(30)
Vermont	944	(47)	1,512.8	(42)	54	(45)	5.7%	(10)	86.5	(30)	0.2%	(50)	774	(43)	3.4	(49)
Virginia	32,908	(14)	3,855.4	(19)	1,074	(17)	3.3%	(38)	125.8	(22)	2.8%	(5)	857	(38)	103.1	(12)
Washington	19,822	(19)	2,603.1	(27)	1,036	(18)	5.2%	(15)	136.0	(20)	1.1%	(43)	690	(46)	28.9	(41)
West Virginia	1,567	(46)	876.8	(48)	69	(44)	4.4%	(27)	38.6	(44)	1.6%	(31)	1,116	(27)	13.0	(47)
Wisconsin	13,413	(24)	2,303.7	(32)	481	(26)	3.6%	(35)	82.6	(32)	2.8%	(4)	974	(32)	61.6	(22)
Wyoming	787	(48)	1,359.8	(45)	11	(50)	1.4%	(48)	19.0	(48)	1.9%	(21)	933	(33)	24.4	(44)
United States	1,592,723		4,811.8		94,936		6.0%		286.8		1.4%		1,153		70.1	

© 2020 [Health Industry Advisor LLC](#) analysis, using data from [Covid Tracking Project](#) and [worldometers.info](#)

"Strategic Guidance in an Era of Unprecedented Change"

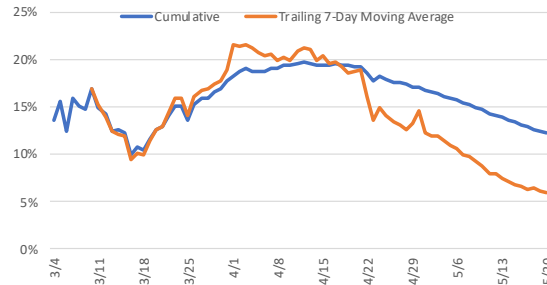
With significantly increased testing, the US is now meeting the WHO standard of <10% test-positives. This suggests that asymptomatic cases are being captured and that we have a better view of true infection rates. Further, new daily infections continue to decline; the death rate seems to have stabilized.

New Daily Tests - US



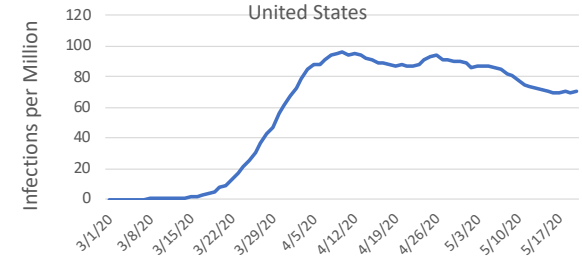
© 2020 [Health Industry Advisor LLC](#) analysis, using data from [Covid Tracking Project](#)

Test-Positive Rate



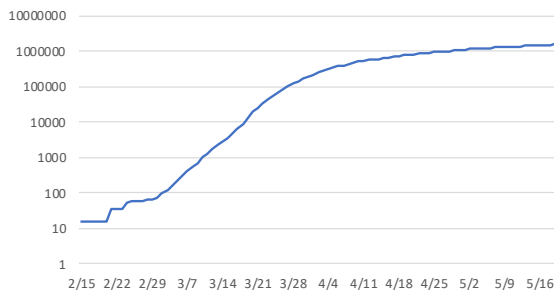
© 2020 [Health Industry Advisor LLC](#) analysis, using data from [Covid Tracking Project](#)

New Daily Infections Per 1M
Trailing 7-Day Moving Average
United States



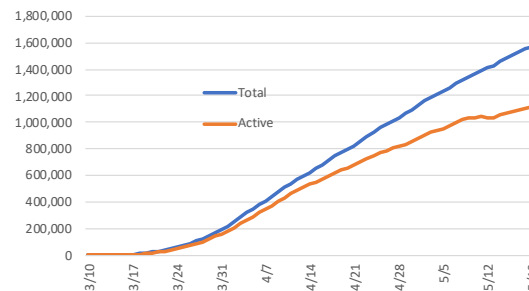
© 2020 [Health Industry Advisor LLC](#) analysis, using data from [Worldometers.info](#)

Total Cases Log Scale - US



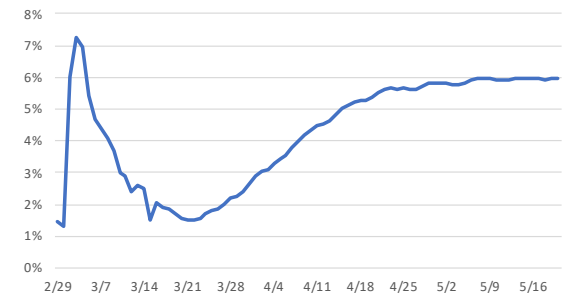
© 2020 [Health Industry Advisor LLC](#) analysis, using data from [Worldometers.info](#)

Cases - US



© 2020 [Health Industry Advisor LLC](#) analysis, using data from [Worldometers.info](#)

Deaths Per Case - US

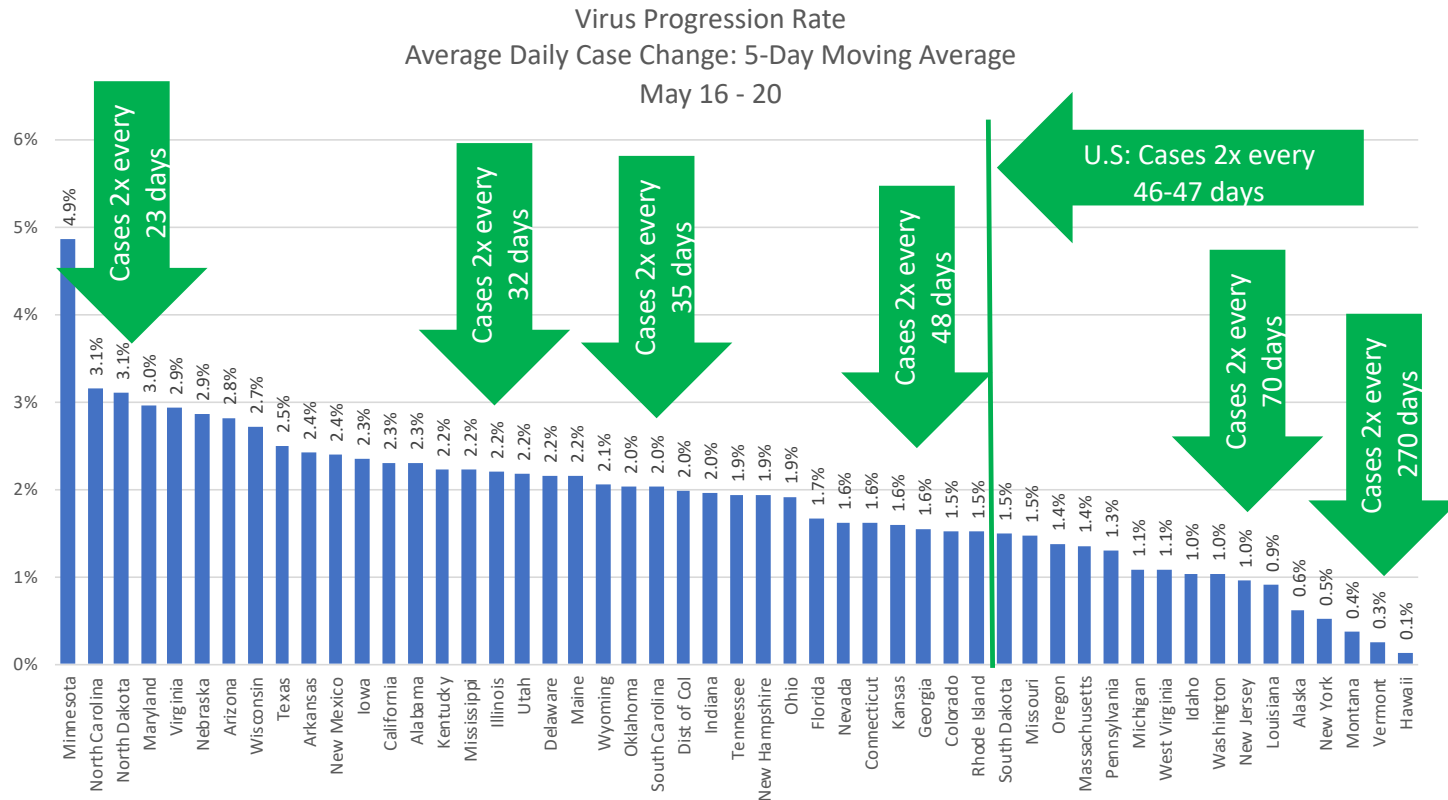


© 2020 [Health Industry Advisor LLC](#) analysis, using data from [Worldometers.info](#)

