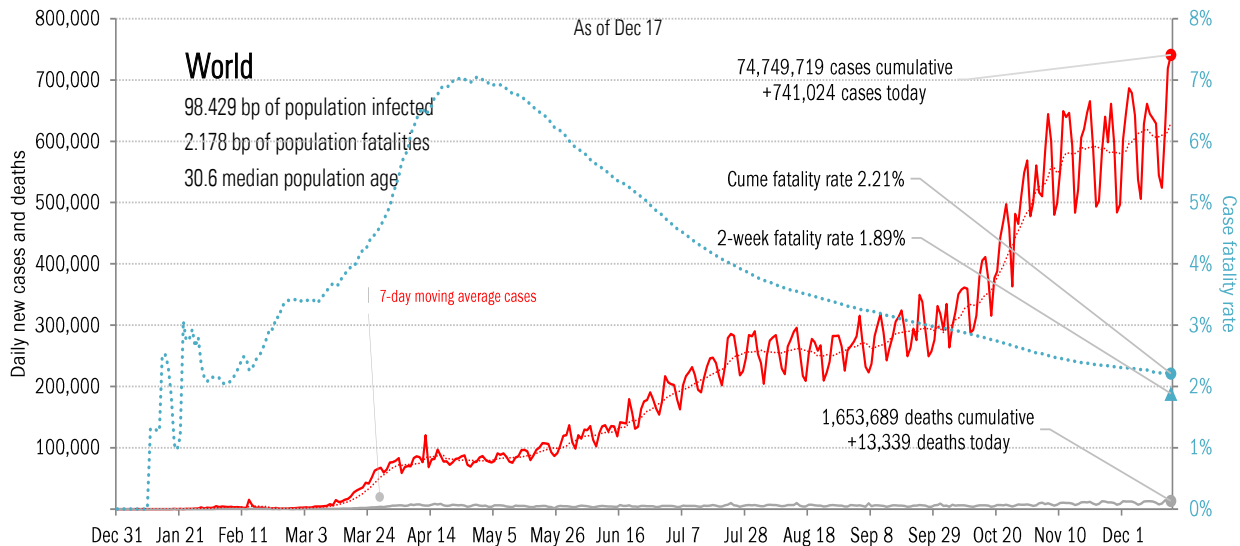
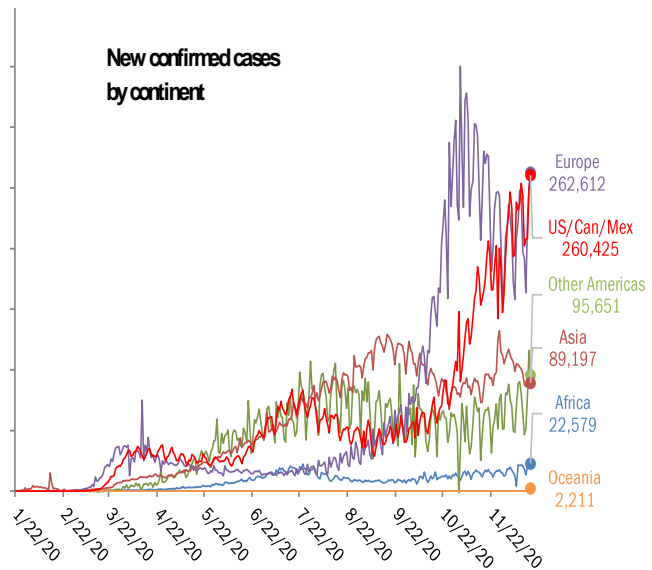


Data Insights: Covid-2019 Monitor

Friday, December 18, 2020

The global scorecard

The worst ten countries			
New cases		New Deaths	
United States	+241,620	United States	+3,438
Brazil	+69,826	Brazil	+1,092
United Kingdom	+35,532	Germany	+754
Germany	+30,179	Mexico	+718
Russia	+27,787	Italy	+683
Turkey	+27,515	Russia	+574
India	+22,890	United Kingdom	+532
France	+18,398	Poland	+431
Italy	+18,233	India	+338
Netherlands	+12,871	Ukraine	+265
+504,851		+8,825	
World	+741,024	World	+13,339
Top ten	68%	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

Copyright 2020 Trend Macrolytics LLC. All rights reserved. This document is not to be forwarded to individuals or organizations not authorized by Trend Macrolytics LLC to receive it. For information purposes only; not to be deemed to be recommendations for buying or selling specific securities or to constitute personalized investment advice. Derived from sources deemed to be reliable, but no warranty is made as to accuracy.

The US scorecard

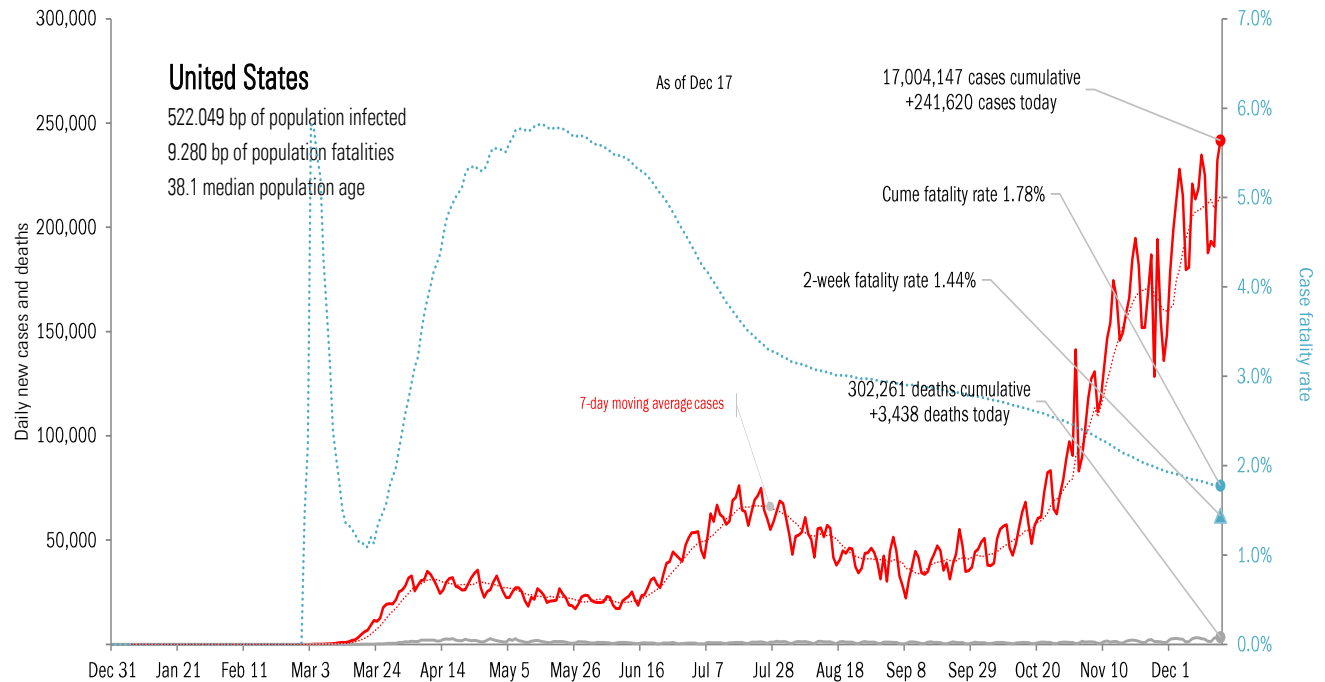
The ten worst US states

New cases		New Deaths		New in hospital		Curre cases		Curre deaths		Curre in hospital	
CA	+52,281	CA	+379	CA	+540	CA	1,723,362	NY	28,222	NY	89,995
TX	+19,849	TX	+266	SC	+478	TX	1,539,189	TX	24,660	FL	60,077
FL	+13,102	PA	+224	NV	+425	FL	1,149,126	CA	21,860	NJ	44,602
CH	+11,412	MI	+213	AL	+115	IL	879,428	FL	20,594	GA	38,718
NY	+10,914	IL	+208	TX	+100	NY	815,469	NJ	18,080	CH	33,745
PA	+9,966	TN	+177	AZ	+75	CH	596,178	IL	15,985	AZ	31,851
TN	+8,945	AZ	+147	TN	+65	PA	529,335	PA	13,392	IN	31,820
IL	+8,828	NY	+122	WA	+52	GA	494,173	MI	11,801	AL	29,559
IN	+6,340	CH	+117	NY	+50	TN	493,230	MA	11,558	MD	24,136
GA	+5,835	FL	+104	VA	+50	MI	487,356	GA	10,294	MIN	20,172
+147,472		+1,957		+1,950		8,706,846		176,446		404,675	
All states	+241,620	All states	+3,438	All states	+1,147	All states	17,004,147	All states	302,261	All states	632,907
Top ten	61%	Top ten	57%	Top ten	170%	Top ten	51%	Top ten	58%	Top ten	64%

