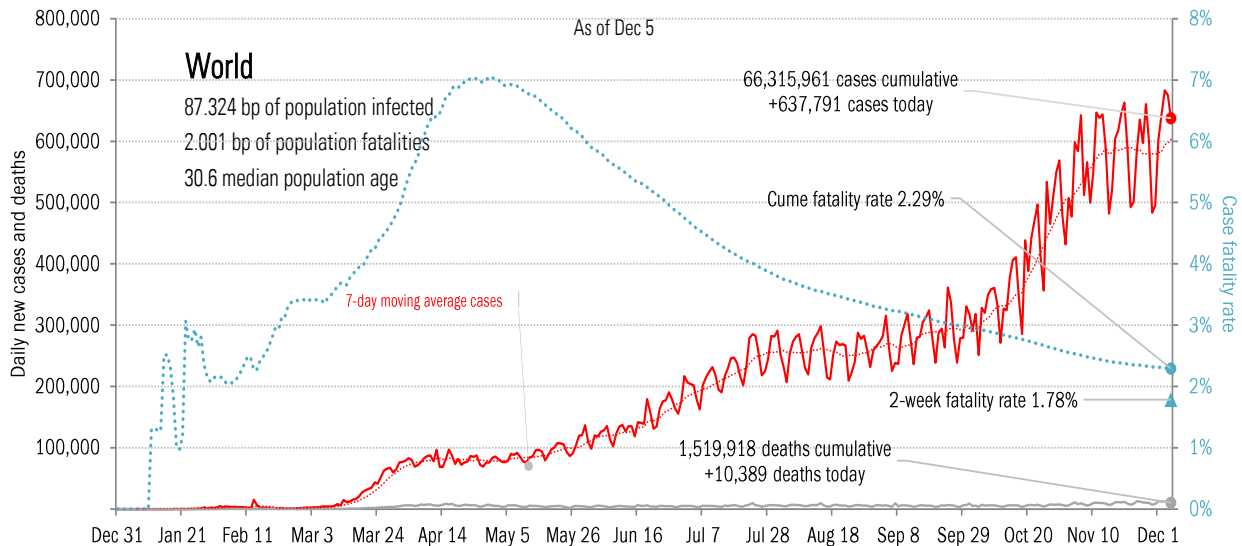
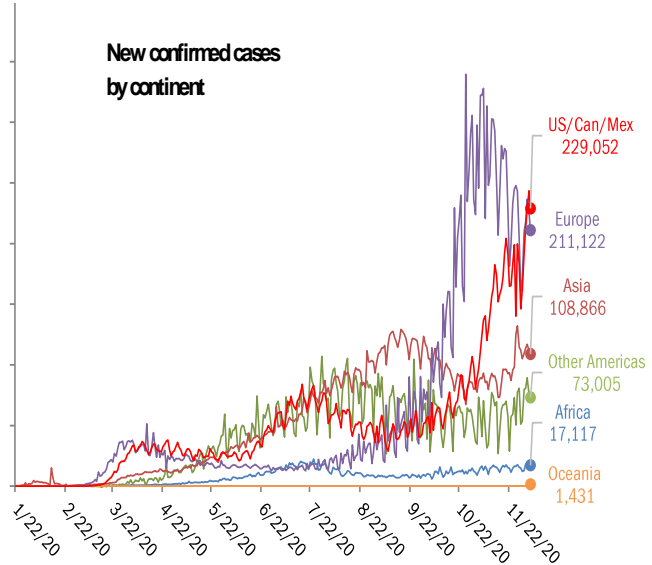


Data Insights: Covid-2019 Monitor

Sunday, December 6, 2020

The global scorecard

| The worst ten countries | | | |
|-------------------------|----------|----------------|---------|
| New cases | | New Deaths | |
| United States | +211,073 | United States | +2,445 |
| Brazil | +43,209 | Brazil | +664 |
| India | +36,011 | Italy | +662 |
| Turkey | +31,896 | Mexico | +593 |
| Russia | +28,450 | Poland | +502 |
| Germany | +26,126 | Russia | +498 |
| Italy | +21,052 | India | +482 |
| United Kingdom | +15,579 | United Kingdom | +397 |
| Ukraine | +14,157 | Iran | +321 |
| France | +12,923 | Germany | +262 |
| +440,476 | | +6,826 | |
| World | +637,791 | World | +10,389 |
| Top ten | 69% | Top ten | 66% |



Source: [Johns Hopkins](#), [Covid Tracking Project](#), TrendMacro calculations

For more information contact us:

Donald Luskin: 312 273 6766 don@trendmacro.com
 Thomas Demas: 704 552 3625 tdemas@trendmacro.com

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The US scorecard

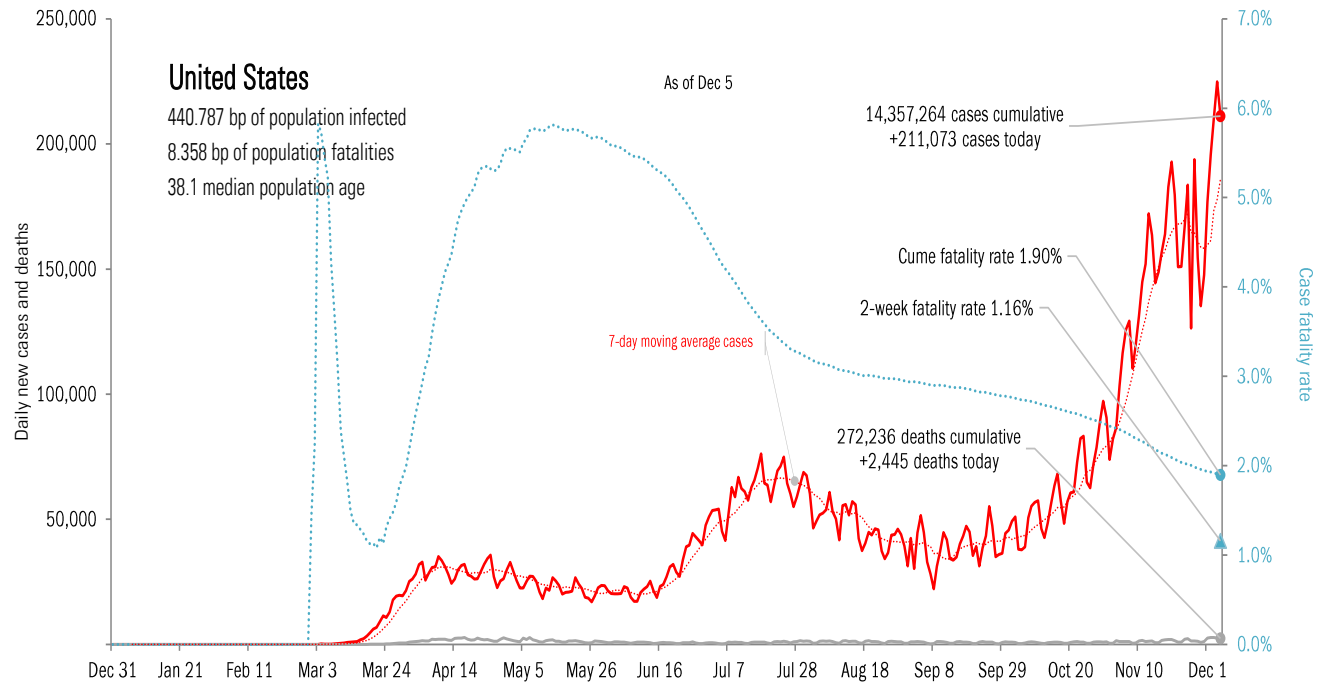
The ten worst US states

| New cases | | New Deaths | | New in hospital | | Curre cases | | Curre deaths | | Curre in hospital | |
|-----------------|----------|---------------|--------|-----------------|-------|------------------|------------|----------------|---------|-------------------|---------|
| CA | +25,068 | TX | +247 | CA | +325 | CA | 1,311,625 | NY | 27,089 | NY | 89,995 |
| PA | +12,884 | IL | +235 | NV | +111 | TX | 1,240,750 | TX | 22,502 | FL | 57,040 |
| TX | +11,938 | CA | +209 | NY | +96 | FL | 1,032,552 | CA | 19,791 | NJ | 42,361 |
| NY | +10,761 | MI | +204 | PA | +42 | IL | 779,975 | FL | 19,327 | GA | 36,001 |
| CH | +10,469 | PA | +149 | MA | +34 | NY | 696,125 | NJ | 17,306 | CH | 28,959 |
| FL | +10,198 | WI | +92 | OK | +34 | CH | 467,432 | IL | 14,017 | IN | 28,016 |
| IL | +9,887 | FL | +91 | AZ | +32 | GA | 442,017 | PA | 11,262 | AZ | 28,006 |
| IN | +7,690 | IN | +85 | DE | +18 | WI | 437,918 | MA | 10,953 | AL | 26,331 |
| AZ | +6,799 | MN | +75 | AK | +15 | MI | 426,576 | MI | 10,321 | MD | 21,912 |
| MI | +6,308 | NY | +72 | AR | +15 | PA | 411,484 | GA | 9,793 | WI | 18,126 |
| +112,002 | | +1,459 | | +722 | | 7,246,454 | | 162,361 | | 376,747 | |
| All states | +211,073 | All states | +2,445 | All states | -+86 | All states | 14,357,264 | All states | 272,236 | All states | 583,420 |
| Top ten | 53% | Top ten | 60% | Top ten | -840% | Top ten | 50% | Top ten | 60% | Top ten | 65% |