State-by-State Average Daily Case Growth

"Strategic Guidance in an Era of Unprecedented Change"

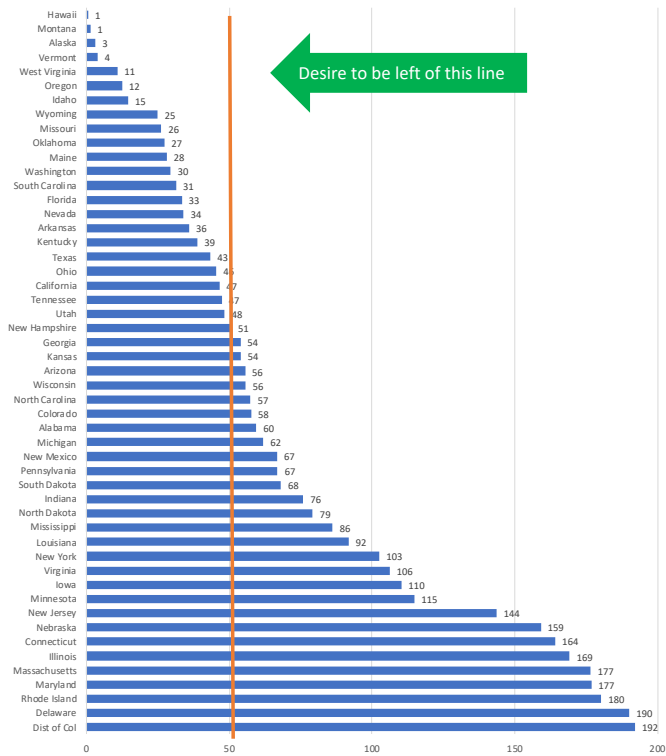
Just 1 month ago, cases in every state were doubling every 1 – 3 weeks.
Now, they would take 2 weeks to more than 1 year to double



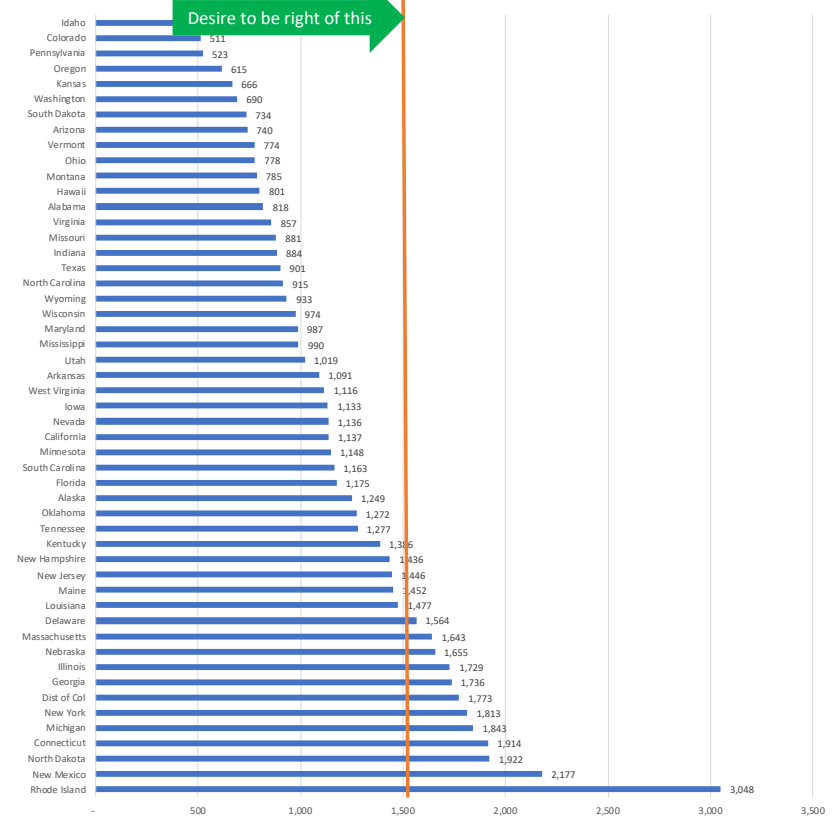
State-by-State New Daily Infections & Tests Per Capita

"Strategic Guidance in an Era of Unprecedented Change"

New Daily Infections Per 1 Million Population
By State
May 14 - 20



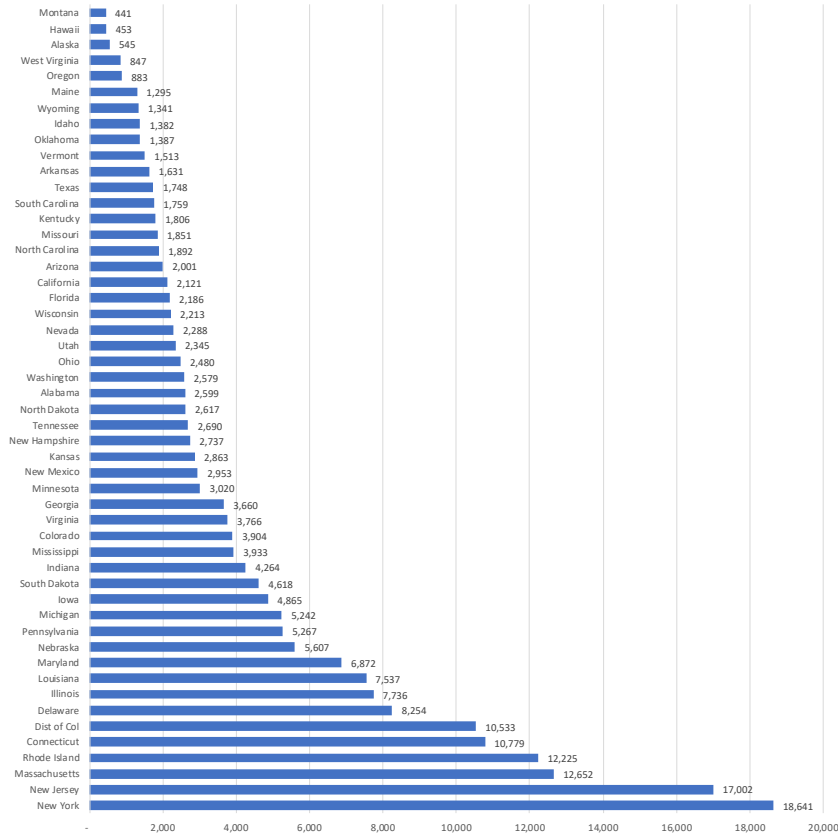
Daily Tests Per 1 Million Population
By State
May 14 - 20