Some states not reporting

Five most improved US states

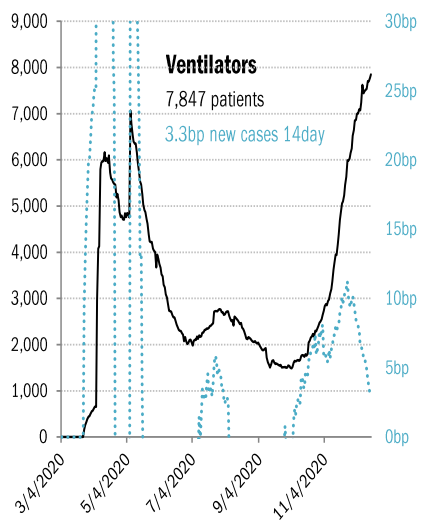
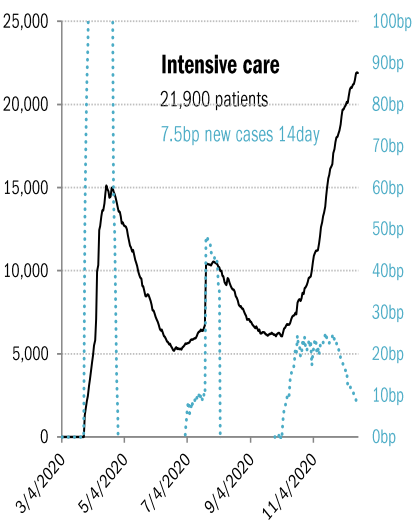
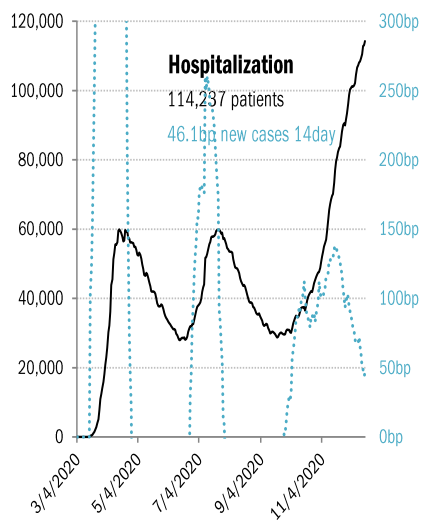
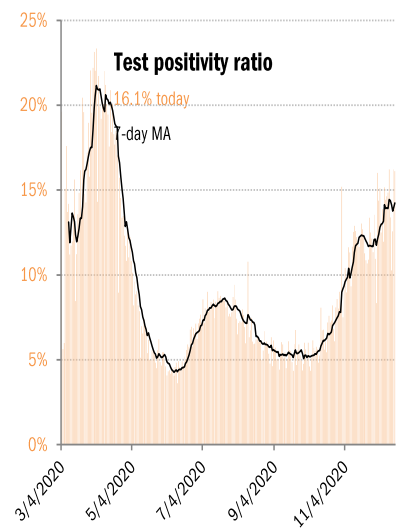
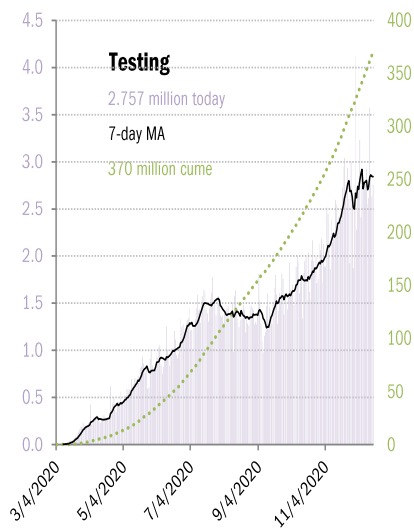
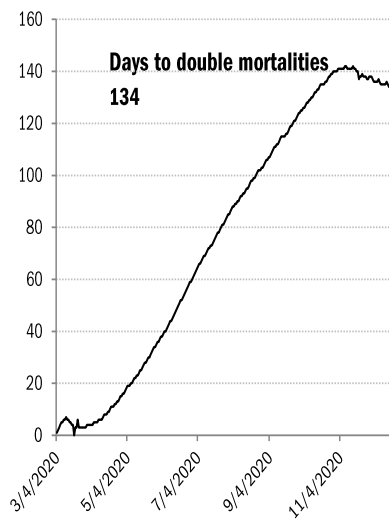
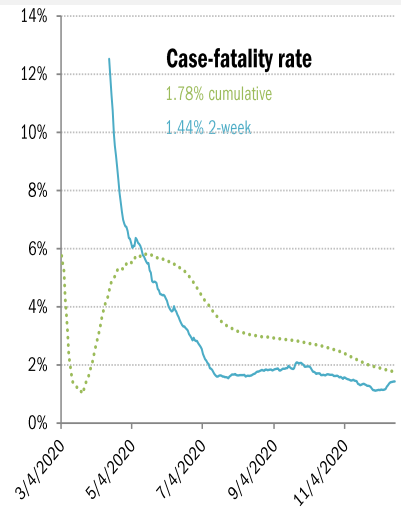
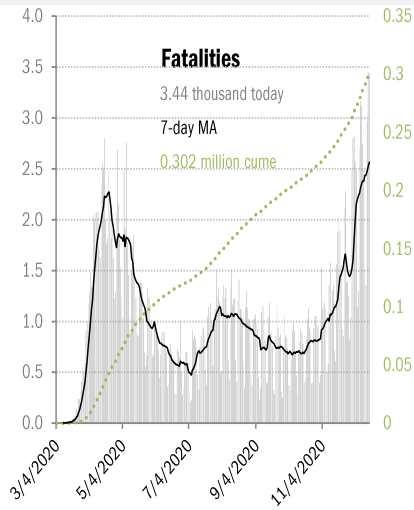
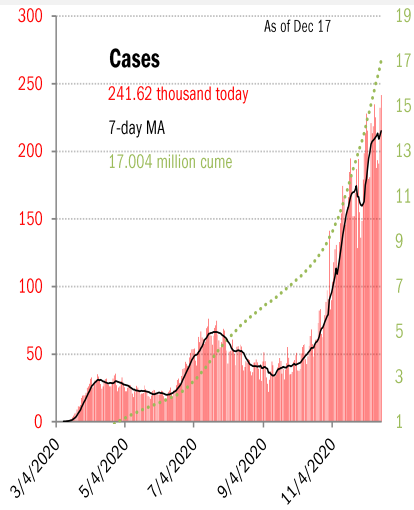
Fewer daily cases		Fewer new deaths		Fewer new hospitalizations		Most recoveries	
KS	-4,551	KS	-144	KS	-235	MA	+19,622
TN	-2,465	IN	-54	PA	-188	PA	+11,174
CA	-1,430	NJ	-54	CA	-148	CH	+10,497
NJ	-1,406	PA	-54	FL	-87	TN	+6,881
MA	-817	SD	-38	NC	-83	WI	+4,633



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

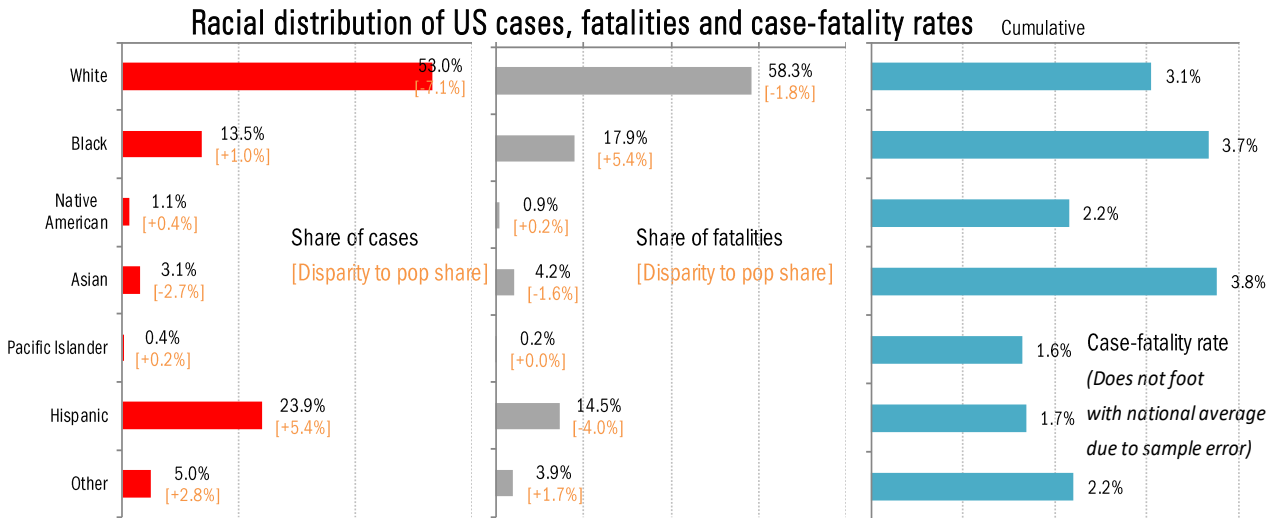
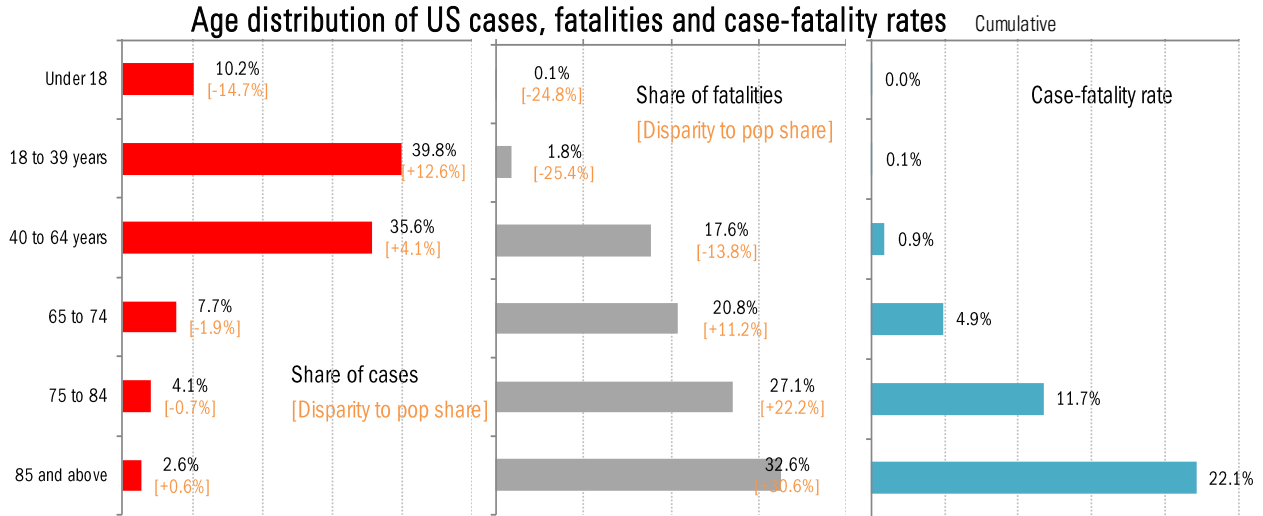
US deep-dive

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

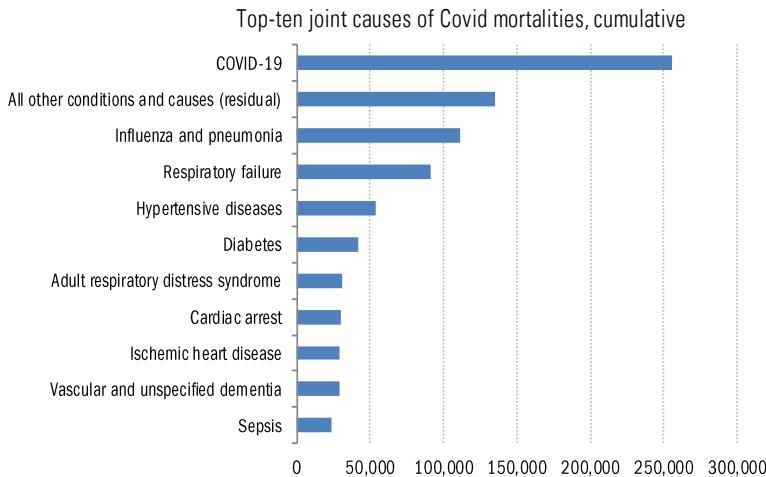


Source: [Covid Tracking Project](#), TrendMacro calculations

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



Comorbidities



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 2.9 additional conditions or causes per death.