Some states not reporting

Five most improved US states

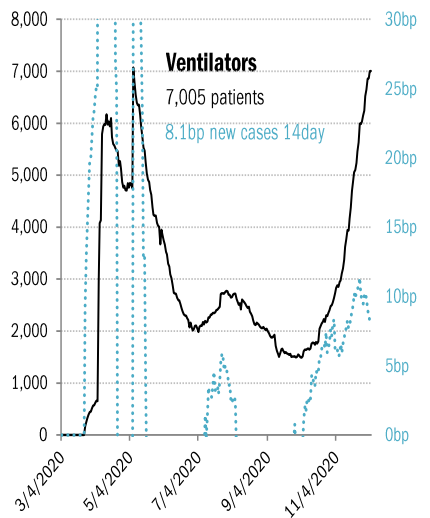
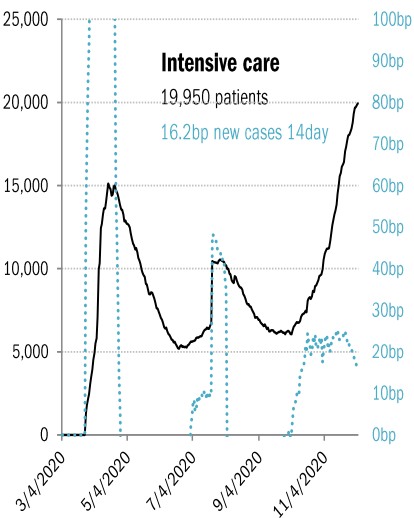
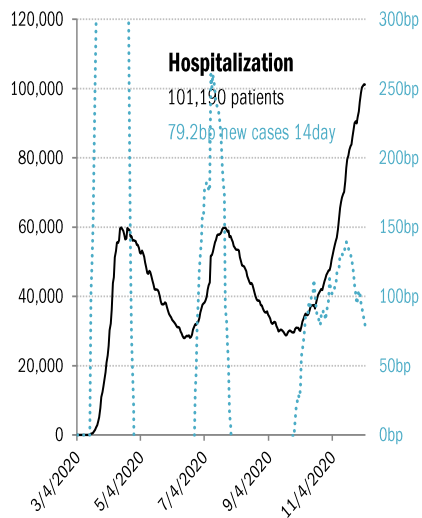
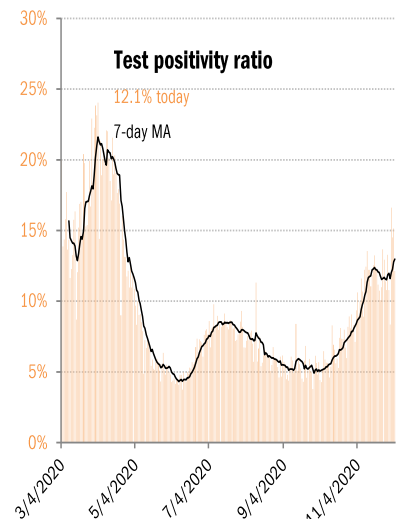
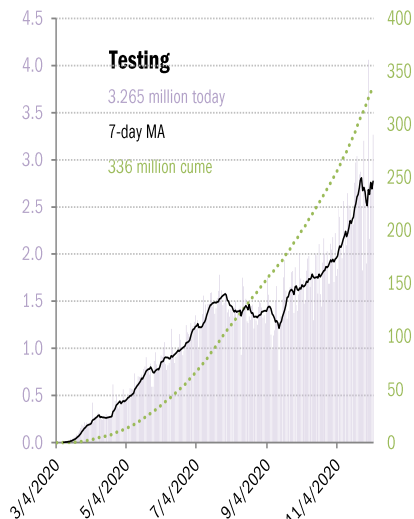
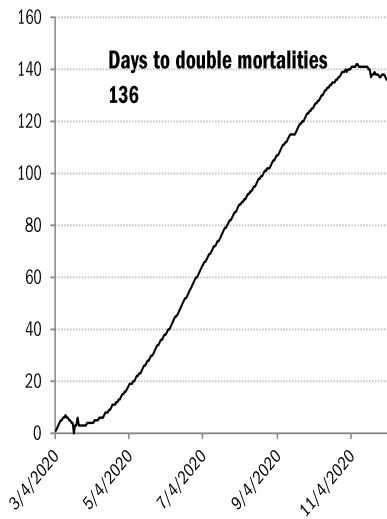
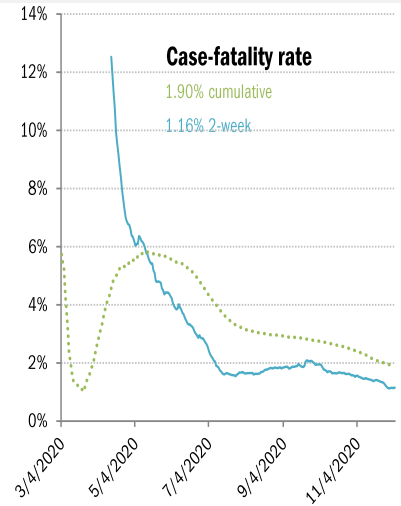
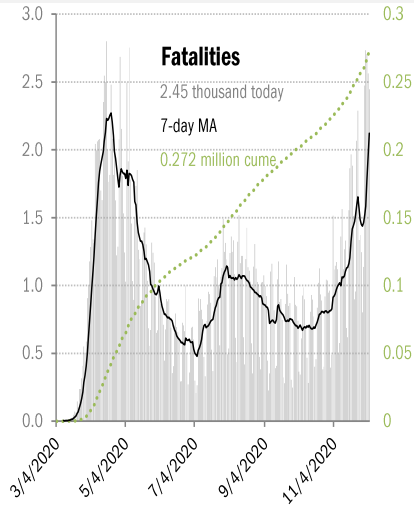
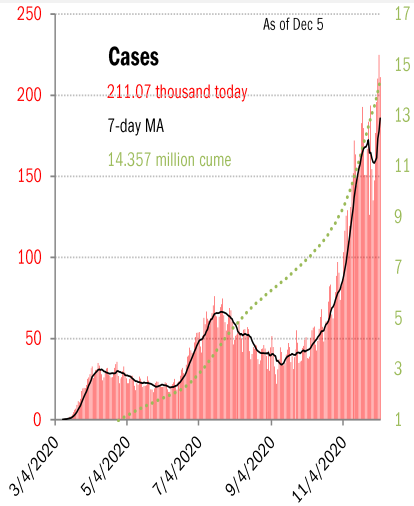
| Fewer daily cases | | Fewer new deaths | | Fewer new hospitalizations | | Most recoveries | |
|-------------------|--------|------------------|------|----------------------------|------|-----------------|---------|
| KS | -6,234 | KS | -107 | KS | -289 | MI | +32,481 |
| MI | -3,117 | TN | -66 | AZ | -124 | TX | +9,597 |
| LA | -3,099 | CH | -65 | PA | -117 | CH | +8,503 |
| TX | -1,761 | CT | -35 | MO | -113 | MIN | +7,930 |
| CT | -1,538 | FL | -33 | TN | -86 | PA | +7,472 |



Source: [Covid Tracking Project](#), TrendMacro calculations

US deep-dive

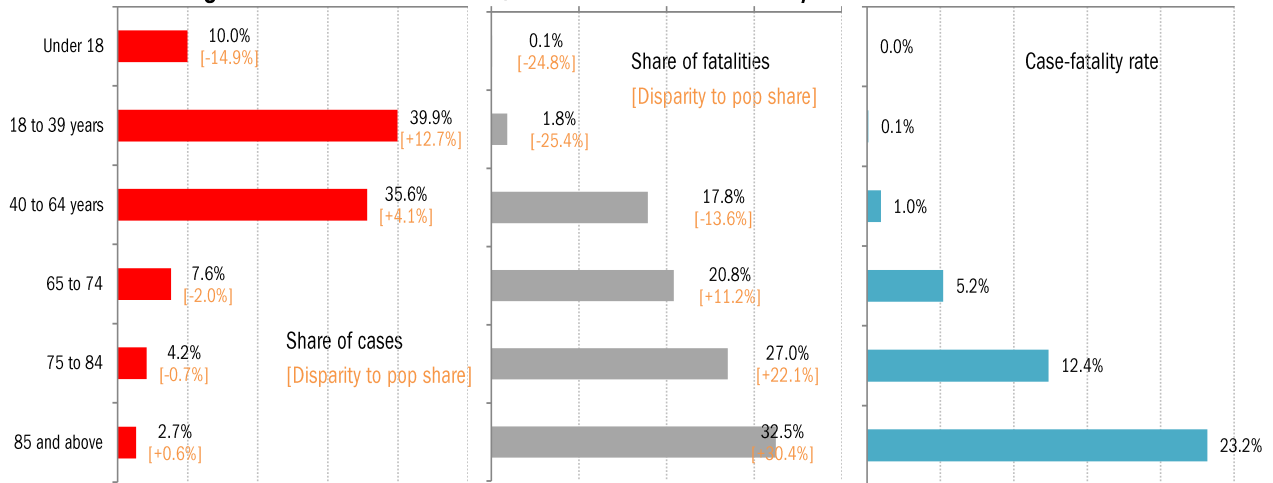
National and state-by-state data do not line up because of different sources



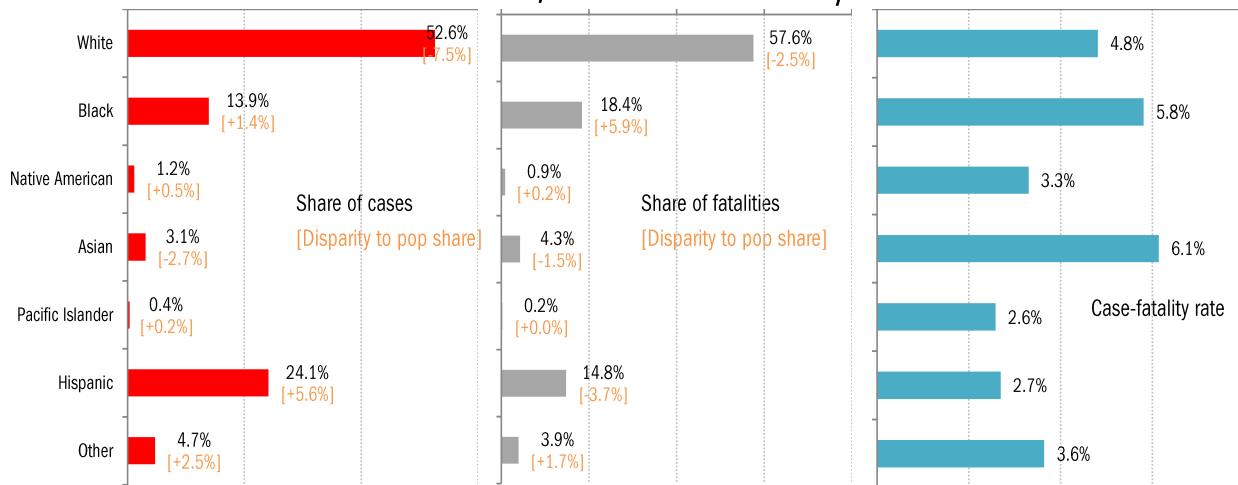
Source: [Covid Tracking Project](#), TrendMacro calculations

US deep-dive on the demographics of age, race and health

Age distribution of US cases, fatalities and case-fatality rates

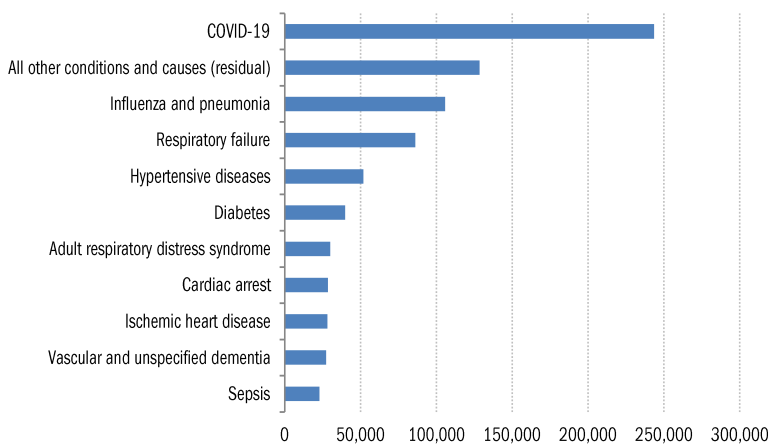


Racial distribution of US cases, fatalities and case-fatality rates



Comorbidities

Top-ten joint causes of Covid mortalities, cumulative



For 6% of the deaths, COVID-19 was the only cause mentioned. For deaths with conditions or causes in addition to COVID-19, on average, there were 2.6 additional conditions or causes per death.