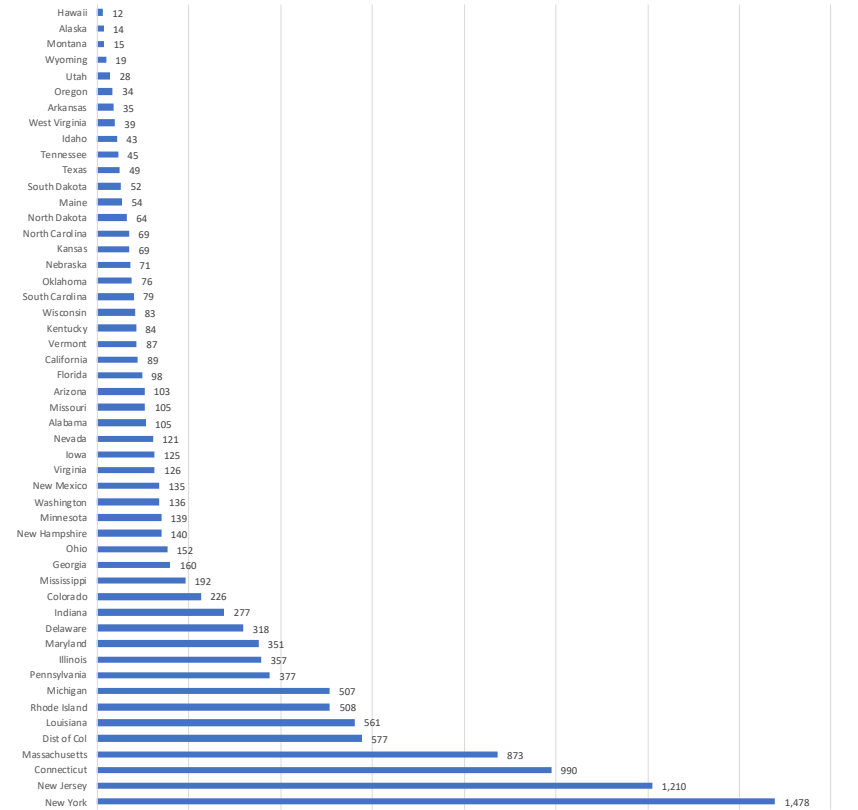
State-by-State Cases & Deaths Per Capita

"Strategic Guidance in an Era of Unprecedented Change"

Total Cases Per 1 Million Population
By State
As of May 20



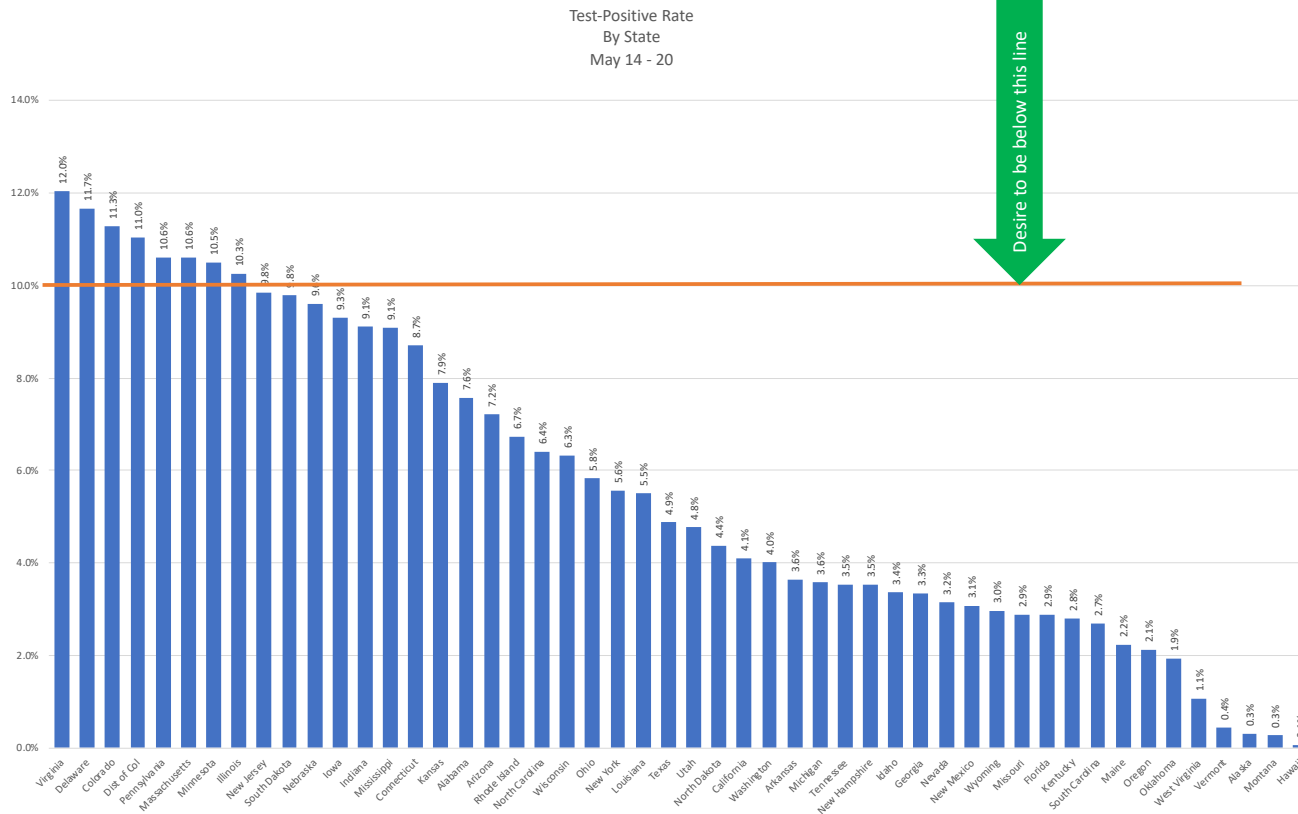
Deaths Per 1 Million Population
By State
As of May 20



Which States Are Performing Sufficient Tests?

"Strategic Guidance in an Era of Unprecedented Change"

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. All except 7 states and the District of Columbia effectively met this guideline for the past week.



VIRUS PROGRESSION: ROADMAP TO RECOVERY

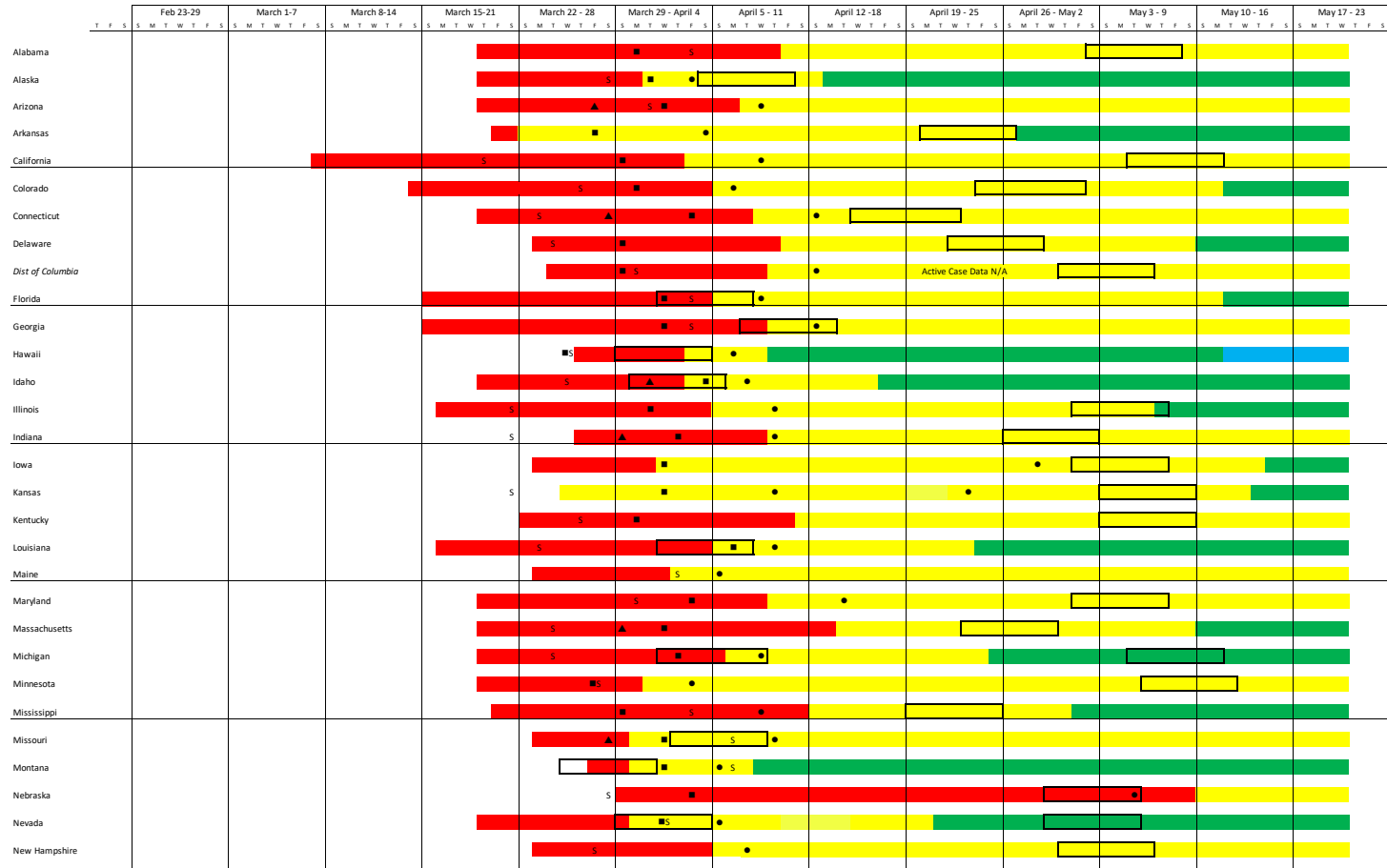
“Strategic Guidance in an Era of Unprecedented Change”