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

Recommended reading

[American Medical Association Rescinds Previous Statement Against Prescription of Hydroxychloroquine to COVID-19 Patients](#)

Len Bilen
Len Bilen's Blog
December 14, 2020

[One Wild Mink Near Utah Fur Farms Tests Positive for Virus](#)

James Gorman
New York Times
December 15, 2020

[AMA did not change its stance on hydroxychloroquine and COVID-19](#)

Jason Puckett, Linda S. Johnson
ABC10
December 16, 2020

[FDA advisory panel recommends use of Moderna vaccine](#)

Sarah Oweremohle
Politico
December 17, 2020

[How to End Lockdowns Next Month](#)

Jay Bhattacharya and Sunetra Gupta
Wall Street Journal
December 17, 2020

[Rhode Island Governor Tells Citizens To 'Stay Home' Before Heading To Wine Bar](#)

Jordan Lancaster
Daily Caller
December 16, 2020

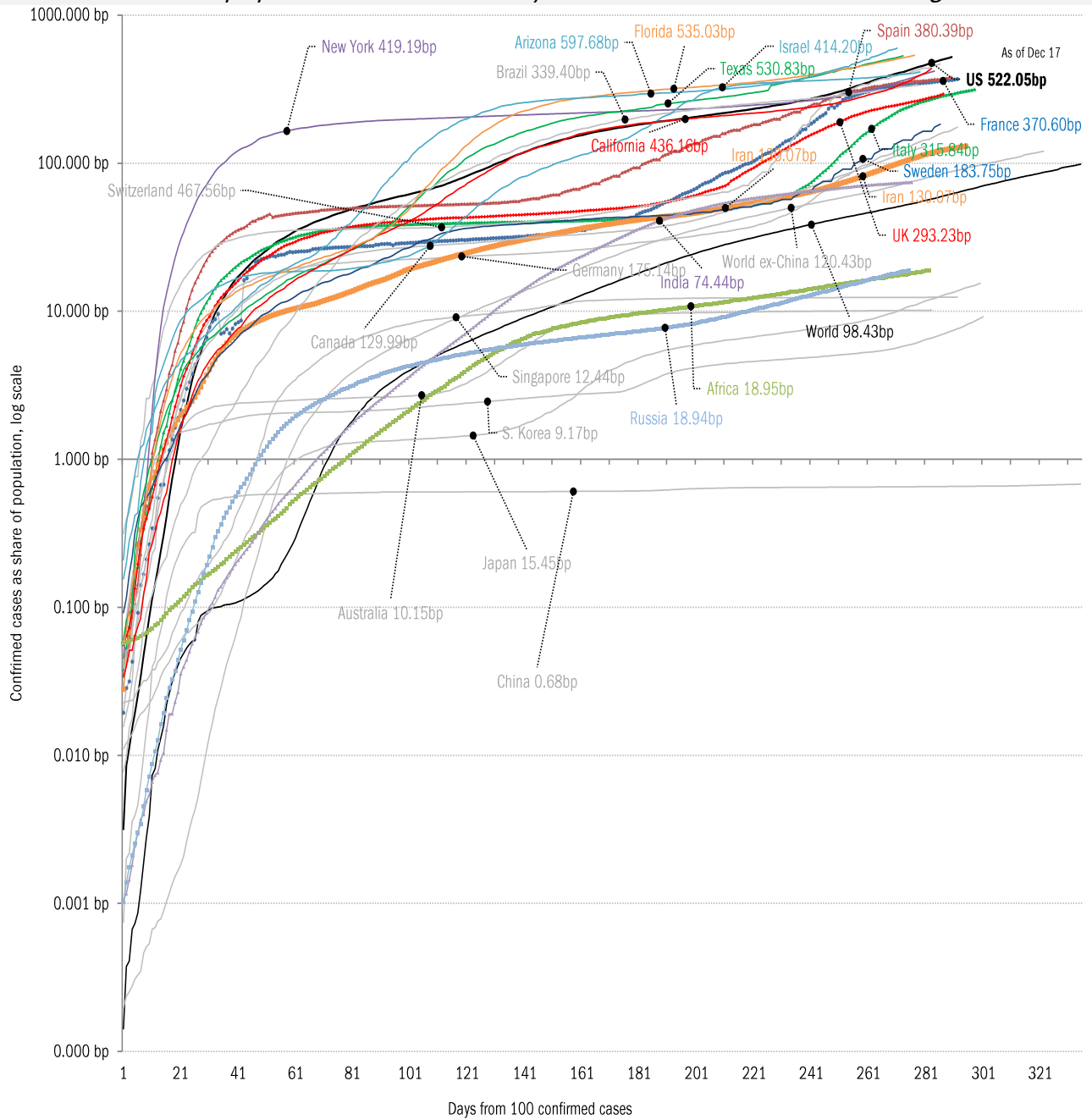
Meme of day

2020:



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

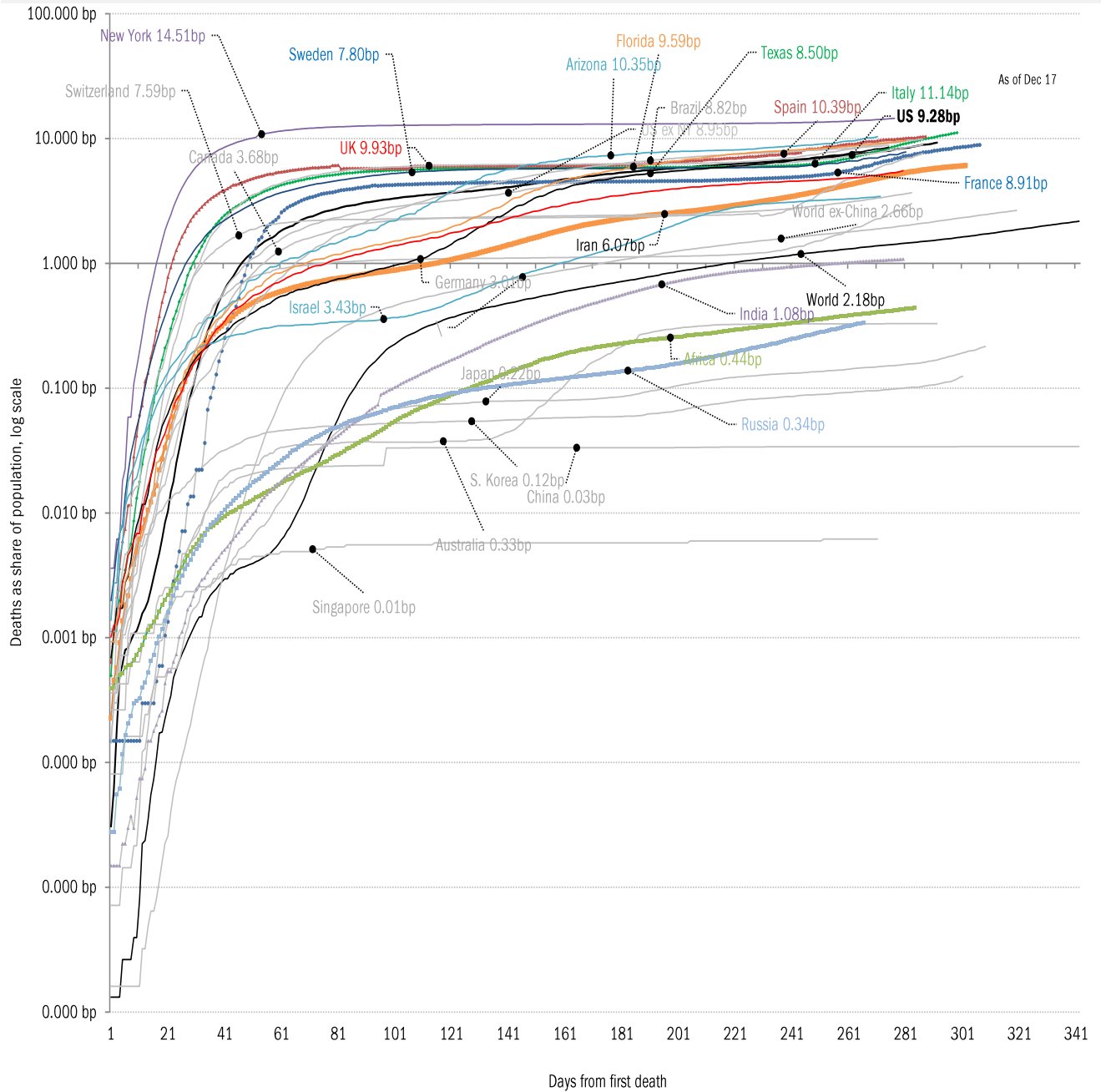
The coronavirus case accelerometer... tracking the world's infection curves
Share of infected population from first day with 100 confirmed cases, log scale