Source: Distributions [CDC](#), Comorbidities [CDC](#), TrendMacro calculations

Recommended reading

[Yale School of Public Health Professor David Paltiel on Computer Modelling of COVID-19 Vaccination Programs](#)

Jonathan Kay
Quillette
November 28, 2020

[More than one-in-three small businesses closed since January](#)

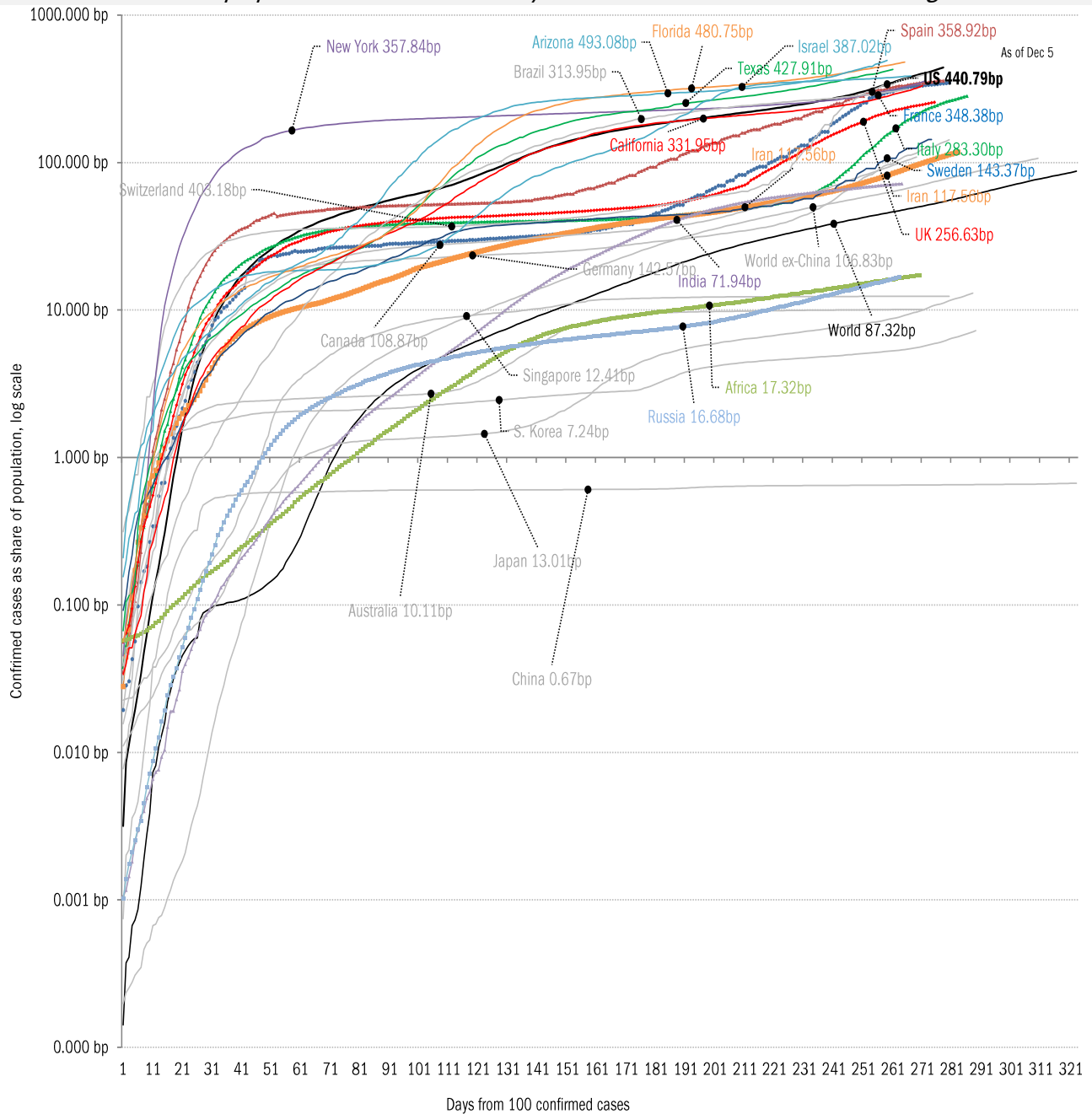
Greg Bishop
Center Square
December 2, 2020

Meme of day



Source: Our beloved clients, and [Power Line blog "The Week in Pictures"](#)

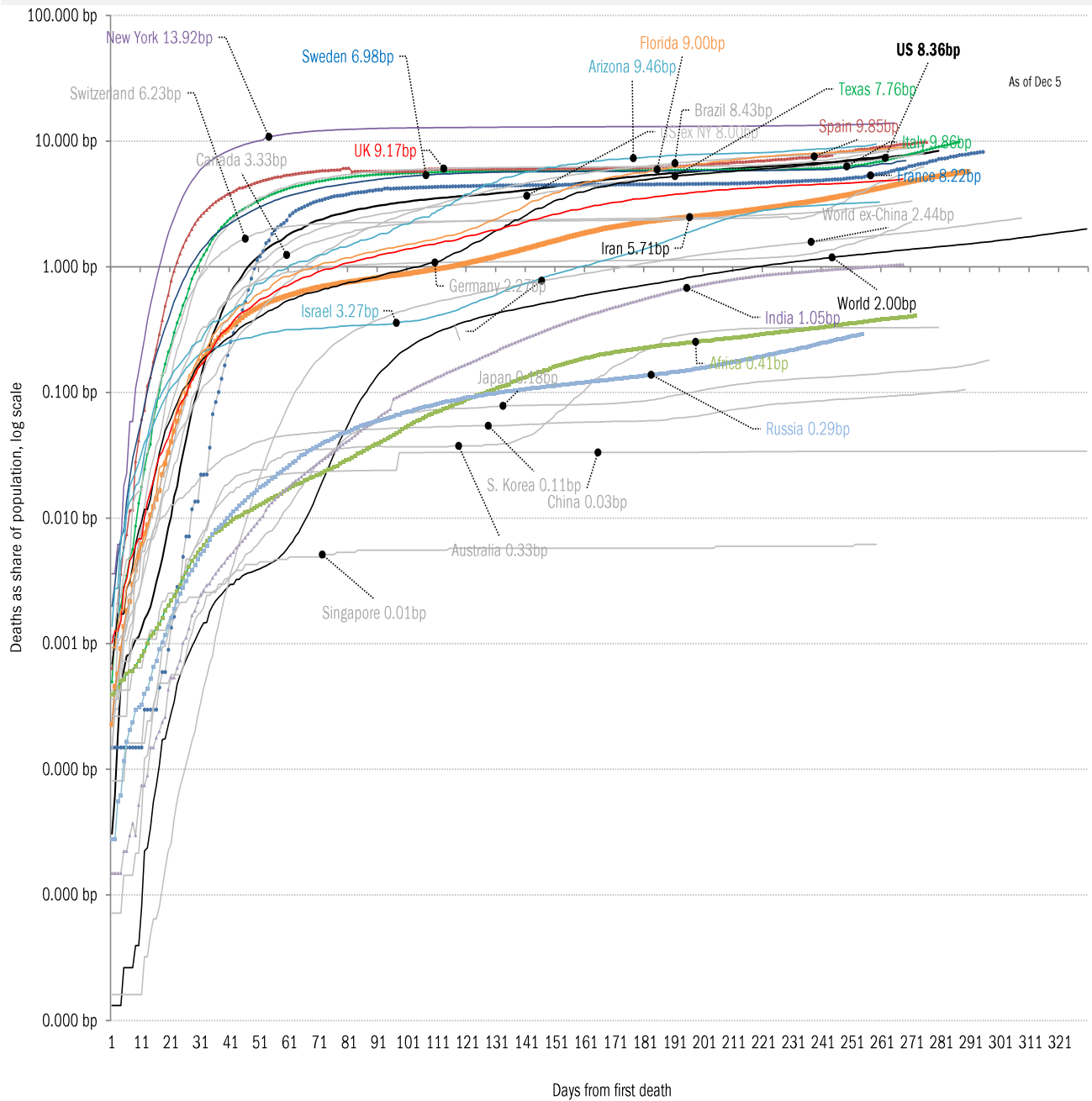
The coronavirus case accelerometer... tracking the world's infection curves
Share of infected population from first day with 100 confirmed cases, log scale