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”

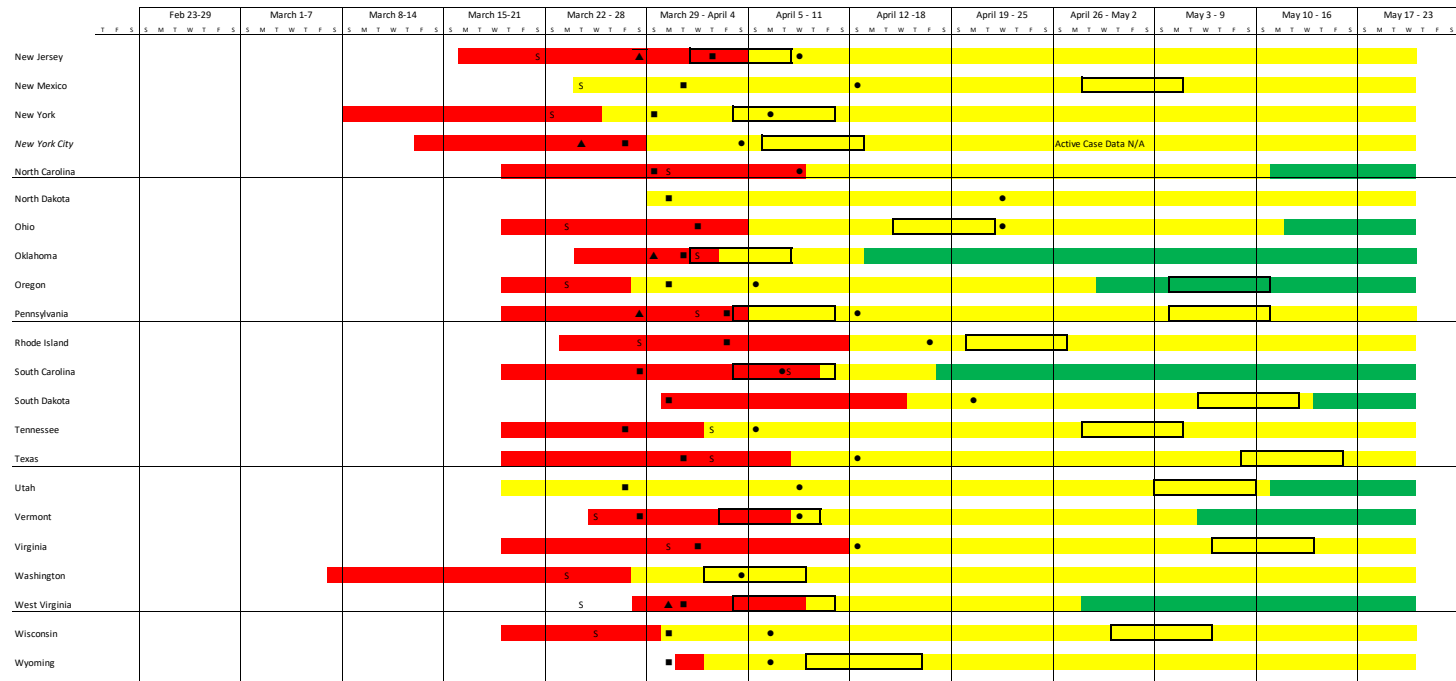


Legend on following page

© 2020 [Health Industry Advisor LLC](https://www.healthindustryadvisor.com/) analysis, using data from [worldometers.info](https://www.worldometers.info/)

State-by-State Virus Progression – 2 of 2

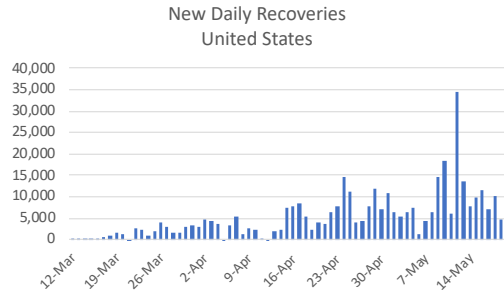
“Strategic Guidance in an Era of Unprecedented Change”



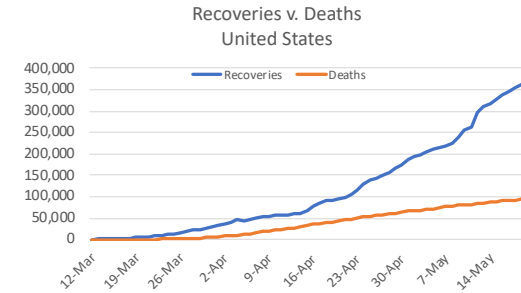
© 2020 [Health Industry Advisor LLC](https://www.healthindustryadvisor.com/) analysis, using data from [worldometers.info](https://www.worldometers.info/)

UNDER-REPORTED RECOVERIES? POSSIBLE LAG IN STATE REPORTING

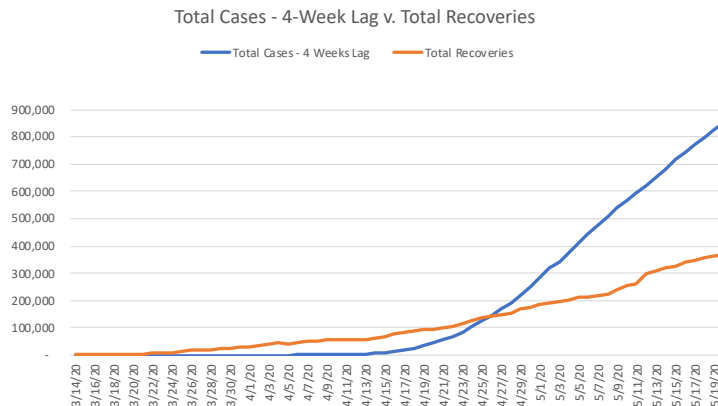
"Strategic Guidance in an Era of Unprecedented Change"



© 2020 [Health Industry Advisor LLC](#) analysis, using data from [Worldometers.info](#)



© 2020 [Health Industry Advisor LLC](#) analysis, using data from [Worldometers.info](#)



© 2020 [Health Industry Advisor LLC](#) analysis, using data from [Worldometers.info](#)

"Strategic Guidance in an Era of Unprecedented Change"