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

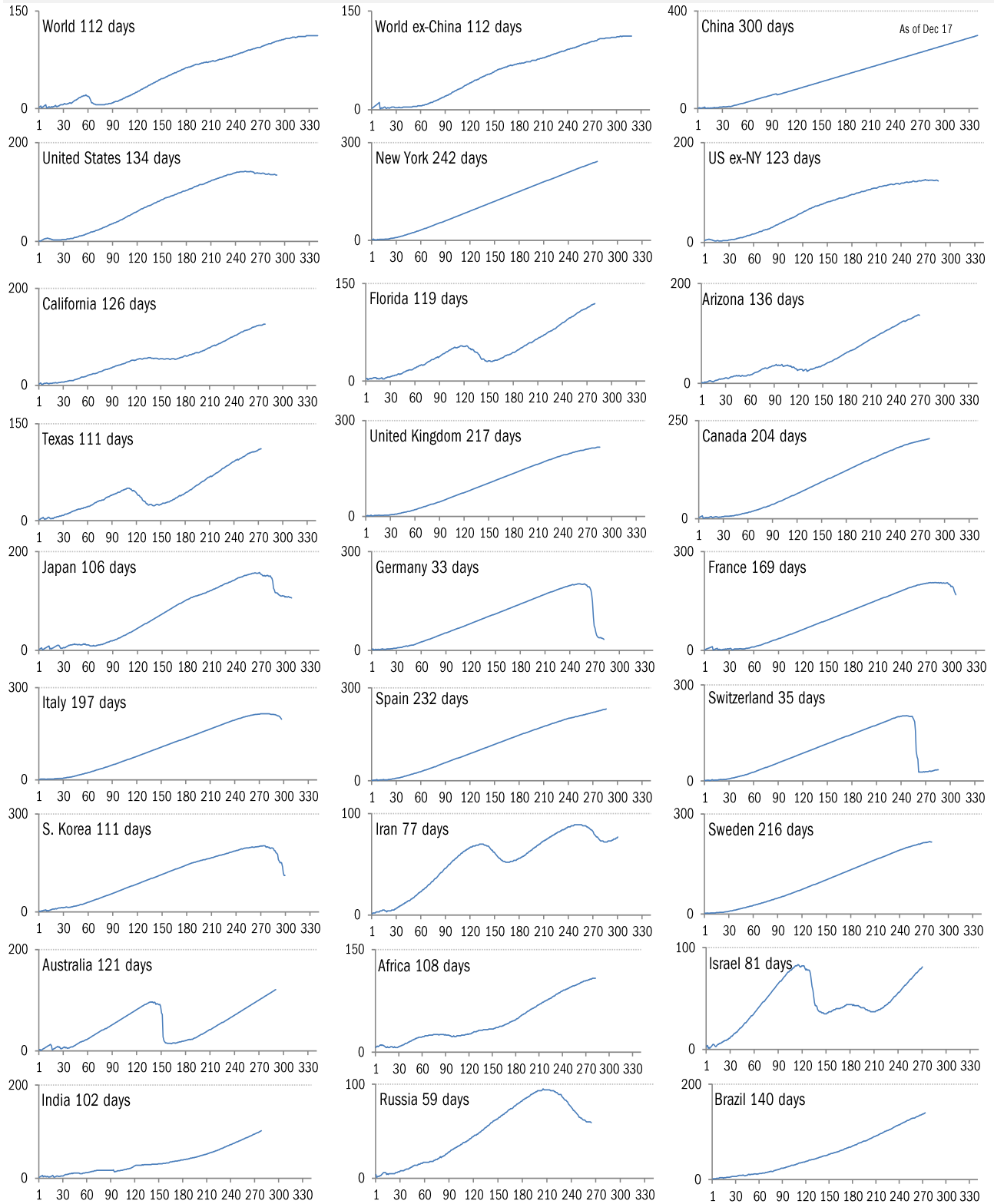


Source: [Johns Hopkins](#), [Covid Tracking Project](#), TrendMacro calculations

"Exponential"? Our most reliable evidence of the rate of spread of Covid-2019

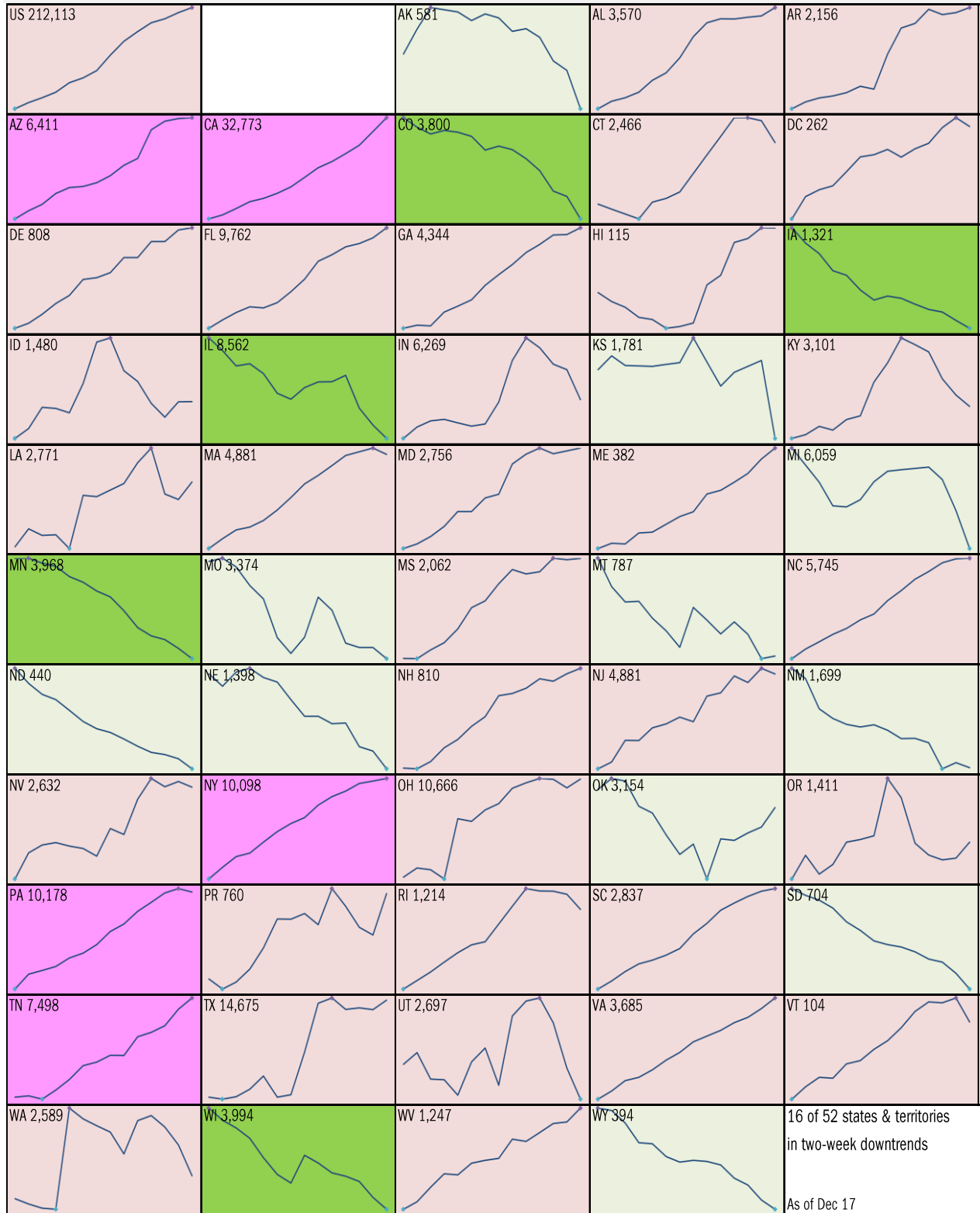
Vertical: days to double deaths Horizontal: days from first death

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

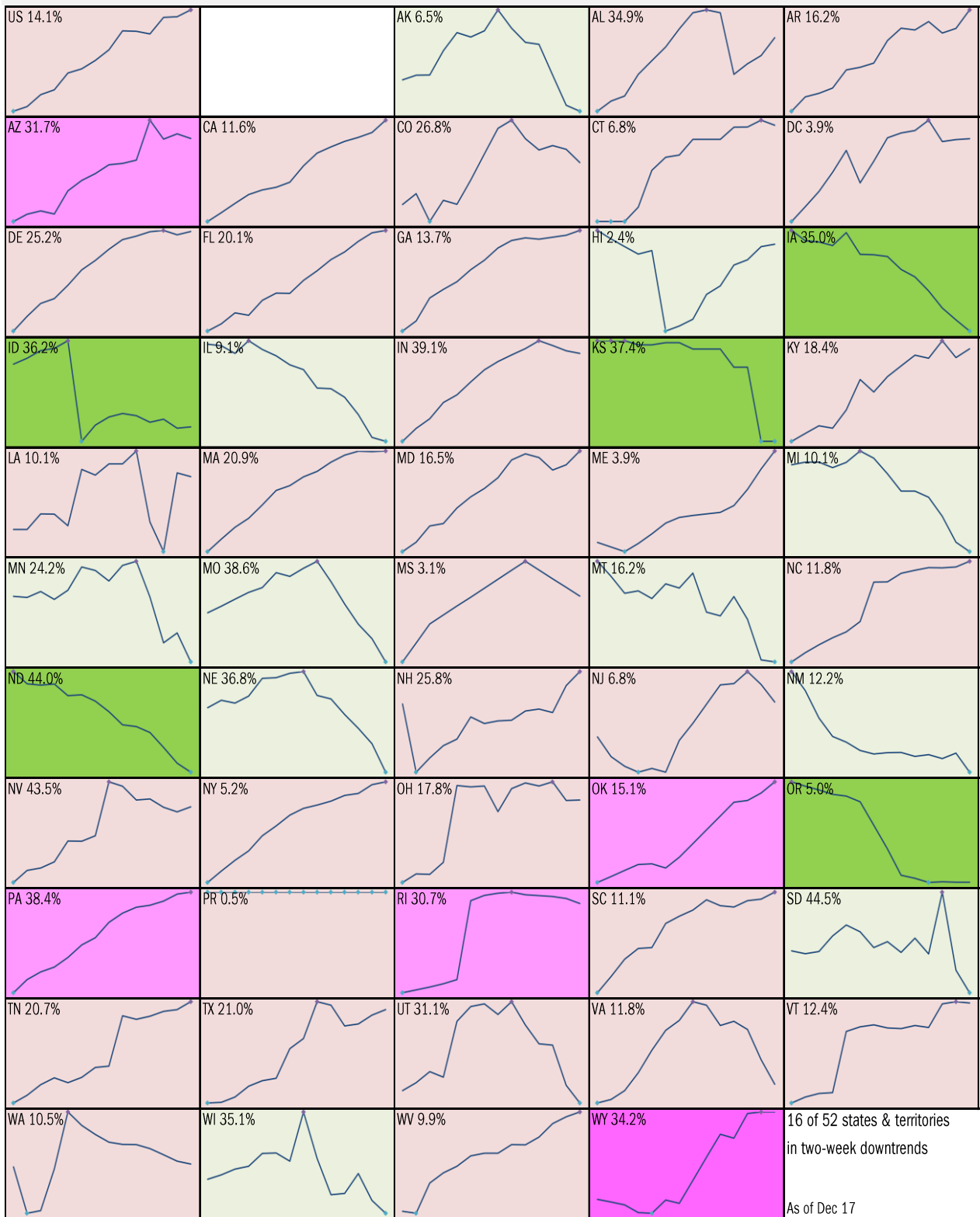


Source: [Covid Tracking Project](#), TrendMacro calculations

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



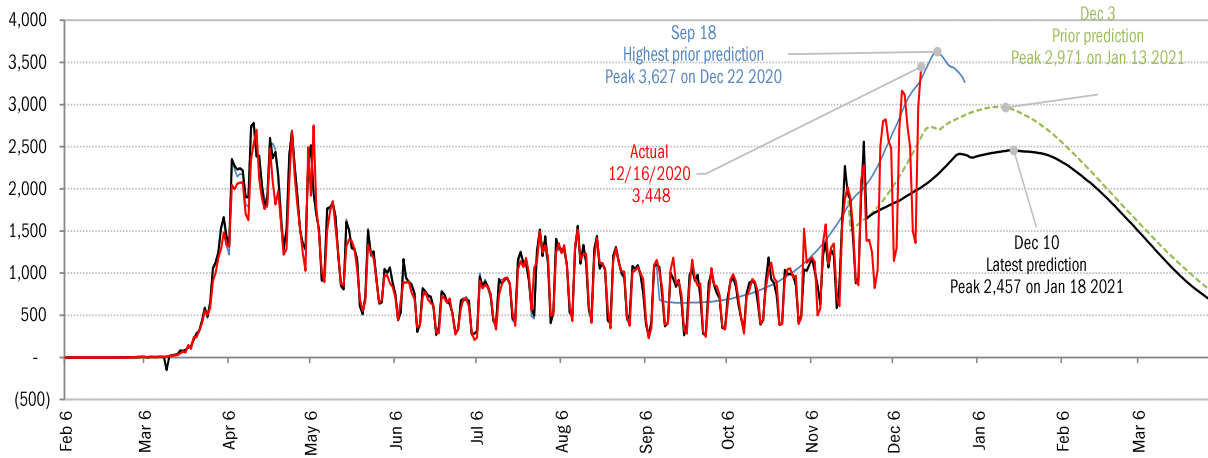
Source: [Covid Tracking Project](#), TrendMacro calculations