Source: [Johns Hopkins](#), [Covid Tracking Project](#), TrendMacro calculations

The coronavirus mortality accelerometer ... tracking the world's fatality curves

Share of deceased population from day of first fatality

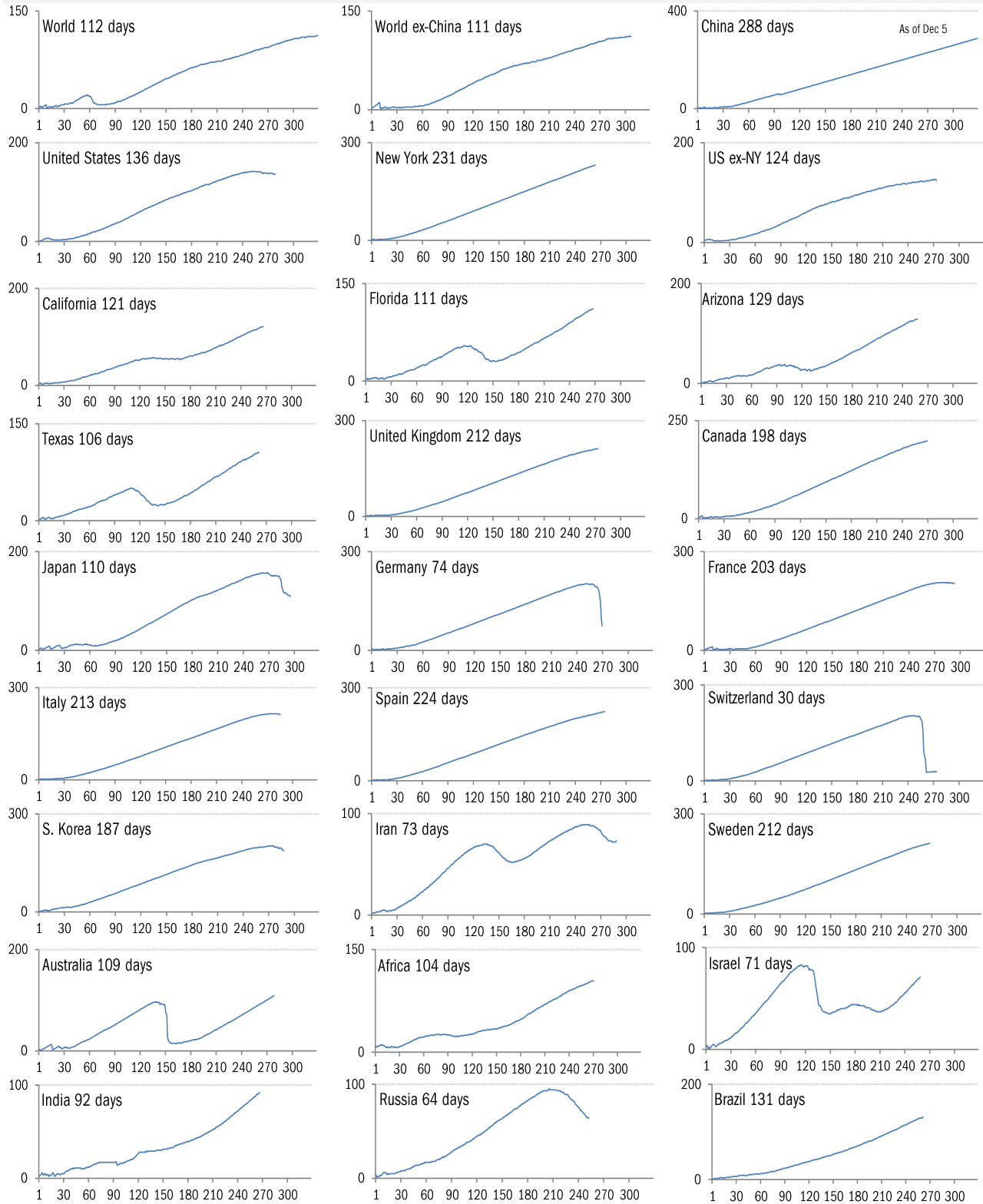


Source: [Johns Hopkins](#), [Covid Tracking Project](#), TrendMacro calculations

"Exponential"? Our most reliable evidence of the rate of spread of Covid-19

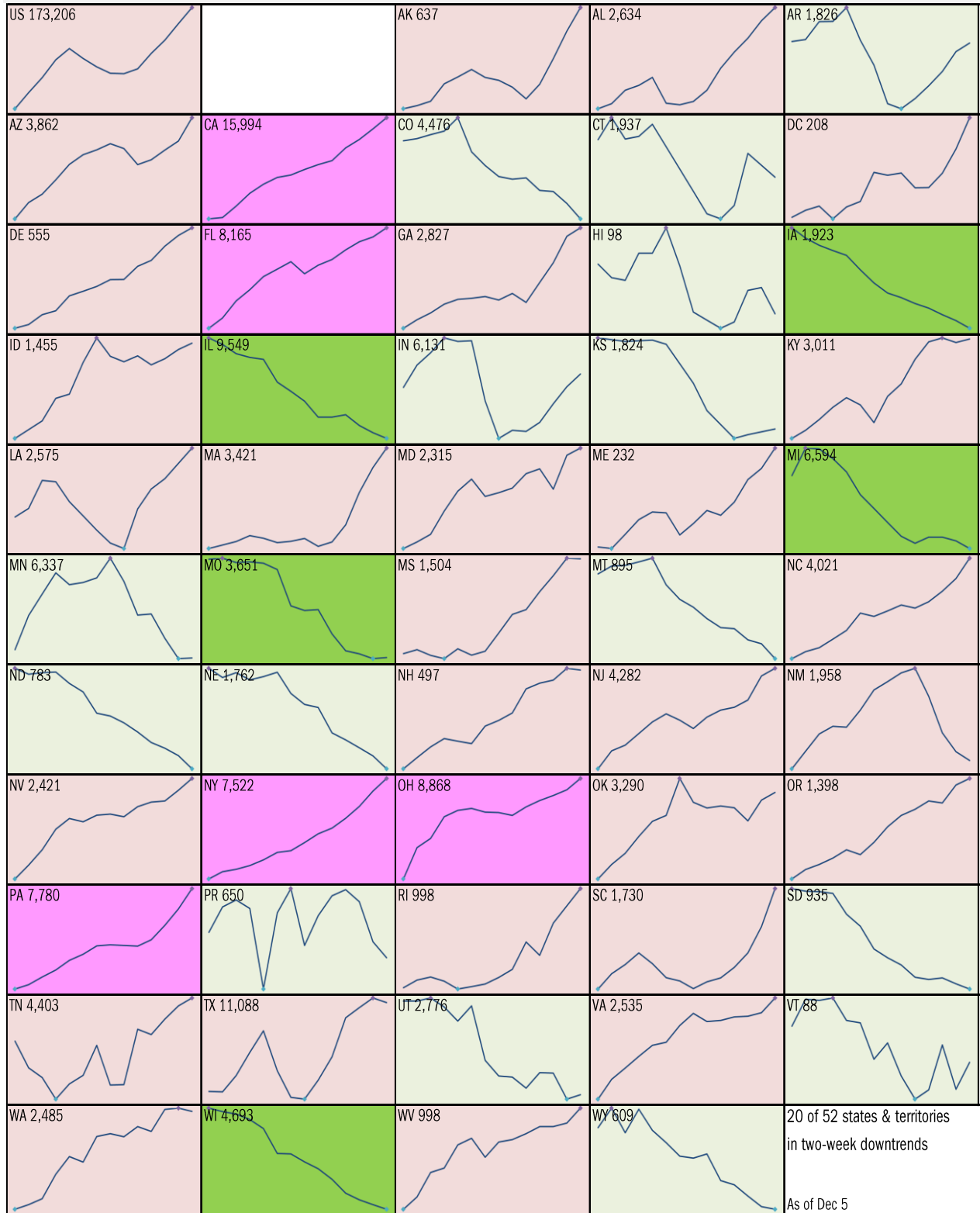
Vertical: days to double deaths Horizontal: days from first death

Flat indicates exponential spread Declining indicates supra-exponential spread Rising indicates sub-exponential spread



Source: [Johns Hopkins, Covid Tracking Project](#), TrendMacro calculations

Requirement to [Open Up America Again](#): 14-day "downward trajectory" in new cases
 14-day moving average, last 14 days *Most recent value displayed* ● High ● Low
 ■ Downward trajectory ■ Five best ■ Upward trajectory ■ Five worst

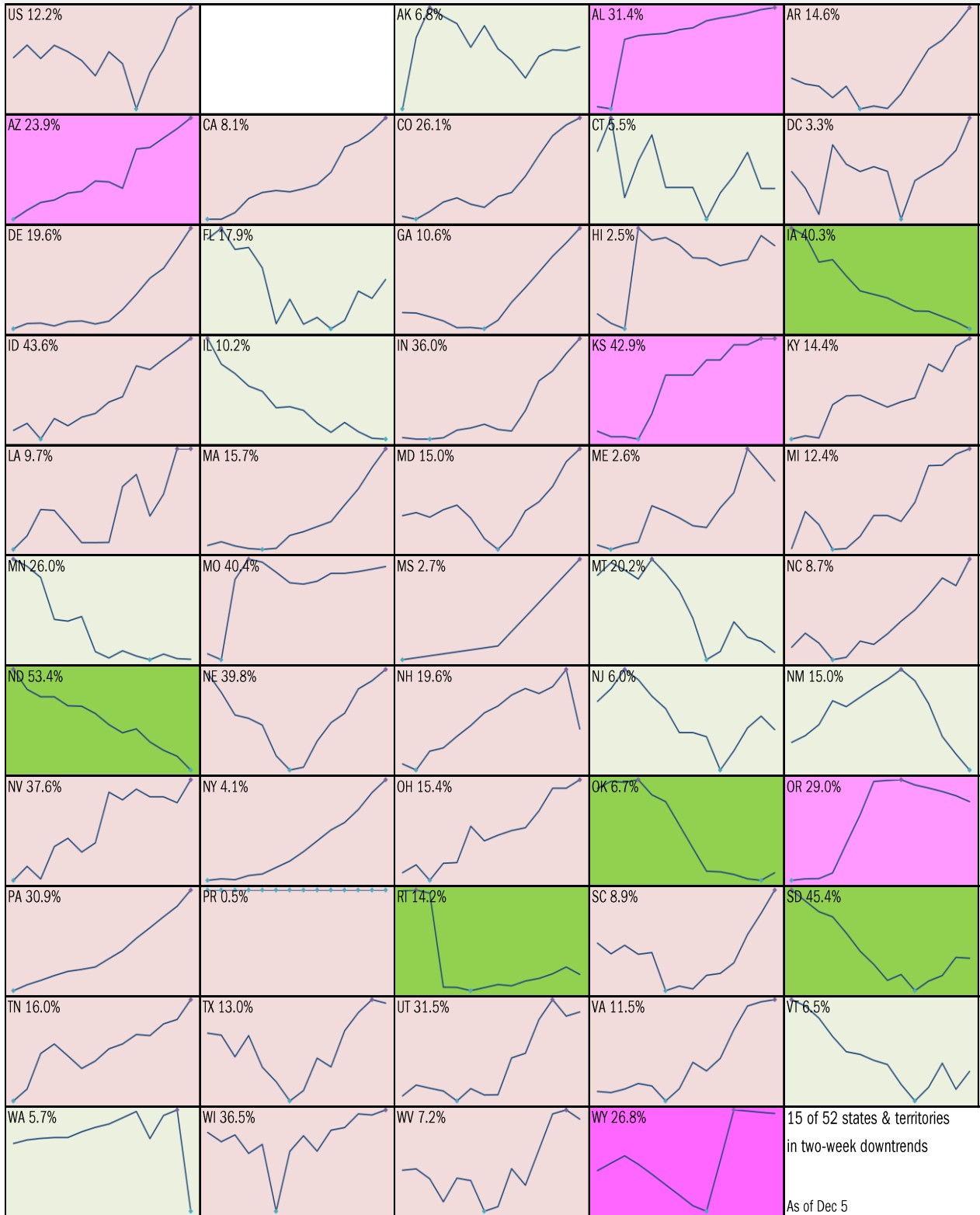


Source: [Covid Tracking Project](#), TrendMacro calculations

Alt requirement to [Open Up America Again](#): 14-day "downward trajectory" in pos tests

14-day moving average, last 14 days Most recent value displayed ● High ● Low

■ Downward trajectory ■ Five best ■ Upward trajectory ■ Five worst



As of Dec 5

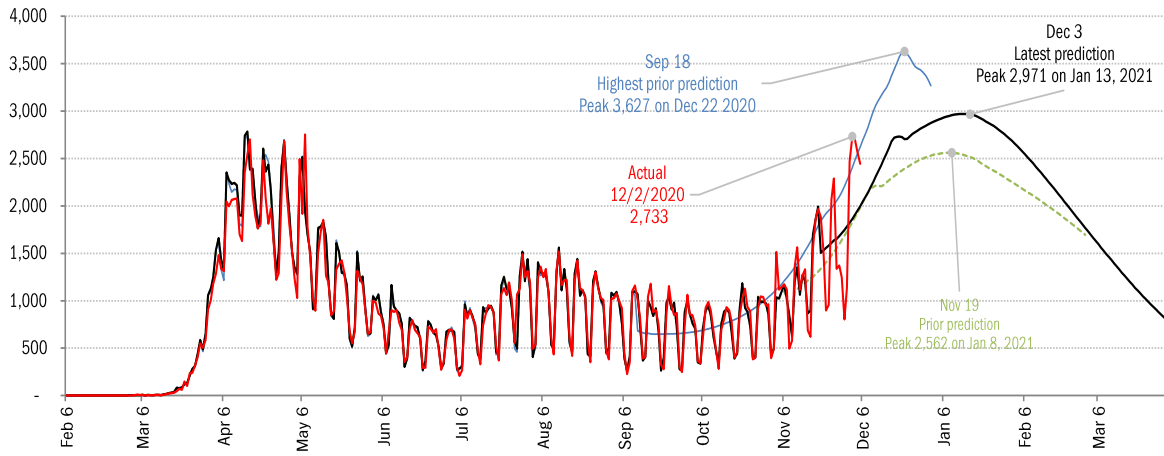
Source: [Covid Tracking Project](#), TrendMacro calculations