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 ~310-390k

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

State	Recoveries	Expected Recoveries		State	Recoveries	Expected Recoveries	
		Low	High			Low	High
Alabama	20	4,474	5,033	Montana	440	351	395
Alaska	352	268	302	Nebraska	349	1,450	1,632
Arizona	70	4,367	4,913	Nevada	5,039	3,265	3,673
Arkansas	3,852	1,914	2,153	New Hampshire	1,275	1,270	1,429
California	15,202	29,874	33,609	New Jersey	7,038	76,692	86,279
Colorado	1,491	8,702	9,790	New Mexico	1,985	1,768	1,989
Connecticut	6,264	17,975	20,222	New York	63,007	209,814	236,041
Delaware	3,965	2,560	2,880	North Carolina	11,637	5,990	6,739
District Of Columbia	1,059	2,565	2,885	North Dakota	1,302	543	611
Florida	7,638	22,861	25,718	Ohio	4,914	11,294	12,705
Georgia	340	16,882	18,992	Oklahoma	4,266	2,315	2,605
Hawaii	578	474	533	Oregon	1,406	1,647	1,853
Idaho	1,379	1,442	1,622	Pennsylvania	6,856	29,514	33,203
Illinois	111	28,086	31,597	Rhode Island	886	4,673	5,257
Indiana	1,869	9,950	11,194	South Carolina	6,043	3,809	4,285
Iowa	8,419	2,998	3,373	South Dakota	3,023	1,486	1,672
Kansas	2,801	1,854	2,085	Tennessee	11,783	6,274	7,058
Kentucky	2,919	2,698	3,036	Texas	30,376	17,166	19,312
Louisiana	26,249	20,206	22,732	Utah	4,183	2,756	3,101
Maine	1,110	726	816	Vermont	824	658	741
Maryland	2,806	11,820	13,298	Virginia	4,271	8,213	9,239
Massachusetts	27,812	34,355	38,650	Washington	5,183	9,995	11,245
Michigan	28,234	27,173	30,569	West Virginia	977	770	867
Minnesota	12,227	2,177	2,449	Wisconsin	7,728	3,876	4,361
Mississippi	7,681	3,915	4,405	Wyoming	534	358	402
Missouri	2,965	4,950	5,569				
				United States	370,076	678,974	763,845

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

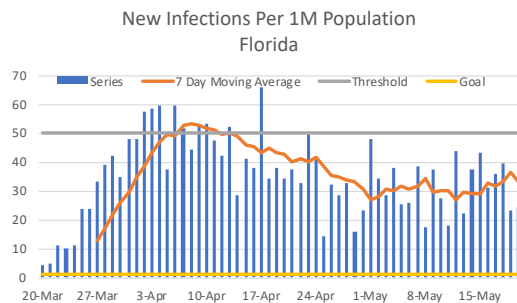
States seemingly up-to-date with reporting recoveries
States only reporting ~ 1/2 expected recoveries
States well-behind in reporting recoveries

MONITORING THE IMPACT OF RELAXING RESTRICTIONS

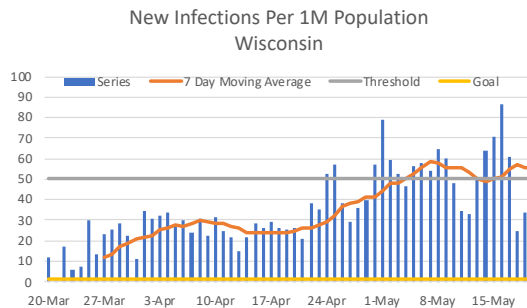
State-By-State Impact of Relaxing Restrictions

“Strategic Guidance in an Era of Unprecedented Change”

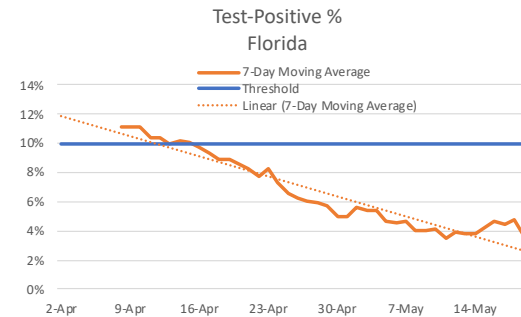
With several states re-opening, we are monitoring testing and infection rates to determine if, when and how much impact relaxation has on renewed spread of the virus. Here, we focus on Florida and Wisconsin
Thus far, test-positive and new infection rates in both states are relatively low.



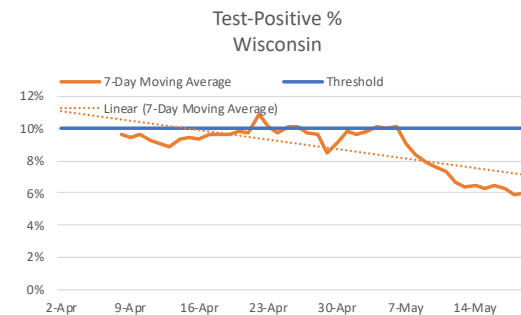
© 2020 [Health Industry Advisor LLC](#) analysis, using data from [Worldometers.info](#)



© [Health Industry Advisor LLC](#) analysis, using data from [World Health Organization](#)



© 2020 [Health Industry Advisor LLC](#) analysis, using data from [Covid Tracking Project](#)



© 2020 [Health Industry Advisor LLC](#) analysis, using data from [Covid Tracking Project](#)

U.S. COUNTY-BY-COUNTY INFORMATION

- 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

Daily Infection Rates By Rural/Metro Class

Large Central Metro Areas – Top 20 Ranked By Trailing 7-Day Moving Average

“Strategic Guidance in an Era of Unprecedented Change”

Large Metro Areas With Most New Daily Infections / Capita Last Week

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
Alexandria city	Virginia	1	1,544	9,735	274	300		34	617	2.2%
Cook	Illinois	1	64,691	12,698	259	404		2,980	54,110	4.6%
Suffolk	Massachusetts	1	16,825	22,088	257	858		797	14,472	4.7%
Hartford	Connecticut	1	9,050	10,408	250	287		1,090	19,792	12.0%
Union	New Jersey	1	15,031	27,249	214	888		977	17,740	6.5%
District of Columbia	District of Columbi	1	7,434	11,112	203	284		400	7,263	5.4%
Essex	New Jersey	1	16,686	21,358	188	745		1,565	28,417	9.4%
Hennepin	Minnesota	1	5,650	4,568	187	192	Yes	476	8,643	8.4%
Ramsey	Minnesota	1	1,720	3,216	178	178	Yes	74	1,344	4.3%
Milwaukee	Wisconsin	1	5,185	5,596	172	177		260	4,721	5.0%
Arlington	Virginia	1	1,688	7,190	166	228		79	1,434	4.7%
Richmond city	Virginia	1	811	3,734	162	162	Yes	19	345	2.3%
Philadelphia	Pennsylvania	1	20,129	13,122	148	458		1,109	20,137	5.5%
Baltimore city	Maryland	1	4,010	6,926	147	246		210	3,813	5.2%
Marion	Indiana	1	8,632	9,226	142	268		532	9,660	6.2%
Hudson	New Jersey	1	17,621	26,412	138	852		1,082	19,647	6.1%
Davidson	Tennessee	1	4,390	6,584	130	197		46	835	1.0%
New York City	New York	1	198,710	23,835	127	651		20,376	369,982	10.3%
Denver	Colorado	1	4,790	6,811	122	203		285	5,175	5.9%
Kent	Michigan	1	2,934	4,563	115	206		58	1,053	2.0%

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

Daily Infection Rates By Rural/Metro Class

Large Fringe Metro Areas – Top 20 Ranked By Trailing 7-Day Moving Average

“Strategic Guidance in an Era of Unprecedented Change”