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

New daily fatalities

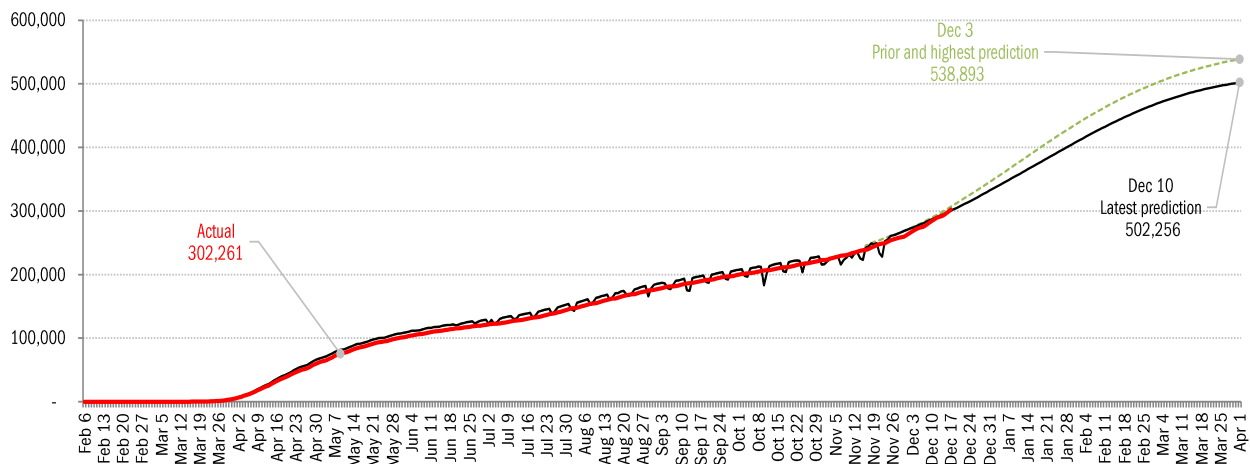
As of Dec 17

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

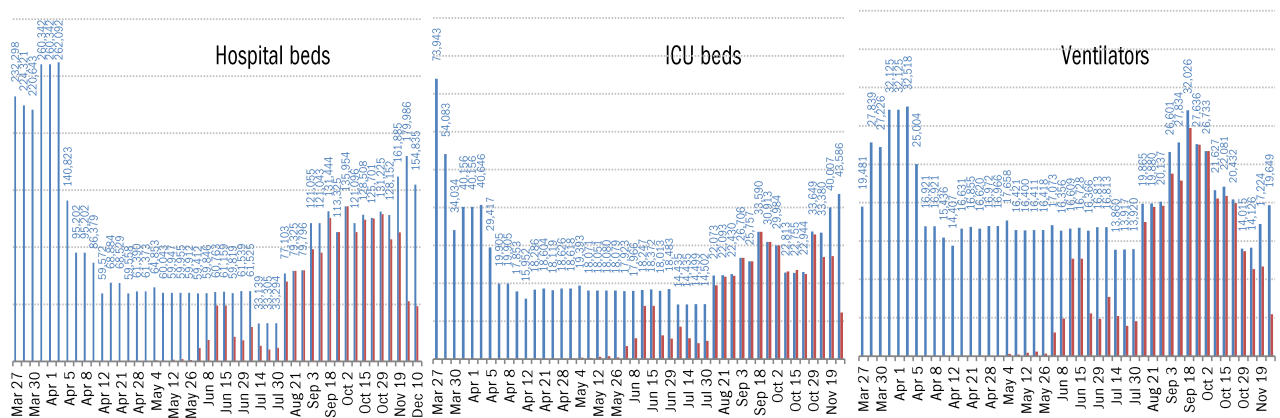


Cumulative fatalities

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

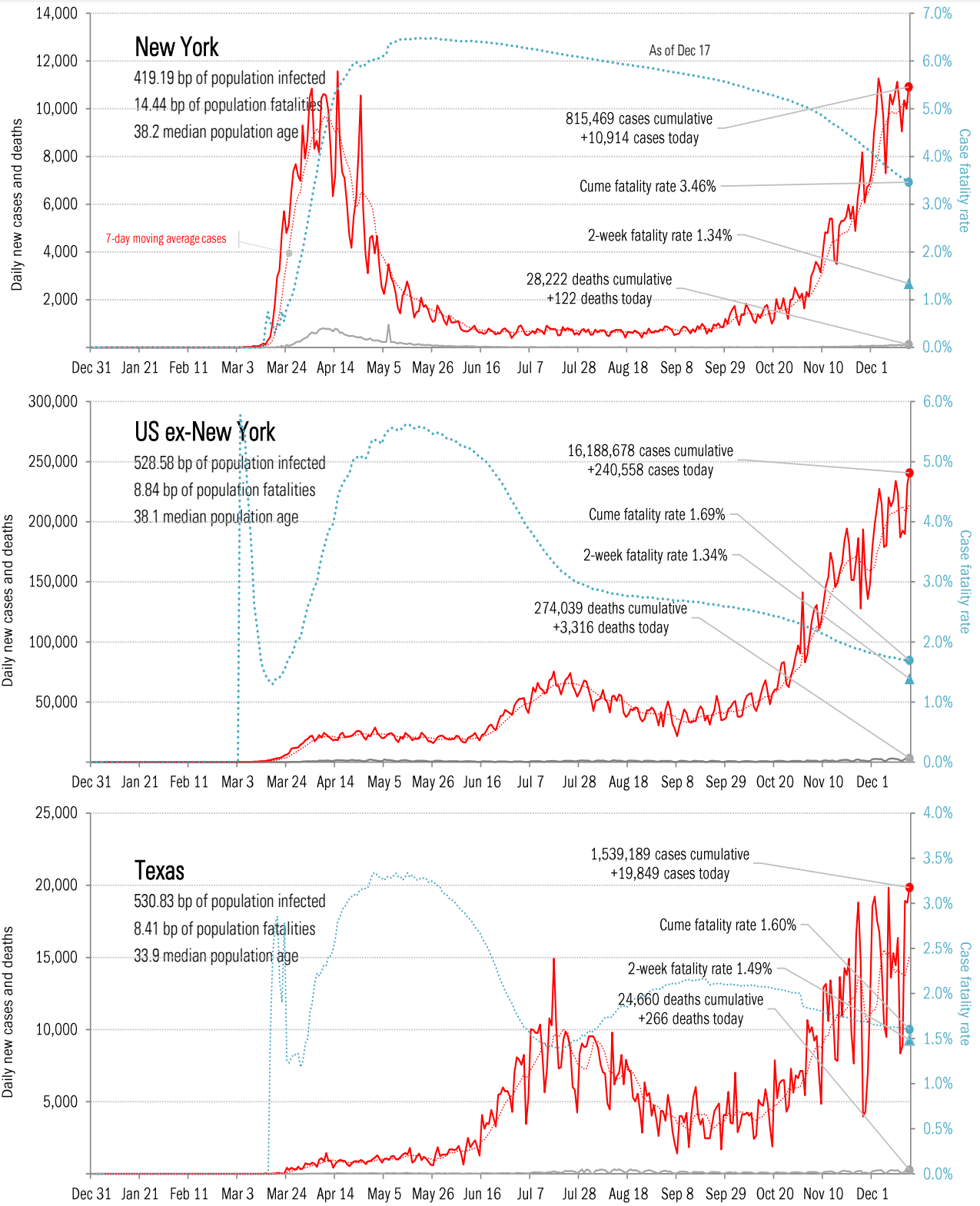


Healthcare system stress, **peak** and **ultimate** estimated at each model revision