Reality-checking the models: actuals versus [IHME](#) predictions

New daily fatalities

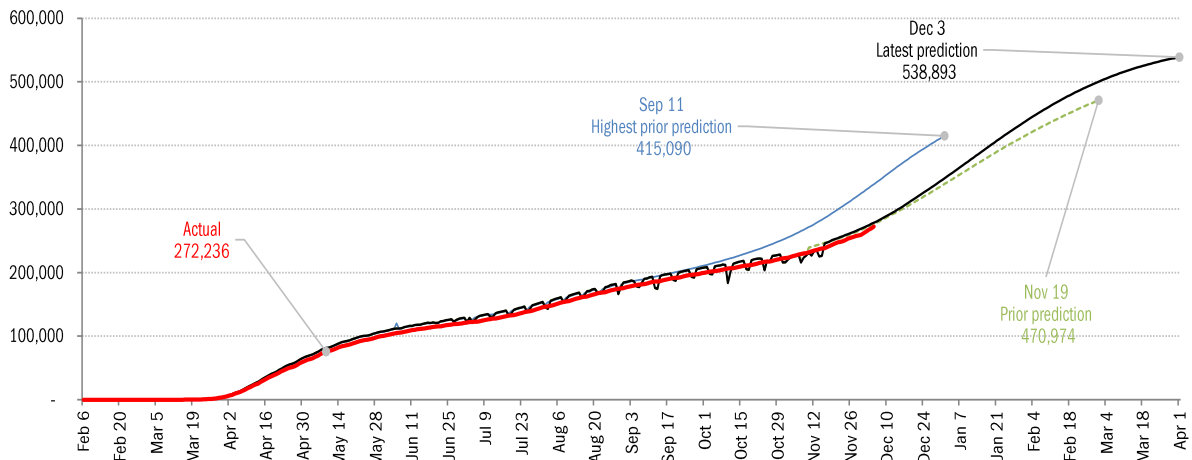
As of Dec 5

Actual versus first, highest, lowest and latest model mean predictions

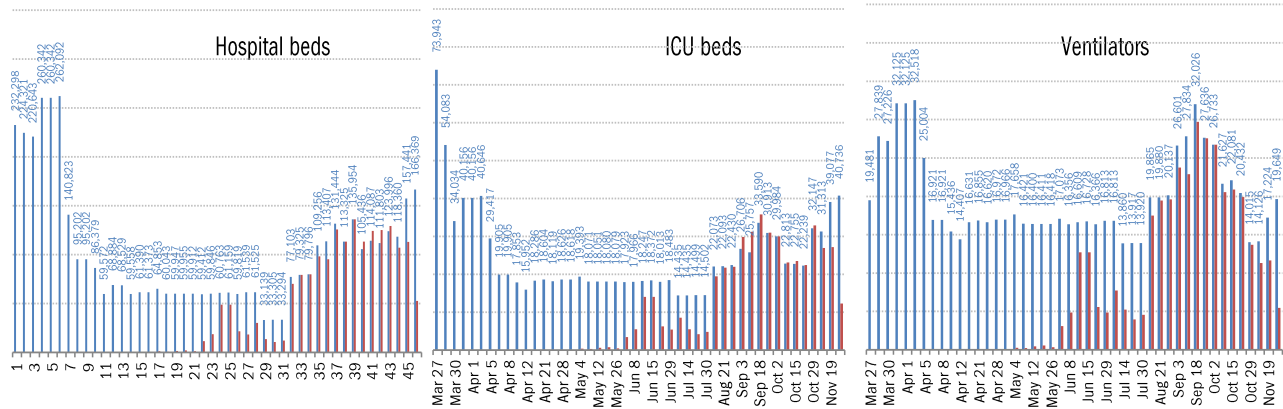


Cumulative fatalities

Actual versus first, highest, lowest and latest model mean predictions

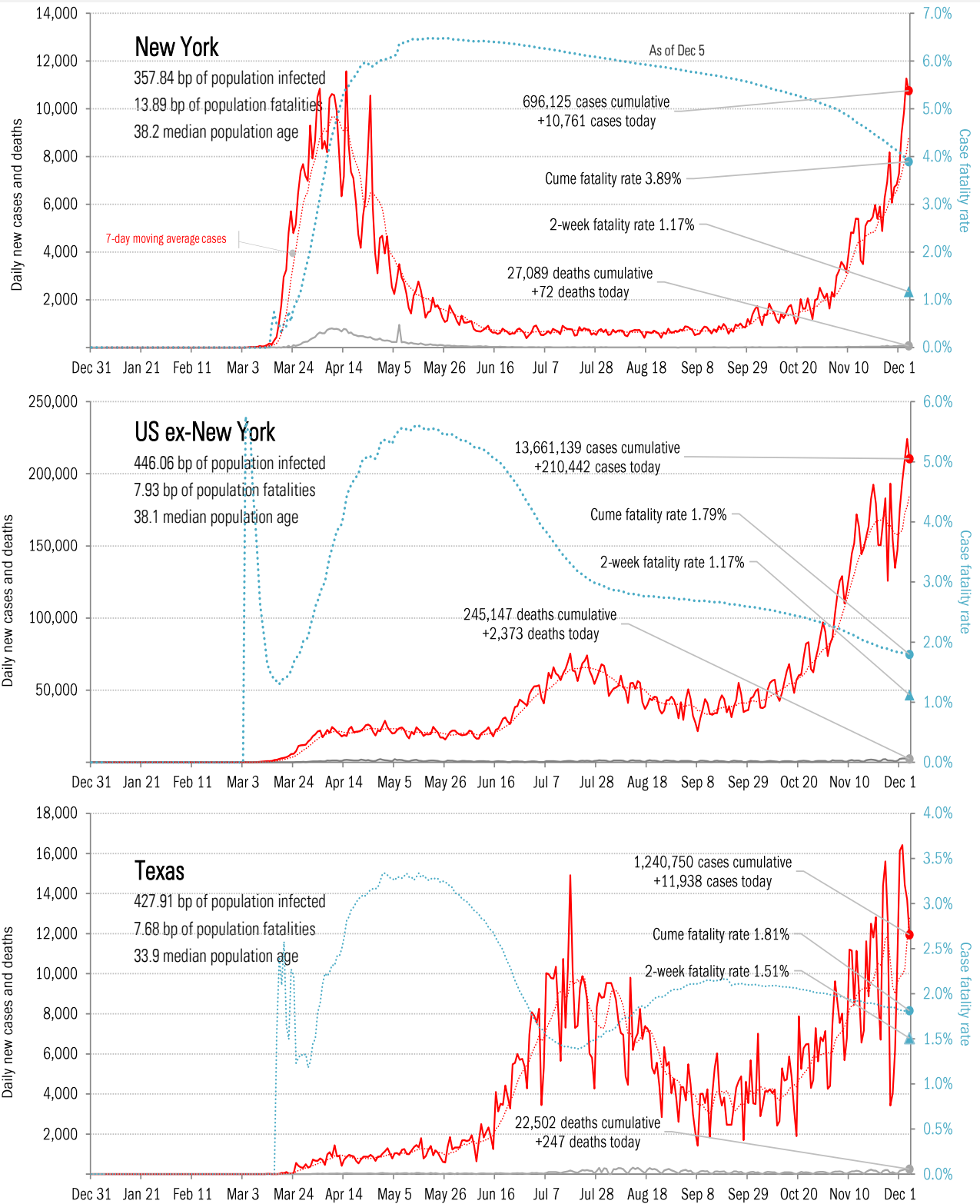


Healthcare system stress, **peak** and **ultimate** estimated at each model revision



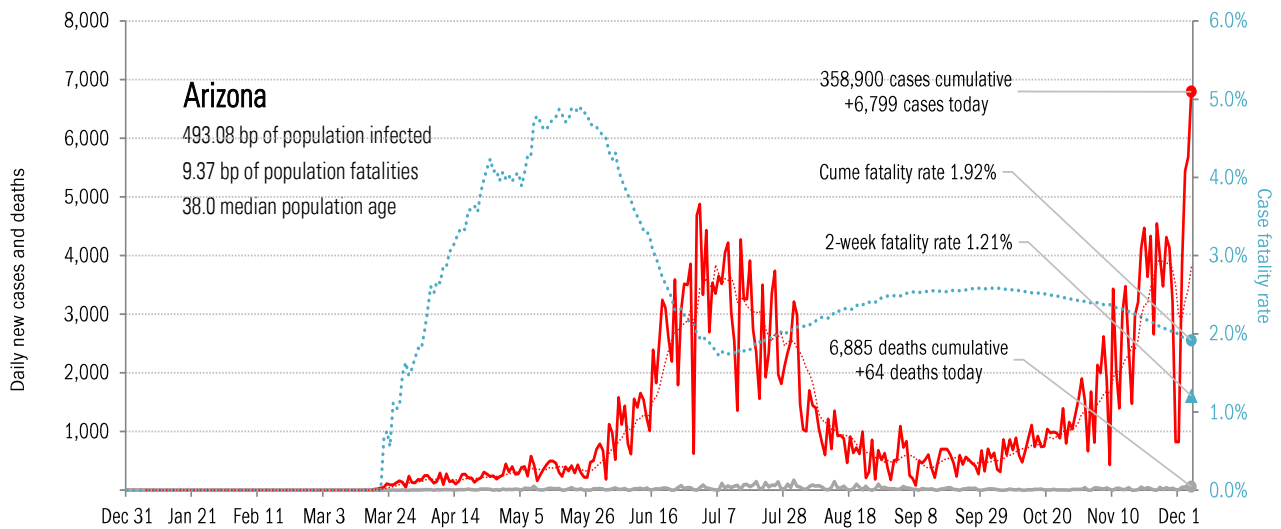
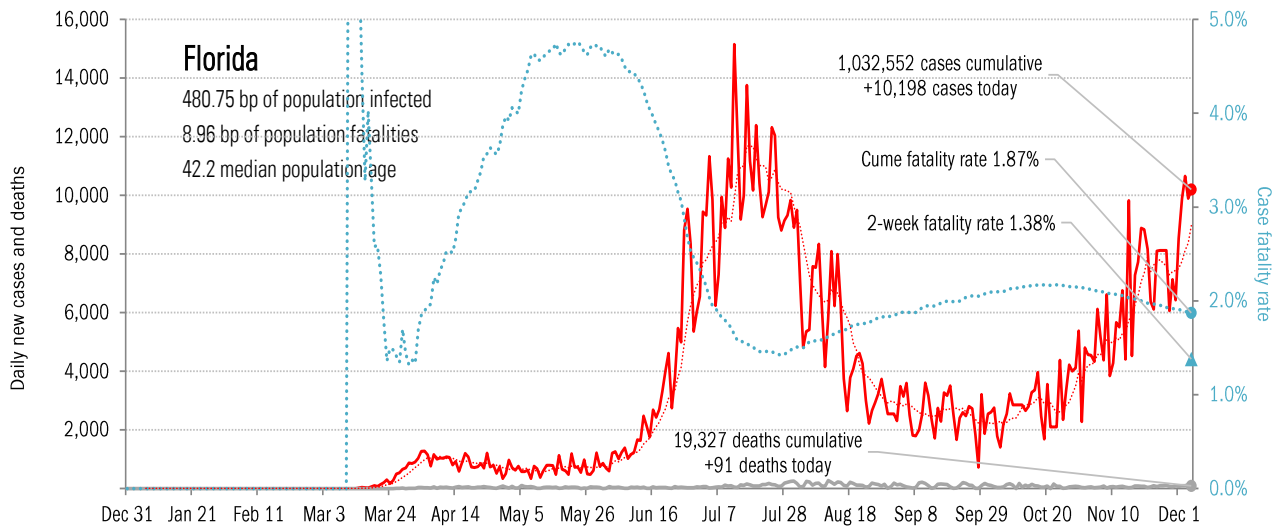
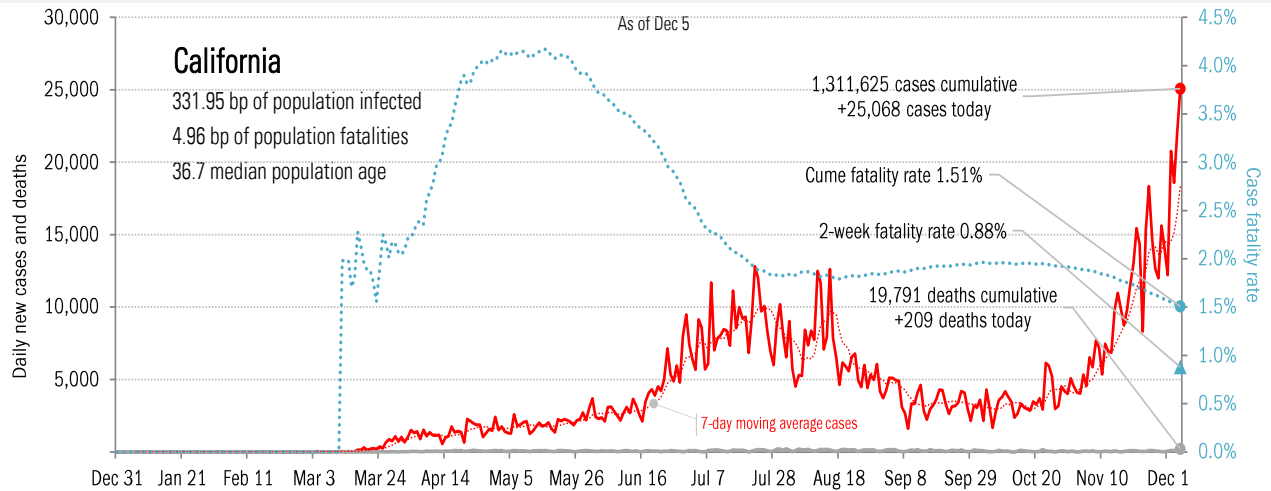
Source: [IHME Covid Tracking Project](#), TrendMacro calculations