Large Metro Areas With Most New Daily Infections / Capita Last Week

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
Sussex	Virginia	2	98	11,318	990	990	Yes	1	18	1.0%
Manassas Park city	Virginia	2	680	16,457	864	864	Yes	5	91	0.7%
Manassas city	Virginia	2	202	11,726	522	556	Yes	3	54	1.5%
Culpeper	Virginia	2	452	9,000	458	458	Yes	5	91	1.1%
Prince George's	Maryland	2	12,261	13,830	379	399		445	8,080	3.6%
Trousdale	Tennessee	2	1,384	164,215	339	22,069		4	73	0.3%
Kane	Illinois	2	4,682	8,867	295	405		120	2,179	2.6%
Prince William	Virginia	2	3,934	8,488	264	313		73	1,326	1.9%
Montgomery	Maryland	2	8,988	8,616	250	250	Yes	503	9,133	5.6%
Bristol	Massachusetts	2	6,080	11,077	249	469		330	5,992	5.4%
Tolland	Connecticut	2	770	5,662	225	225	Yes	54	981	7.0%
Leavenworth	Kansas	2	1,053	14,057	217	1,020		7	127	0.7%
Essex	Massachusetts	2	12,748	16,495	217	624		797	14,472	6.3%
Shelby	Indiana	2	417	9,544	206	347		28	508	6.7%
Hocking	Ohio	2	61	2,182	199	209	Yes	2	36	3.3%
Plymouth	Massachusetts	2	7,198	14,203	195	594		470	8,534	6.5%
Fairfax	Virginia	2	8,020	7,046	195	239		292	5,302	3.6%
St. James	Louisiana	2	284	13,644	192	1,057		23	418	8.1%
Passaic	New Jersey	2	15,371	31,109	189	1,148		842	15,289	5.5%
Fredericksburg city	Virginia	2	101	3,814	189	189	Yes	-	-	0.0%

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

Daily Infection Rates By Rural/Metro Class

Medium Metro Areas – Top 20 Ranked By Trailing 7-Day Moving Average

“Strategic Guidance in an Era of Unprecedented Change”

Medium Metro Areas With Most New Daily Infections / Capita Last Week

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
Potter	Texas	3	2,193	19,450	1,097	1,302		24	436	1.1%
Sussex	Delaware	3	3,904	17,308	443	682		115	2,088	2.9%
Lowndes	Alabama	3	140	14,197	420	522		10	182	7.1%
Gadsden	Florida	3	241	5,552	346	362	Yes	1	18	0.4%
Fairfield	South Carolina	3	134	6,079	337	337	Yes	8	145	6.0%
East Feliciana	Louisiana	3	179	10,586	329	414		24	436	13.4%
Worcester	Massachusetts	3	9,582	11,924	289	422		597	10,840	6.2%
Acadia	Louisiana	3	262	4,286	257	257	Yes	12	218	4.6%
Mercer	New Jersey	3	6,018	17,187	242	549		422	7,663	7.0%
East Baton Rouge	Louisiana	3	3,145	7,312	232	232	Yes	219	3,977	7.0%
Pointe Coupee	Louisiana	3	173	7,942	230	275	Yes	21	381	12.1%
Saluda	South Carolina	3	123	6,066	225	254		-	-	0.0%
Douglas	Nebraska	3	2,597	4,688	224	224	Yes	24	436	0.9%
Yadkin	North Carolina	3	118	3,175	223	223	Yes	1	18	0.8%
Winnebago	Illinois	3	1,588	5,684	219	320	Yes	44	799	2.8%
Randall	Texas	3	616	4,616	217	264		5	91	0.8%
Copiah	Mississippi	3	207	7,444	216	257		3	54	1.4%
Wicomico	Maryland	3	839	8,528	211	359	Yes	21	381	2.5%
Polk	Iowa	3	3,128	6,543	204	319		83	1,507	2.7%
Boone	Illinois	3	314	5,912	188	272	Yes	14	254	4.5%

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

Daily Infection Rates By Rural/Metro Class

Small Metro Areas – Top 20 Ranked By Trailing 7-Day Moving Average

“Strategic Guidance in an Era of Unprecedented Change”

Small Metro Areas With Most New Daily Infections / Capita Last Week

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
Buckingham	Virginia	4	419	28,318	1,139	1,699		2	36	0.5%
Dakota	Nebraska	4	1,565	79,208	810	5,011		16	291	1.0%
Jefferson	Arkansas	4	497	7,943	511	587	Yes	20	363	4.0%
Woodbury	Iowa	4	2,342	23,436	506	1,084		17	309	0.7%
Union	Louisiana	4	245	11,234	485	557		15	272	6.1%
Echols	Georgia	4	21	5,279	467	467	Yes	-	-	0.0%
Lincoln	Arkansas	4	965	100,239	341	9,304		8	145	0.8%
Cumberland	New Jersey	4	1,759	12,476	336	448		56	1,017	3.2%
Howard	Nebraska	4	38	5,960	336	336	Yes	-	-	0.0%
Yakima	Washington	4	2,598	10,490	331	382	Yes	81	1,471	3.1%
Monroe	Georgia	4	102	3,886	316	332	Yes	7	127	6.9%
San Juan	New Mexico	4	1,408	11,424	300	416		92	1,671	6.5%
Cass	North Dakota	4	1,229	6,976	294	294	Yes	34	617	2.8%
Jackson	Kansas	4	32	2,444	273	273	Yes	-	-	0.0%
Stearns	Minnesota	4	1,782	11,671	253	836		10	182	0.6%
Imperial	California	4	902	5,214	247	258	Yes	17	309	1.9%
Coconino	Arizona	4	943	7,174	242	242	Yes	66	1,198	7.0%
Racine	Wisconsin	4	1,061	5,539	222	242		19	345	1.8%
Warren	Kentucky	4	828	6,675	220	283	Yes	3	54	0.4%
Hale	Alabama	4	96	6,628	217	217	Yes	2	36	2.1%

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

Daily Infection Rates By Rural/Metro Class

Micropolitan Areas – Top 20 Ranked By Trailing 7-Day Moving Average

“Strategic Guidance in an Era of Unprecedented Change”

Micropolitan Areas With Most New Daily Infections / Capita Last Week

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
Texas	Oklahoma	5	784	39,492	2,591	2,591	Yes	4	73	0.5%
Finney	Kansas	5	1,331	37,033	1,192	1,888		6	109	0.5%
Ford	Kansas	5	1,404	42,481	1,163	2,135		2	36	0.1%
McKinley	New Mexico	5	1,987	27,768	717	1,220		79	1,434	4.0%
Nobles	Minnesota	5	1,394	64,711	683	4,417		2	36	0.1%
Hancock	Georgia	5	170	23,866	642	1,424		6	109	3.5%
Buena Vista	Iowa	5	117	6,170	573	573	Yes	-	-	0.0%
Dawson	Nebraska	5	811	34,719	569	1,969		7	127	0.9%
Wapello	Iowa	5	405	11,834	509	772		2	36	0.5%
Dodge	Nebraska	5	274	7,720	435	435	Yes	1	18	0.4%
Wilkes	North Carolina	5	448	6,644	434	434	Yes	1	18	0.2%
Platte	Nebraska	5	481	14,656	431	936		1	18	0.2%
Titus	Texas	5	129	3,969	404	404	Yes	1	18	0.8%
Navajo	Arizona	5	1,320	12,176	399	399	Yes	48	872	3.6%
St. Francis	Arkansas	5	362	16,984	382	1,521		-	-	0.0%
Seward	Kansas	5	780	36,696	356	2,843		1	18	0.1%
Dubois	Indiana	5	162	3,887	353	394	Yes	2	36	1.2%
Rice	Minnesota	5	270	4,554	328	328	Yes	2	36	0.7%
Kearny	Kansas	5	40	10,390	297	519		1	18	2.5%
Marshall	Iowa	5	817	21,212	293	1,090		7	127	0.9%

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

Daily Infection Rates By Rural/Metro Class

Non-Core Areas – Top 20 Ranked By Trailing 7-Day Moving Average

“Strategic Guidance in an Era of Unprecedented Change”