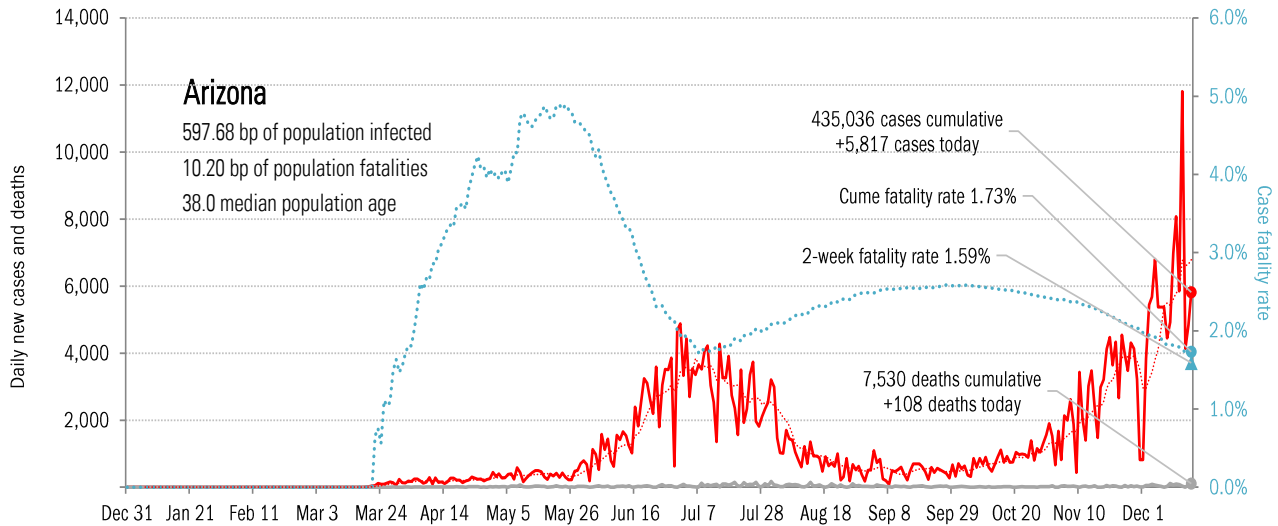
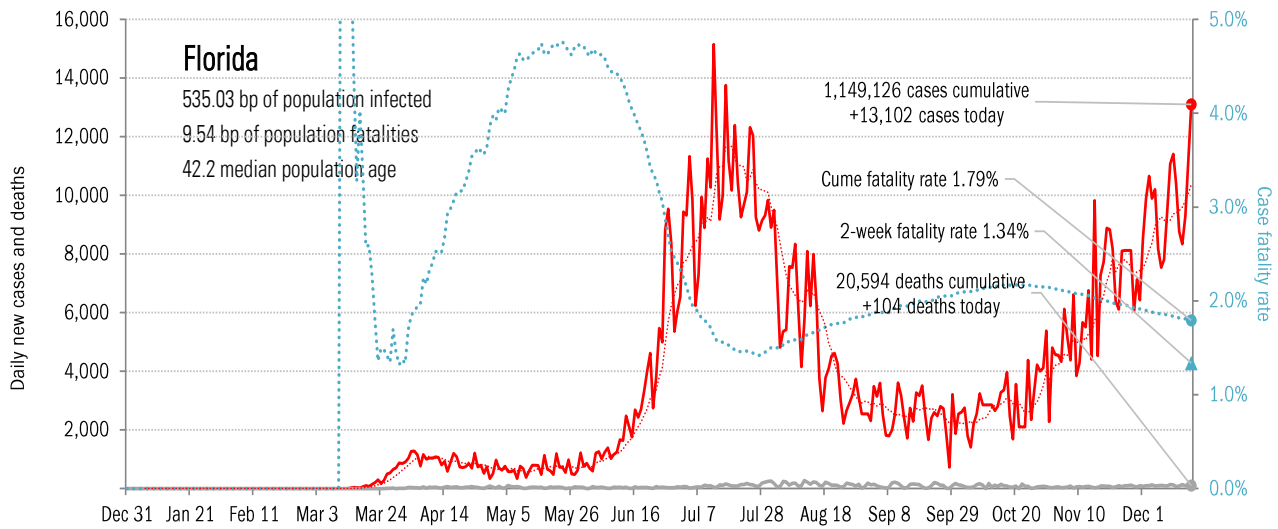
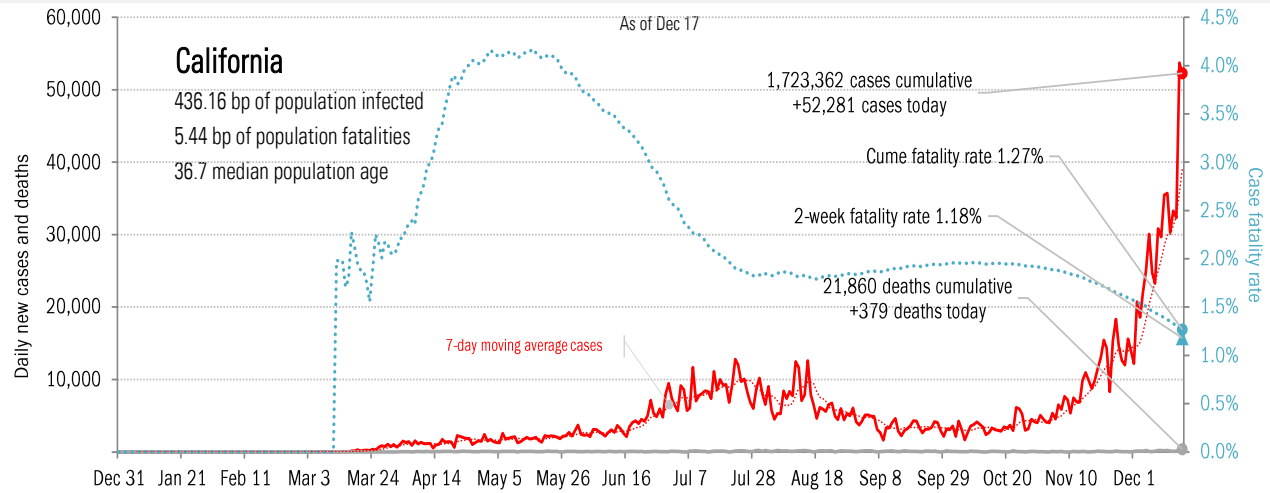
Source: [IHME](#), [Covid Tracking Project](#), TrendMacro calculations

From Ground Zero to the Rio Grande



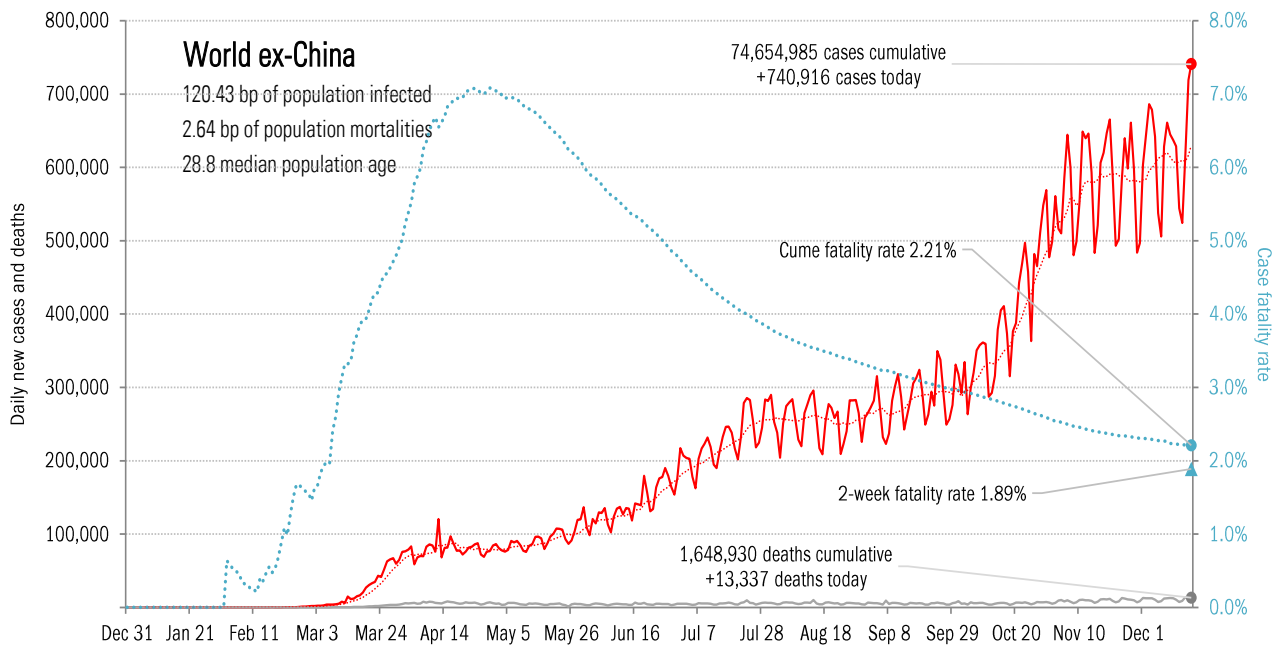
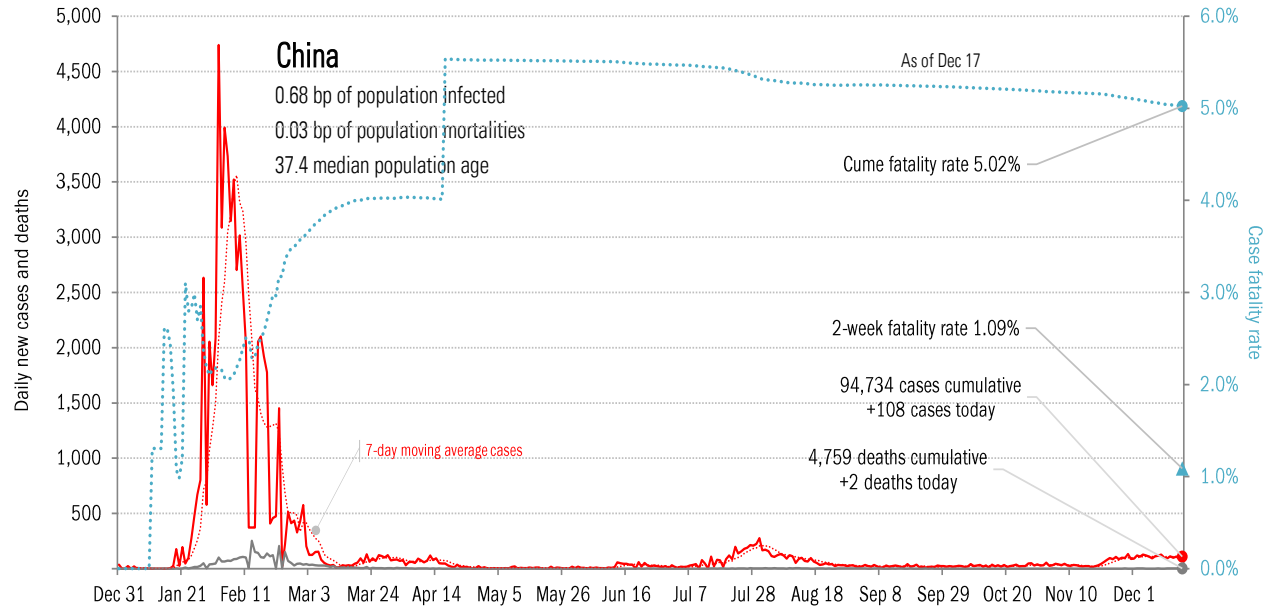
Source: [Covid Tracking Project](#), TrendMacro calculations