From Ground Zero to the Rio Grande



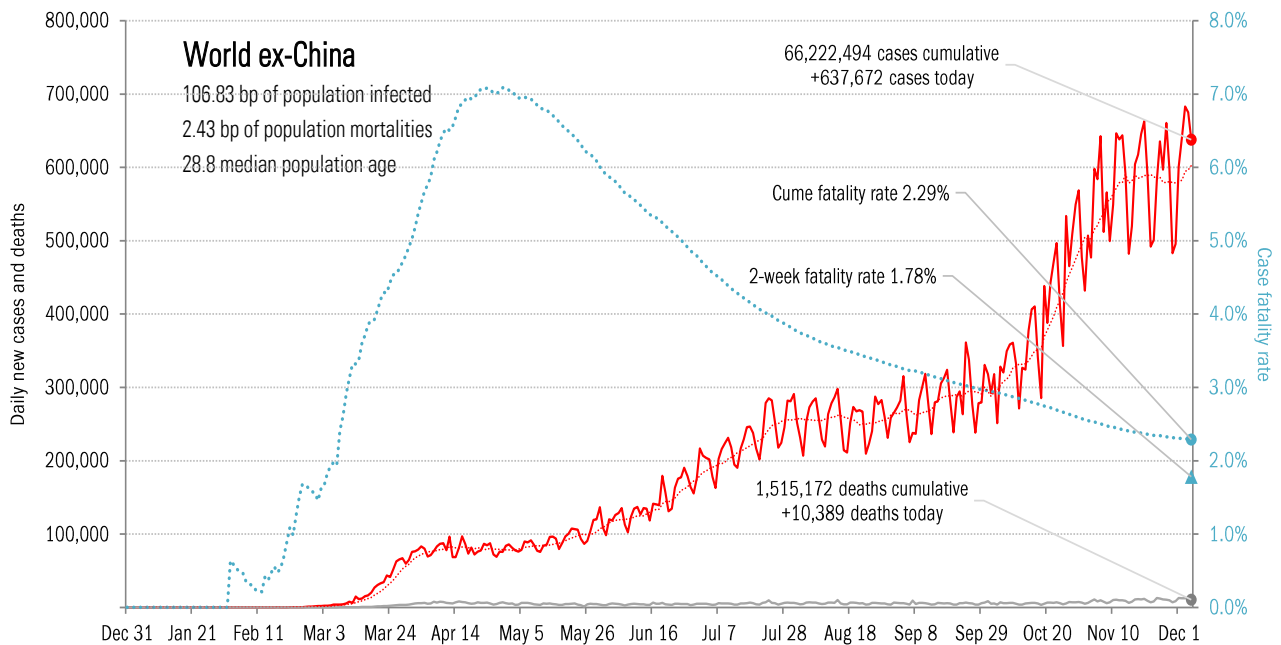
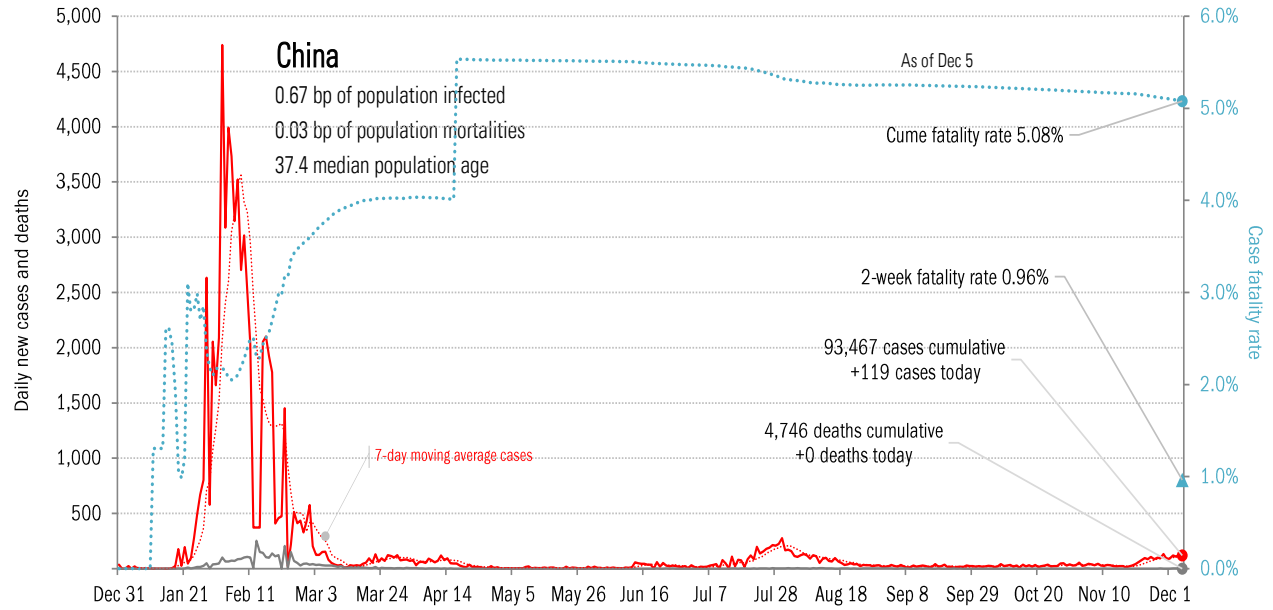
Source: [Covid Tracking Project](#), TrendMacro calculations

The sun-belt hot-spot states (other than Texas)



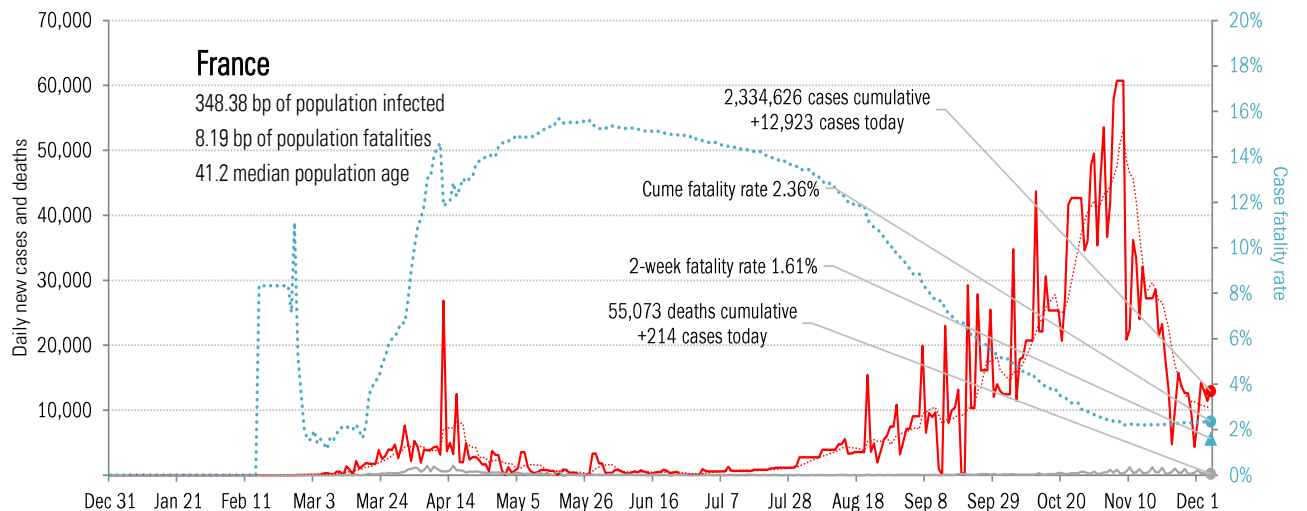
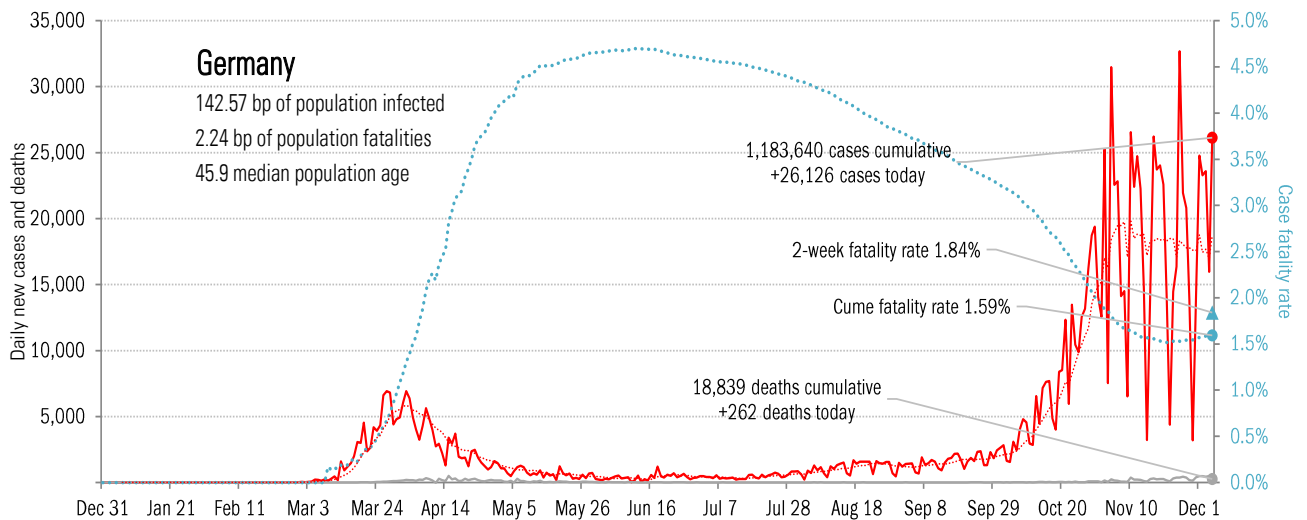
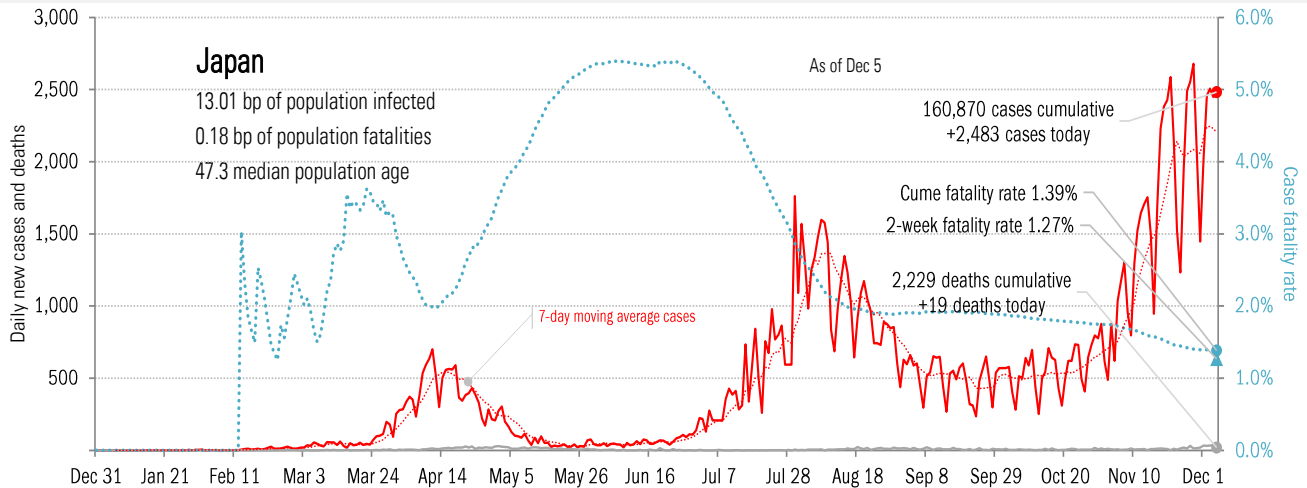
Source: [Covid Tracking Project](#), TrendMacro calculations