Non-Core Areas With Most New Daily Infections / Capita Last Week

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
Lake	Tennessee	6	404	82,231	8,840	10,032	Yes	-	-	0.0%
Crawford	Iowa	6	394	23,354	1,668	1,727	Yes	1	18	0.3%
Hamilton	Florida	6	147	12,638	1,572	1,670		-	-	0.0%
Colfax	Nebraska	6	532	49,548	1,344	3,659		1	18	0.2%
Richmond	Virginia	6	265	36,069	1,264	3,321		4	73	1.5%
Sullivan	Missouri	6	37	6,050	818	818	Yes	-	-	0.0%
San Juan	Utah	6	238	15,732	812	831		4	73	1.7%
Accomack	Virginia	6	701	21,904	763	1,027		9	163	1.3%
Holmes	Mississippi	6	310	18,671	740	740	Yes	20	363	6.5%
Saline	Nebraska	6	436	32,681	739	2,120		1	18	0.2%
Galax city	Virginia	6	82	13,394	607	1,003		-	-	0.0%
Wayne	Tennessee	6	63	4,377	595	595	Yes	-	-	0.0%
Apache	Arizona	6	1,023	14,421	562	562	Yes	20	363	2.0%
East Carroll	Louisiana	6	46	7,723	528	528	Yes	-	-	0.0%
Butler	Alabama	6	295	15,274	525	769		10	182	3.4%
Lee	South Carolina	6	174	11,175	523	541		11	200	6.3%
Neshoba	Mississippi	6	429	14,968	513	568		25	454	5.8%
Delta	Texas	6	133	7,194	510	572		7	127	5.3%
Union	Illinois	6	122	7,334	507	524		4	73	3.3%
Franklin	Louisiana	6	274	14,079	484	888		9	163	3.3%

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

Daily Infection Rates By Rural/Metro Class

Large Central Metro Areas – Lowest Rate of Recent Infections

“Strategic Guidance in an Era of Unprecedented Change”

Large Metro Areas With 35 or Fewer New Daily Infections / Capita Last Week

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
Sacramento	California	1	1,249	820	6	39		56	1,017	4.5%
Santa Clara	California	1	2,483	1,299	9	83		138	2,506	5.6%
Jackson	Missouri	1	457	663	11	28		16	291	3.5%
Collin	Texas	1	1,075	1,075	16	38		31	563	2.9%
Allegheny	Pennsylvania	1	1,658	1,399	16	73		145	2,633	8.7%
Virginia Beach city	Virginia	1	559	1,271	16	55		19	345	3.4%
Oklahoma	Oklahoma	1	1,087	1,400	17	49		49	890	4.5%
Orange	Florida	1	1,698	1,256	17	75		37	672	2.2%
Multnomah	Oregon	1	1,005	1,260	17	42		55	999	5.5%
Hillsborough	Florida	1	1,670	1,180	20	54		60	1,089	3.6%
Duval	Florida	1	1,318	1,417	20	63		36	654	2.7%
Pinellas	Florida	1	1,062	1,107	23	53		71	1,289	6.7%
Bexar	Texas	1	2,278	1,173	25	32		62	1,126	2.7%
King	Washington	1	7,901	3,586	26	184		536	9,733	6.8%
Fulton	Georgia	1	3,795	3,727	28	134		174	3,159	4.6%
Wake	North Carolina	1	1,272	1,189	28	39		30	545	2.4%
San Francisco	California	1	2,186	2,519	34	89		36	654	1.6%
Alameda	California	1	2,543	1,552	34	49		88	1,598	3.5%
Norfolk city	Virginia	1	370	1,762	35	58		6	109	1.6%

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

Daily Infection Rates By Rural/Metro Class

Large Central Metro Areas – Top 20 Ranked By Trailing 7-Day Moving Average

“Strategic Guidance in an Era of Unprecedented Change”

Large Metro Areas With Highest New Infection Rate Occurred Within Last 3 Days

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
Hennepin	Minnesota	1	5,650	4,568	187	192	Yes	476	8,643	8.4%
Ramsey	Minnesota	1	1,720	3,216	178	178	Yes	74	1,344	4.3%
Richmond city	Virginia	1	811	3,734	162	162	Yes	19	345	2.3%
Maricopa	Arizona	1	7,482	1,722	42	46	Yes	339	6,155	4.5%
Orange	California	1	4,558	1,449	39	40	Yes	88	1,598	1.9%

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

Daily Infection Rates By Rural/Metro Class

Large Fringe Metro Areas – Top 20 Ranked By Trailing 7-Day Moving Average

“Strategic Guidance in an Era of Unprecedented Change”

Large Fringe Areas With Highest New Infection Rate Occurred Within Last 3 Days

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
Sussex	Virginia	2	98	11,318	990	990	Yes	1	18	1.0%
Manassas Park city	Virginia	2	680	16,457	864	864	Yes	5	91	0.7%
Manassas city	Virginia	2	202	11,726	522	556	Yes	3	54	1.5%
Culpeper	Virginia	2	452	9,000	458	458	Yes	5	91	1.1%
Montgomery	Maryland	2	8,988	8,616	250	250	Yes	503	9,133	5.6%
Tolland	Connecticut	2	770	5,662	225	225	Yes	54	981	7.0%
Hocking	Ohio	2	61	2,182	199	209	Yes	2	36	3.3%
Fredericksburg city	Virginia	2	101	3,814	189	189	Yes	-	-	0.0%
DuPage	Illinois	2	6,171	6,743	164	208	Yes	315	5,720	5.1%
Macon	Tennessee	2	93	3,898	144	144	Yes	3	54	3.2%
Putnam	Indiana	2	128	3,924	140	158	Yes	6	109	4.7%
Floyd	Indiana	2	306	4,007	125	131	Yes	40	726	13.1%
Anoka	Minnesota	2	919	2,625	125	125	Yes	42	763	4.6%
Boone	Kentucky	2	361	2,774	122	136	Yes	11	200	3.0%
Niagara	New York	2	845	4,091	120	120	Yes	39	708	4.6%
Dakota	Minnesota	2	841	1,991	113	113	Yes	25	454	3.0%
Stafford	Virginia	2	501	3,429	103	103	Yes	4	73	0.8%
Petersburg city	Virginia	2	75	2,418	101	101	Yes	2	36	2.7%
Scott	Minnesota	2	271	1,860	101	102	Yes	1	18	0.4%
DeKalb	Illinois	2	268	2,726	94	115	Yes	4	73	1.5%

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

Daily Infection Rates By Rural/Metro Class

Medium Metro Areas – Top 20 Ranked By Trailing 7-Day Moving Average

“Strategic Guidance in an Era of Unprecedented Change”

Medium Metro Areas With Highest New Infection Rate Occurred Within Last 3 Days

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
Gadsden	Florida	3	241	5,552	346	362	Yes	1	18	0.4%
Fairfield	South Carolina	3	134	6,079	337	337	Yes	8	145	6.0%
Acadia	Louisiana	3	262	4,286	257	257	Yes	12	218	4.6%
East Baton Rouge	Louisiana	3	3,145	7,312	232	232	Yes	219	3,977	7.0%
Pointe Coupee	Louisiana	3	173	7,942	230	275	Yes	21	381	12.1%
Douglas	Nebraska	3	2,597	4,688	224	224	Yes	24	436	0.9%
Yadkin	North Carolina	3	118	3,175	223	223	Yes	1	18	0.8%
Winnebago	Illinois	3	1,588	5,684	219	320	Yes	44	799	2.8%
Wicomico	Maryland	3	839	8,528	211	359	Yes	21	381	2.5%
Boone	Illinois	3	314	5,912	188	272	Yes	14	254	4.5%
Loudon	Tennessee	3	97	1,850	144	144	Yes	-	-	0.0%
Worcester	Maryland	3	165	3,231	140	143	Yes	6	109	3.6%
Forsyth	North Carolina	3	736	2,001	132	132	Yes	7	127	1.0%
Pottawattamie	Iowa	3	174	1,909	130	132	Yes	2	36	1.1%
Onondaga	New York	3	1,665	3,736	114	114	Yes	99	1,798	5.9%
Martin	Florida	3	396	2,519	111	111	Yes	8	145	2.0%
Warren	Iowa	3	87	1,760	110	110	Yes	-	-	0.0%
Burke	North Carolina	3	206	2,357	98	100	Yes	14	254	6.8%
Chattahoochee	Georgia	3	20	2,451	88	123	Yes	-	-	0.0%
Sarpy	Nebraska	3	366	2,005	85	85	Yes	2	36	0.5%