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



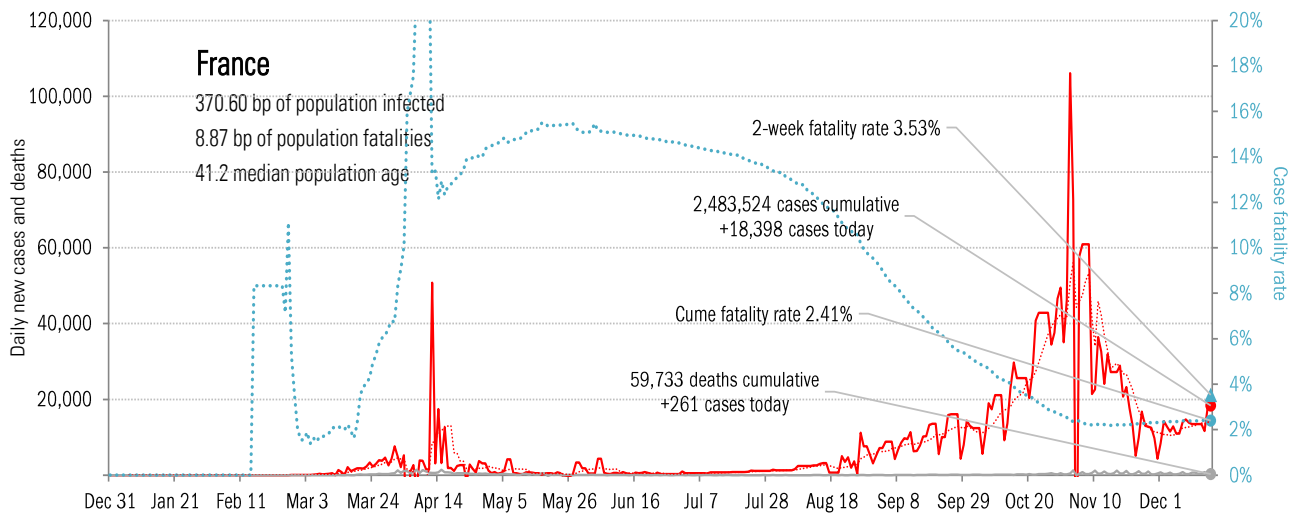
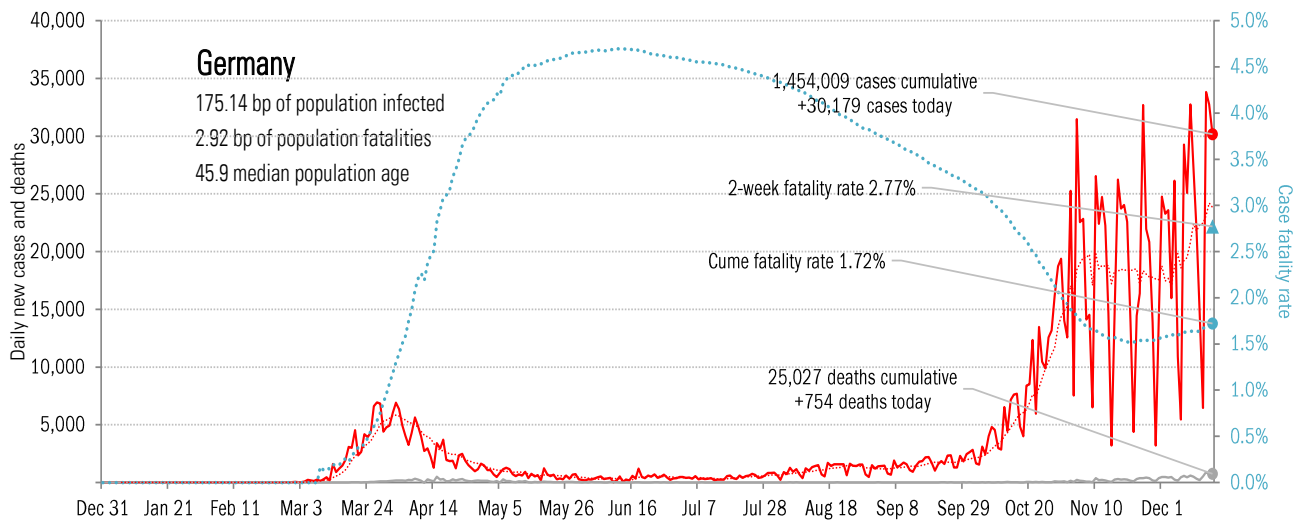
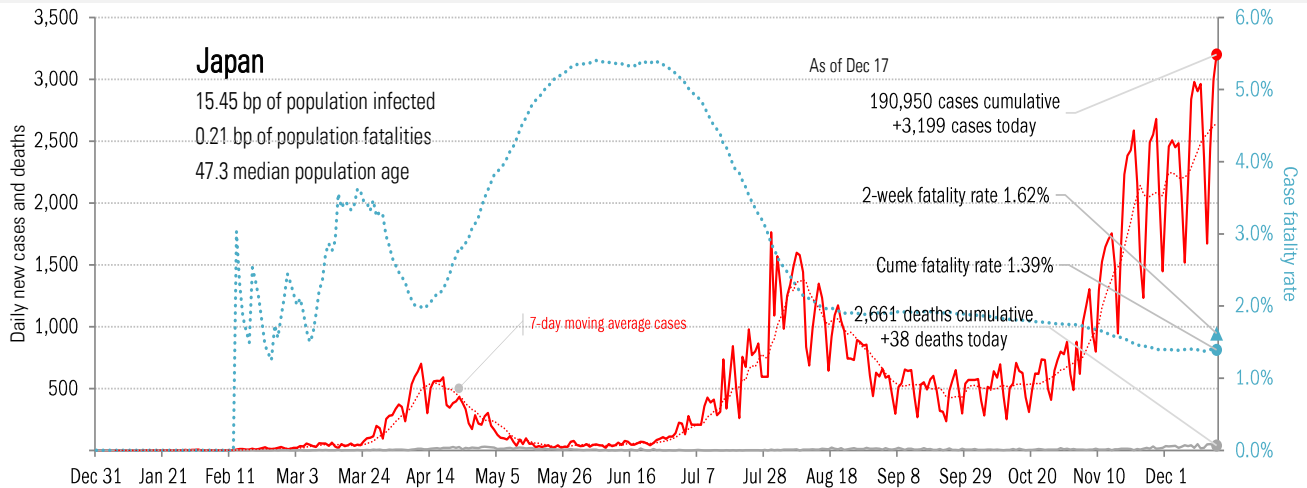
Source: [Covid Tracking Project](#), TrendMacro calculations

Patient zero... and then everyone else



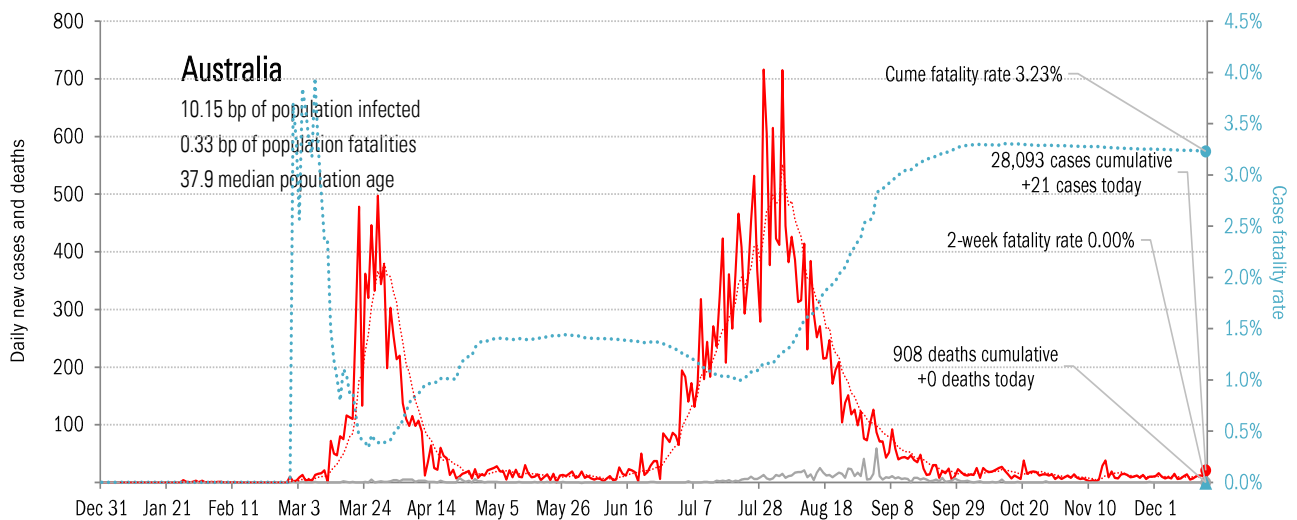
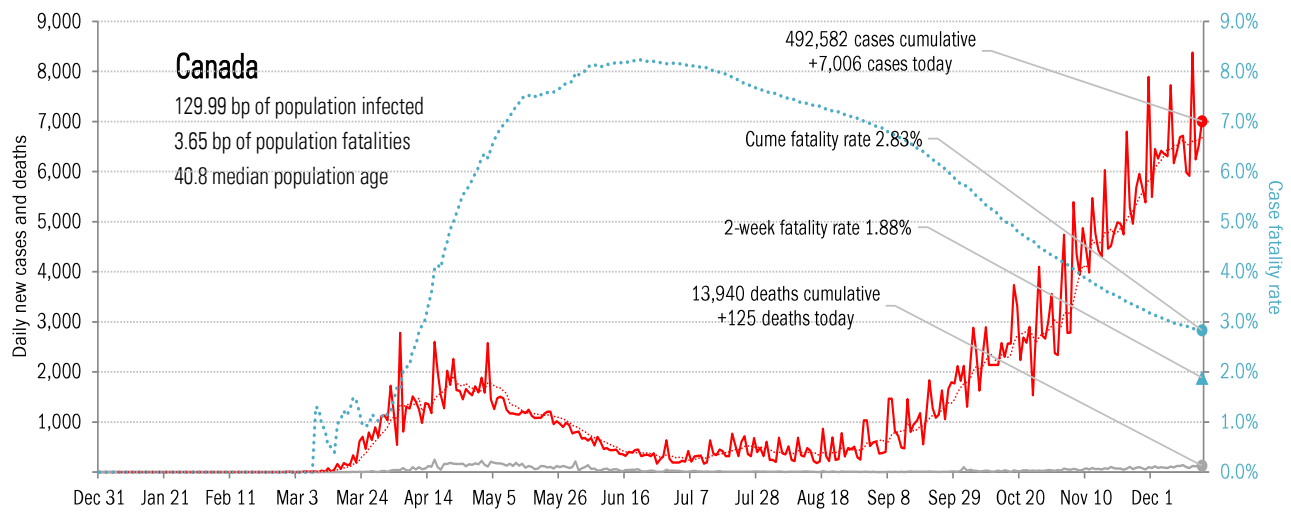
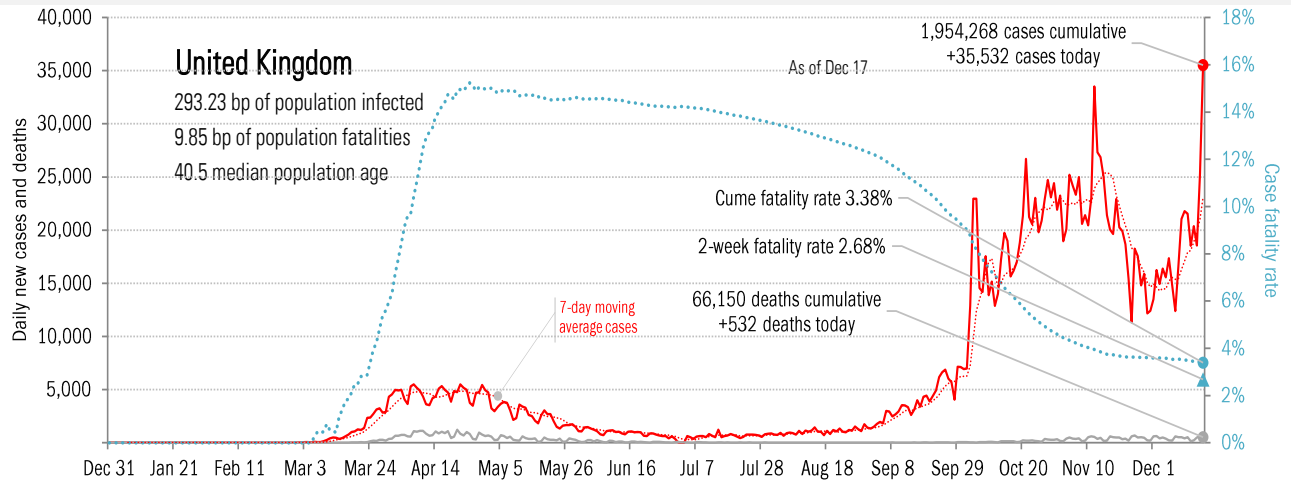
Source: [Johns Hopkins](#), [Covid Tracking Project](#), TrendMacro calculations