Patient zero... and then everyone else



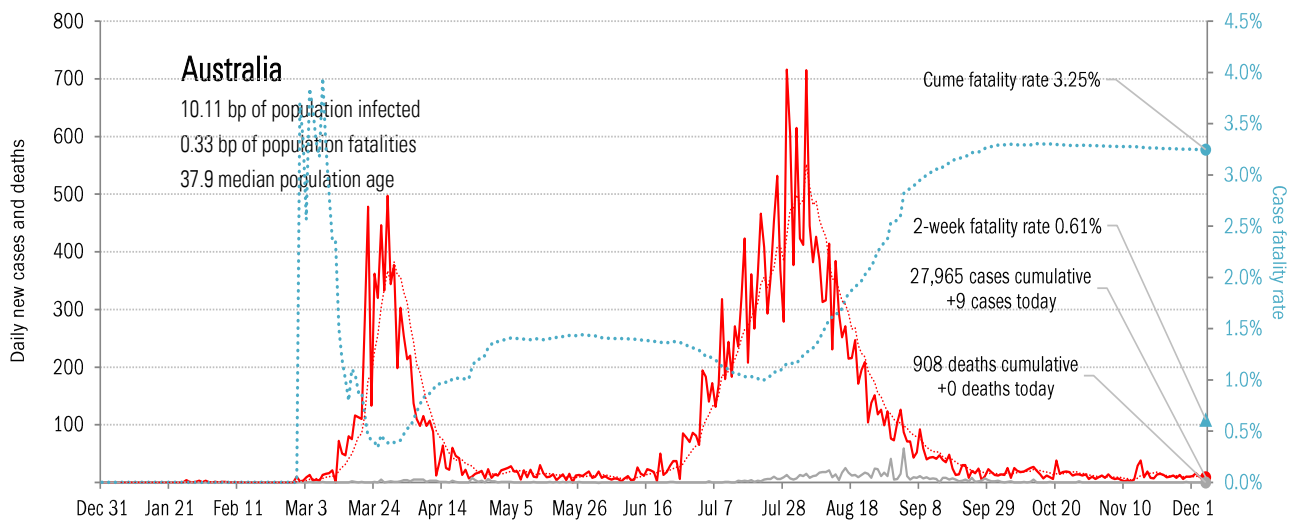
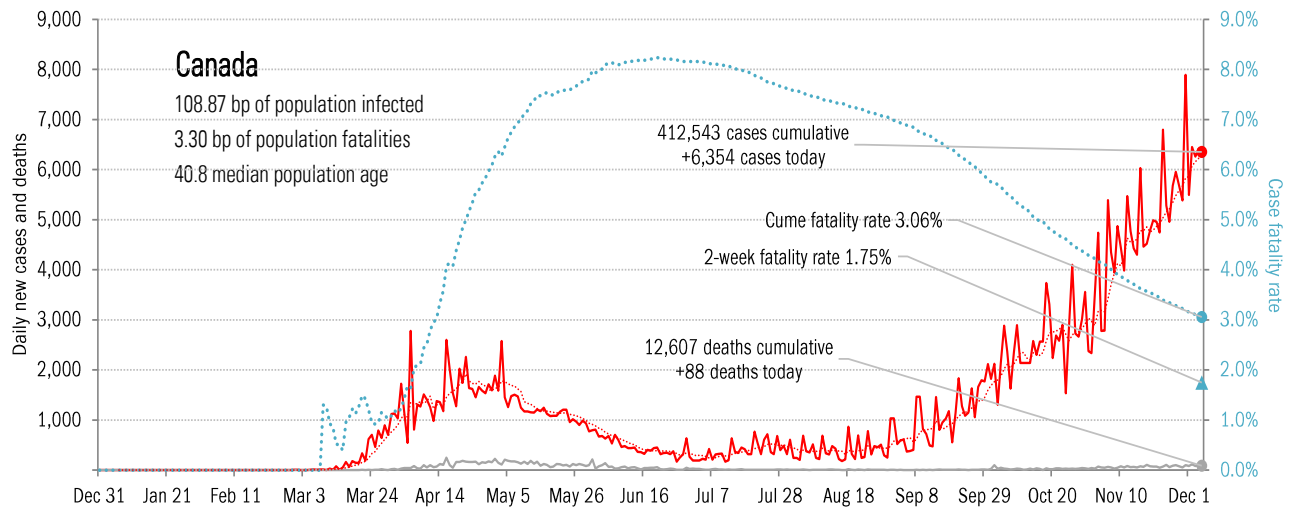
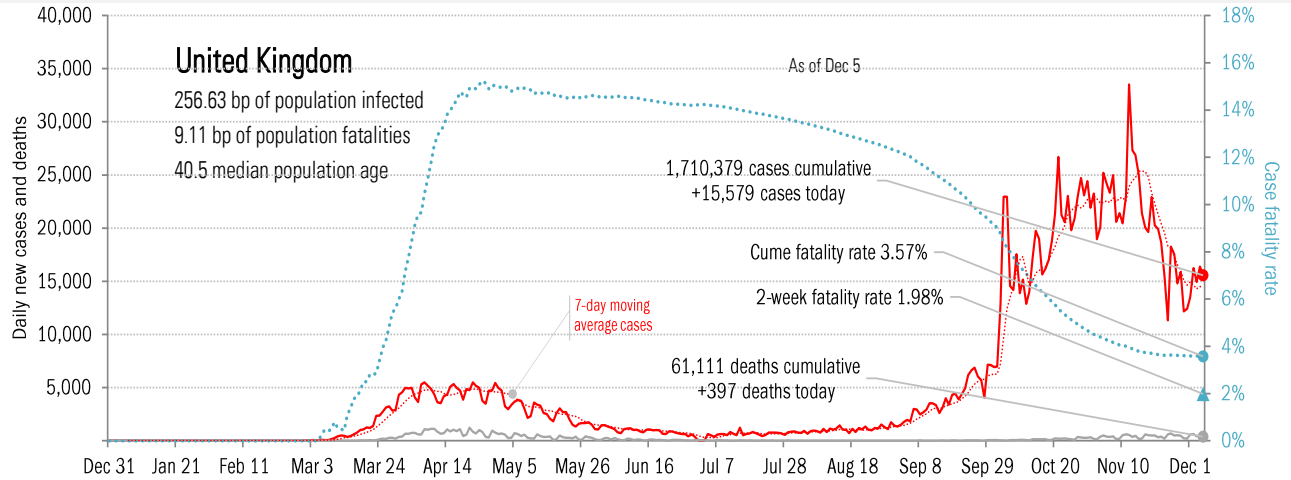
Source: [Johns Hopkins](#), [Covid Tracking Project](#), TrendMacro calculations

Impact in the largest economies



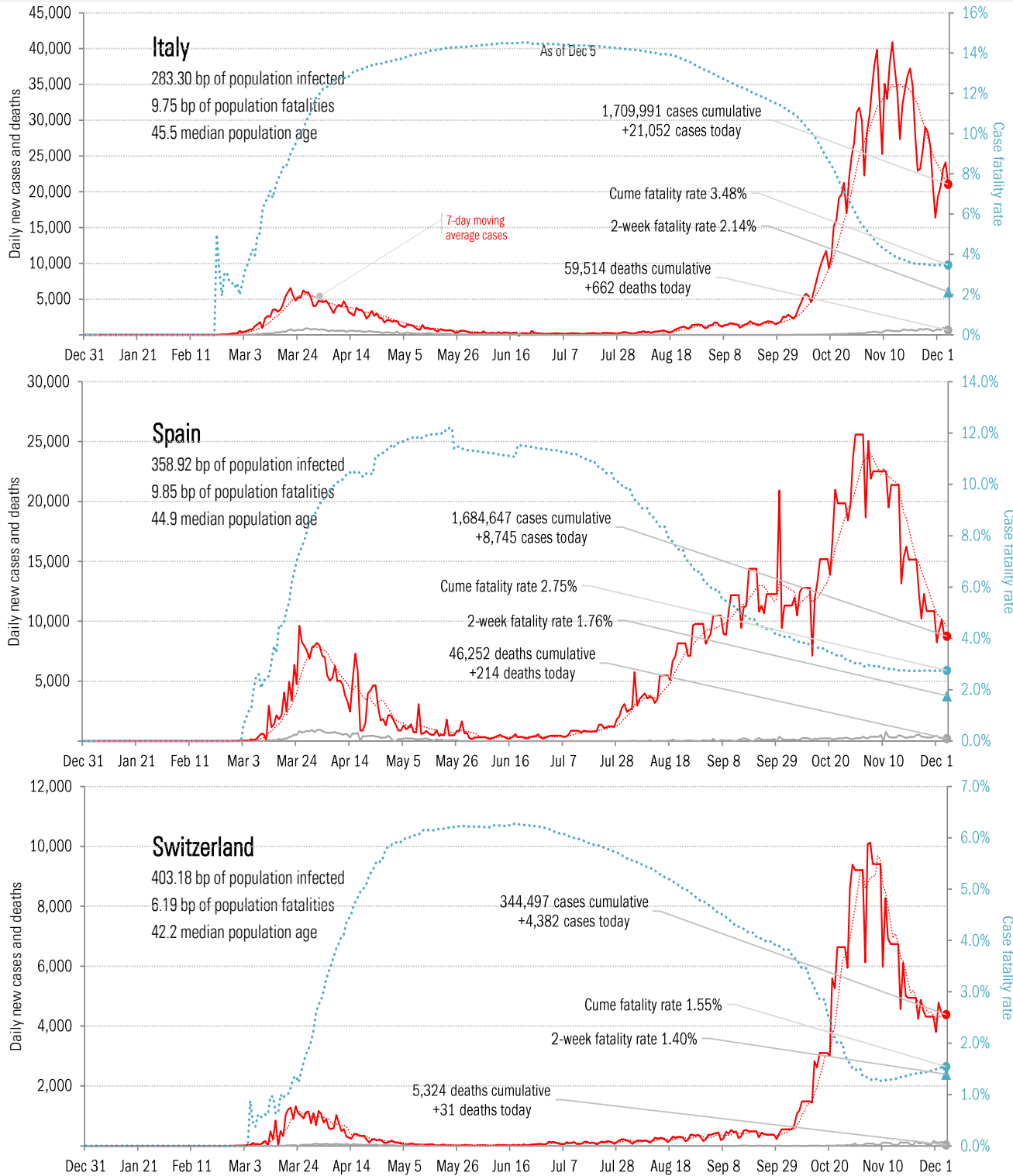
Source: [Johns Hopkins](#), TrendMacro calculations

Impact in The Anglosphere



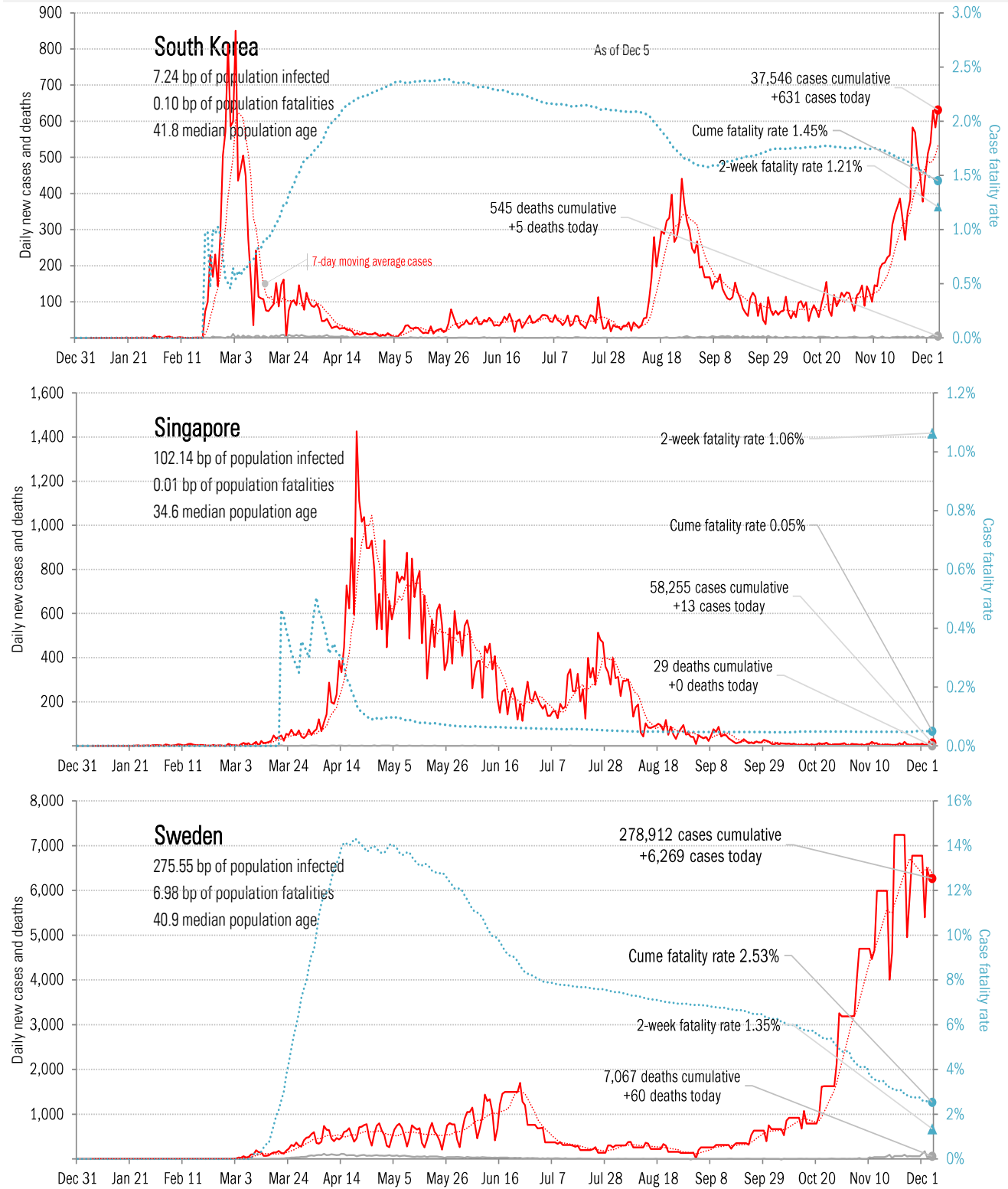
Source: [Johns Hopkins](#), TrendMacro calculations