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

Daily Infection Rates By Rural/Metro Class

Small Metro Areas – Top 20 Ranked By Trailing 7-Day Moving Average

“Strategic Guidance in an Era of Unprecedented Change”

Small Metro Areas With Highest New Infection Rate Occurred Within Last 3 Days

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
Jefferson	Arkansas	4	497	7,943	511	587	Yes	20	363	4.0%
Echols	Georgia	4	21	5,279	467	467	Yes	-	-	0.0%
Howard	Nebraska	4	38	5,960	336	336	Yes	-	-	0.0%
Yakima	Washington	4	2,598	10,490	331	382	Yes	81	1,471	3.1%
Monroe	Georgia	4	102	3,886	316	332	Yes	7	127	6.9%
Cass	North Dakota	4	1,229	6,976	294	294	Yes	34	617	2.8%
Jackson	Kansas	4	32	2,444	273	273	Yes	-	-	0.0%
Imperial	California	4	902	5,214	247	258	Yes	17	309	1.9%
Coconino	Arizona	4	943	7,174	242	242	Yes	66	1,198	7.0%
Warren	Kentucky	4	828	6,675	220	283	Yes	3	54	0.4%
Hale	Alabama	4	96	6,628	217	217	Yes	2	36	2.1%
Forrest	Mississippi	4	442	6,125	206	251	Yes	29	527	6.6%
Belmont	Ohio	4	343	5,394	173	211	Yes	9	163	2.6%
Yuma	Arizona	4	433	2,131	159	159	Yes	4	73	0.9%
Elkhart	Indiana	4	738	3,667	149	149	Yes	25	454	3.4%
Rapides	Louisiana	4	504	3,977	144	145	Yes	15	272	3.0%
Winchester city	Virginia	4	96	3,563	143	143	Yes	1	18	1.0%
Brantley	Georgia	4	44	2,349	130	130	Yes	2	36	4.5%
Dubuque	Iowa	4	286	3,073	127	127	Yes	10	182	3.5%
Berrien	Michigan	4	538	3,567	120	124	Yes	33	599	6.1%

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

Daily Infection Rates By Rural/Metro Class

Micropolitan Areas – Top 20 Ranked By Trailing 7-Day Moving Average

“Strategic Guidance in an Era of Unprecedented Change”

Micropolitan Areas With Highest New Infection Rate Occurred Within Last 3 Days

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
Texas	Oklahoma	5	784	39,492	2,591	2,591	Yes	4	73	0.5%
Buena Vista	Iowa	5	117	6,170	573	573	Yes	-	-	0.0%
Dodge	Nebraska	5	274	7,720	435	435	Yes	1	18	0.4%
Wilkes	North Carolina	5	448	6,644	434	434	Yes	1	18	0.2%
Titus	Texas	5	129	3,969	404	404	Yes	1	18	0.8%
Navajo	Arizona	5	1,320	12,176	399	399	Yes	48	872	3.6%
Dubois	Indiana	5	162	3,887	353	394	Yes	2	36	1.2%
Rice	Minnesota	5	270	4,554	328	328	Yes	2	36	0.7%
Clarke	Mississippi	5	113	7,287	240	240	Yes	14	254	12.4%
Hendry	Florida	5	224	5,466	227	247	Yes	12	218	5.4%
Clinton	Indiana	5	150	4,798	224	224	Yes	2	36	1.3%
LaSalle	Illinois	5	6,709	9,832	219	277	Yes	221	4,013	3.3%
Jones	Mississippi	5	358	5,379	210	210	Yes	10	182	2.8%
Putnam	Tennessee	5	286	3,761	199	199	Yes	5	91	1.7%
Beadle	South Dakota	5	43	2,333	163	163	Yes	2	36	4.7%
Stephenson	Illinois	5	160	3,644	163	185	Yes	1	18	0.6%
Columbiana	Ohio	5	453	4,594	159	159	Yes	45	817	9.9%
Yell	Arkansas	5	30	1,419	155	155	Yes	1	18	3.3%
Jerome	Idaho	5	105	4,408	144	162	Yes	2	36	1.9%
Santa Cruz	Arizona	5	97	2,097	142	142	Yes	-	-	0.0%

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

Daily Infection Rates By Rural/Metro Class

Non-Core Areas – Top 20 Ranked By Trailing 7-Day Moving Average

“Strategic Guidance in an Era of Unprecedented Change”

Non-Core Areas With Highest New Infection Rate Occurred Within Last 3 Days

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
Lake	Tennessee	6	404	82,231	8,840	10,032	Yes	-	-	0.0%
Texas	Oklahoma	5	784	39,492	2,591	2,591	Yes	4	73	0.5%
Crawford	Iowa	6	394	23,354	1,668	1,727	Yes	1	18	0.3%
Sullivan	Missouri	6	37	6,050	818	818	Yes	-	-	0.0%
Holmes	Mississippi	6	310	18,671	740	740	Yes	20	363	6.5%
Wayne	Tennessee	6	63	4,377	595	595	Yes	-	-	0.0%
Buena Vista	Iowa	5	117	6,170	573	573	Yes	-	-	0.0%
Apache	Arizona	6	1,023	14,421	562	562	Yes	20	363	2.0%
East Carroll	Louisiana	6	46	7,723	528	528	Yes	-	-	0.0%
Duplin	North Carolina	6	462	7,924	480	480	Yes	12	218	2.6%
Houston	Texas	6	81	3,972	469	469	Yes	-	-	0.0%
Sumter	Alabama	6	148	12,588	462	462	Yes	4	73	2.7%
Bullock	Alabama	6	52	6,126	438	438	Yes	1	18	1.9%
Dodge	Nebraska	5	274	7,720	435	435	Yes	1	18	0.4%
Wilkes	North Carolina	5	448	6,644	434	434	Yes	1	18	0.2%
Winn	Louisiana	6	90	7,242	414	425	Yes	2	36	2.2%
Titus	Texas	5	129	3,969	404	404	Yes	1	18	0.8%
Navajo	Arizona	5	1,320	12,176	399	399	Yes	48	872	3.6%
Monroe	Ohio	6	56	4,126	358	474	Yes	4	73	7.1%
Dubois	Indiana	5	162	3,887	353	394	Yes	2	36	1.2%

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

Daily Infection Rates By Rural/Metro Class

Washington DC Metro Area

"Strategic Guidance in an Era of Unprecedented Change"

Washington DC Metro Area

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
Charles	Maryland	2	896	5,606	120	154	Yes	63	1,144	7.0%
Montgomery	Maryland	2	8,988	8,616	250	250		503	9,133	5.6%
Prince George's	Maryland	2	12,261	13,830	379	399		445	8,080	3.6%
Alexandria city	Virginia	1	1,544	9,735	274	300		34	617	2.2%
Arlington	Virginia	1	1,688	7,190	166	228		79	1,434	4.7%
Fairfax	Virginia	2	8,020	7,046	195	239		292	5,302	3.6%
Fairfax city	Virginia	2	47	1,956	42	149		3	54	6.4%
Falls Church city	Virginia	2	44	2,984	68	233		4	73	9.1%
Loudoun	Virginia	2	1,527	3,775	112	118		48	872	3.1%
Montgomery	Virginia	4	66	741	-	42		1	18	1.5%
Prince William	Virginia	2	3,934	8,488	264	313		73	1,326	1.9%

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