Impact in continental Europe



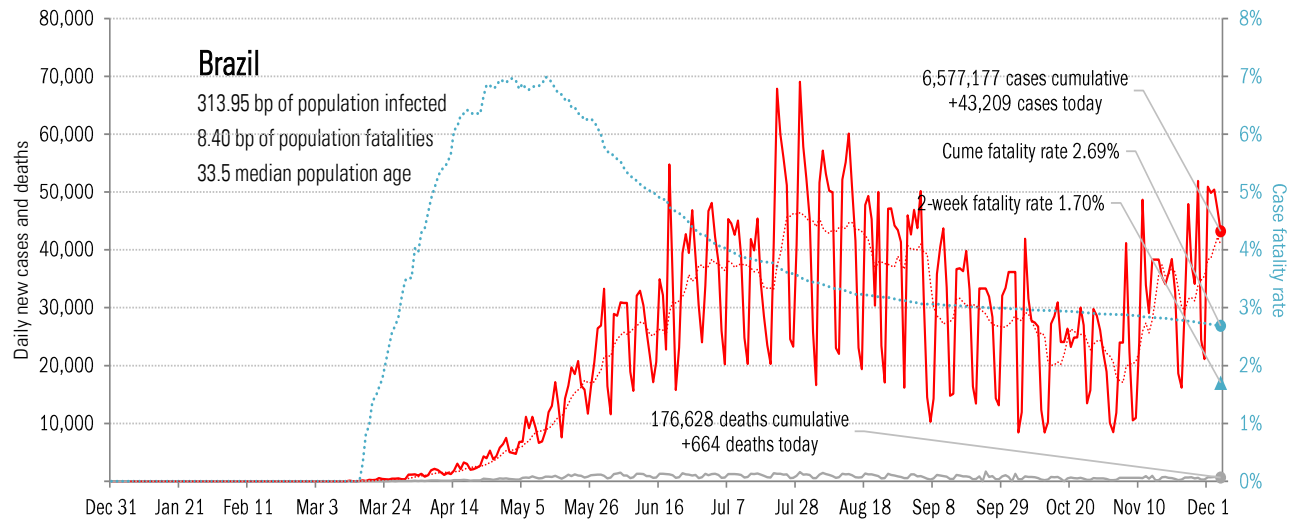
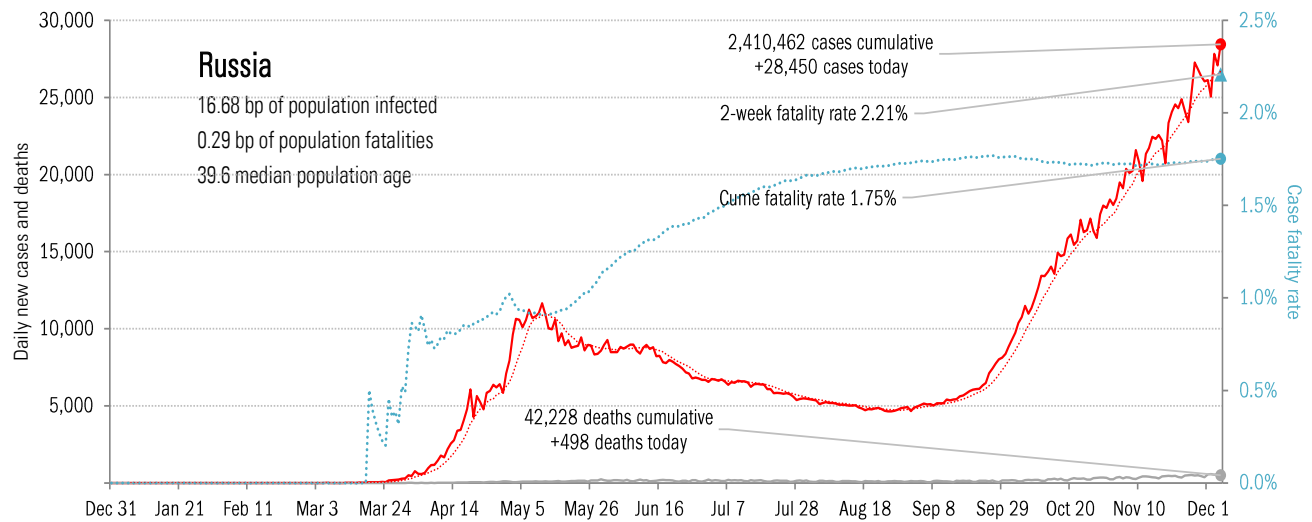
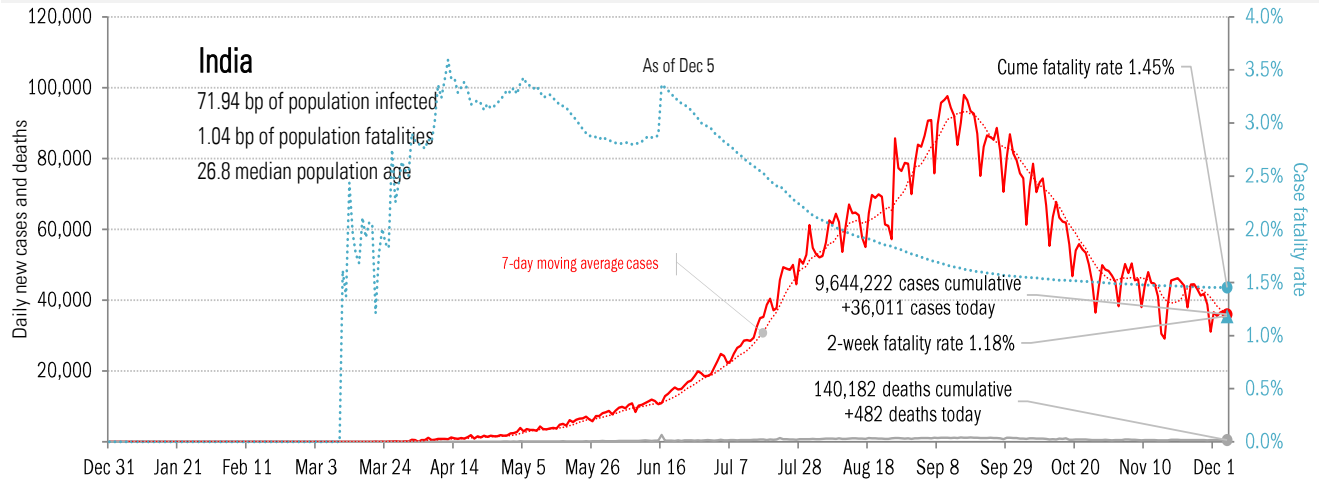
Source: [Johns Hopkins](#), TrendMacro calculations

Impact in other hot-spots



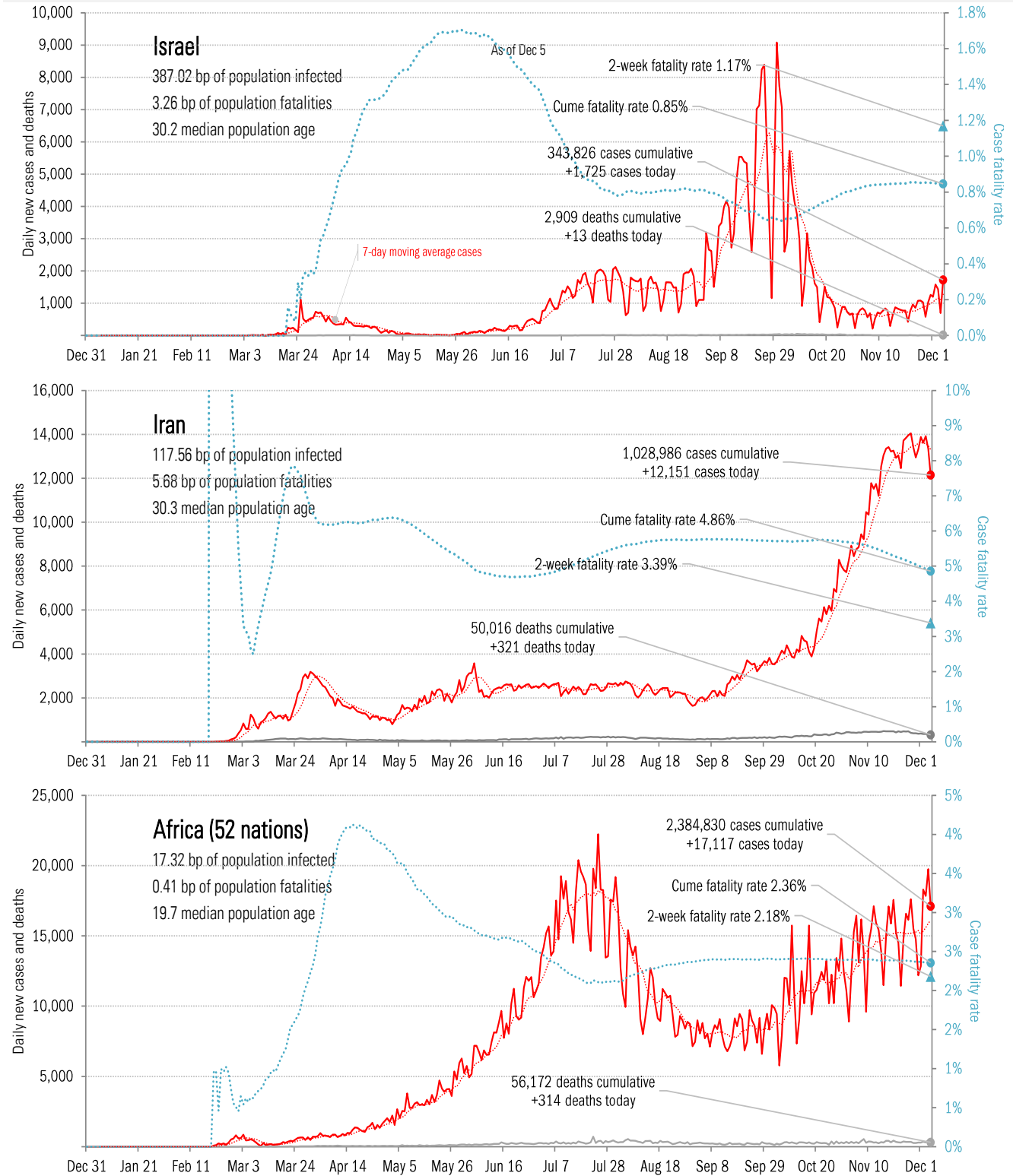
Source: [Johns Hopkins](#), TrendMacro calculations

Impact in the BRICs ex-China



Source: [Johns Hopkins](#), TrendMacro calculations

Impact in the Middle East and Africa



Source: [Johns Hopkins](#), TrendMacro calculations