Impact in the largest economies



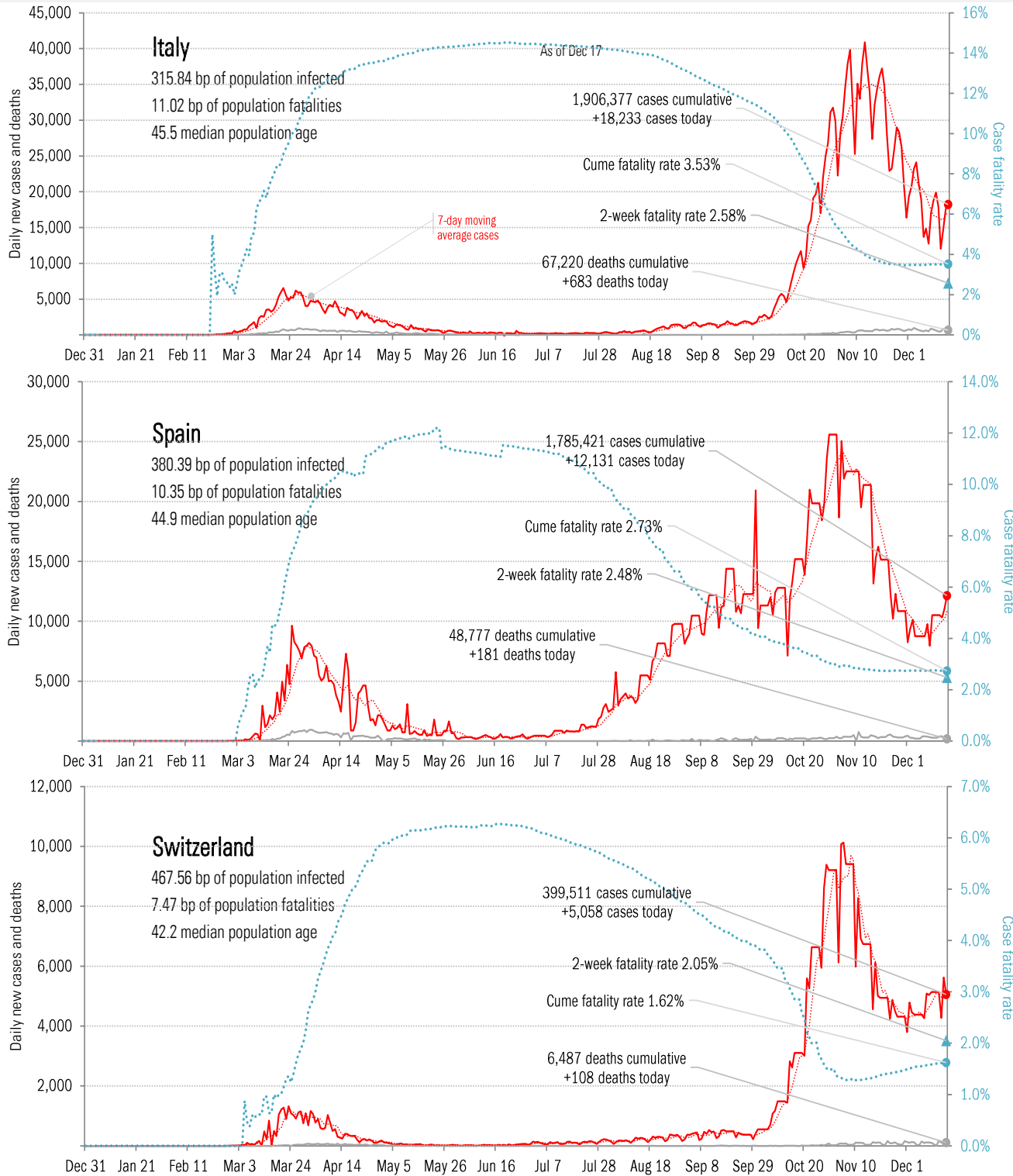
Source: [Johns Hopkins](#), TrendMacro calculations

Impact in The Anglosphere



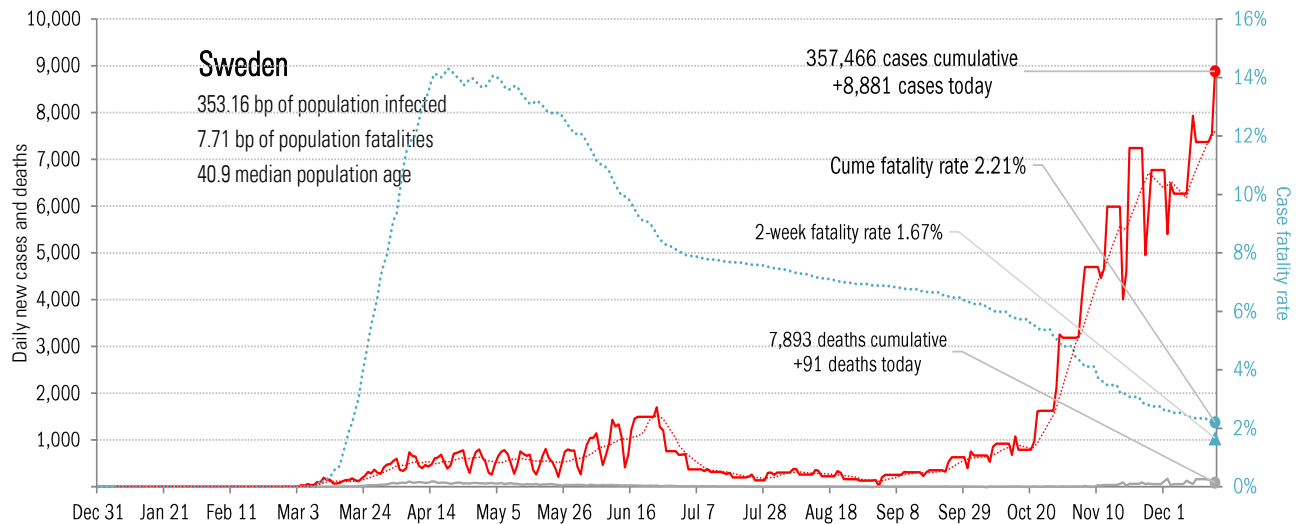
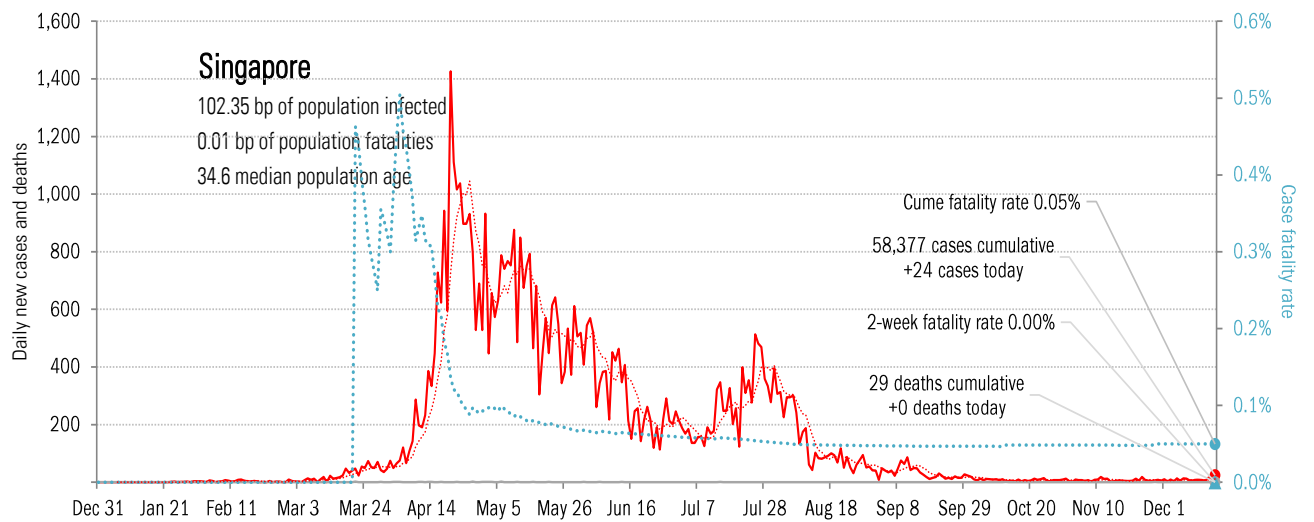
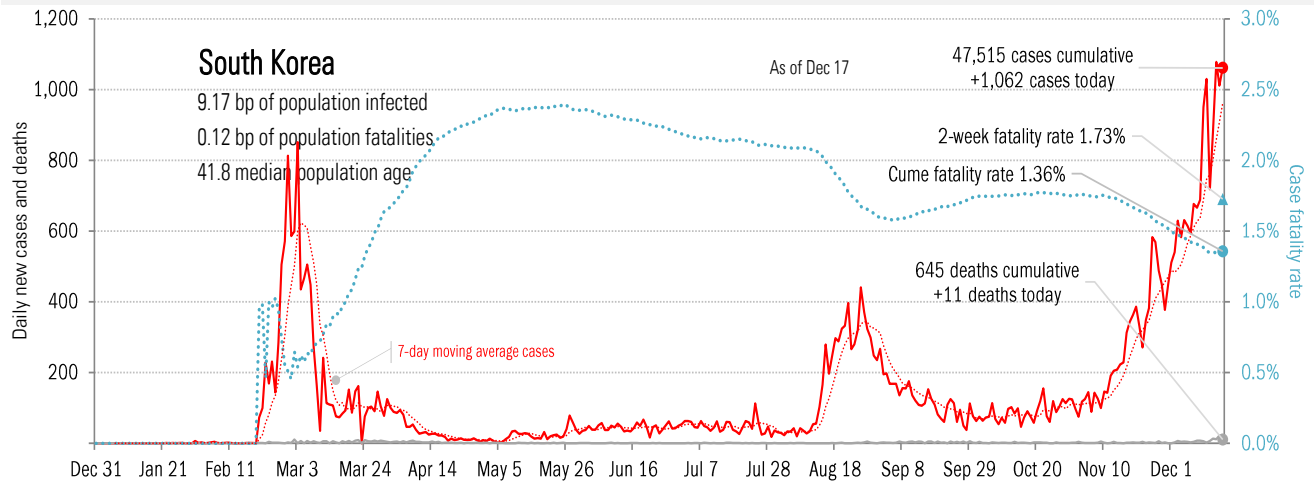
Source: [Johns Hopkins](#), TrendMacro calculations

Impact in continental Europe



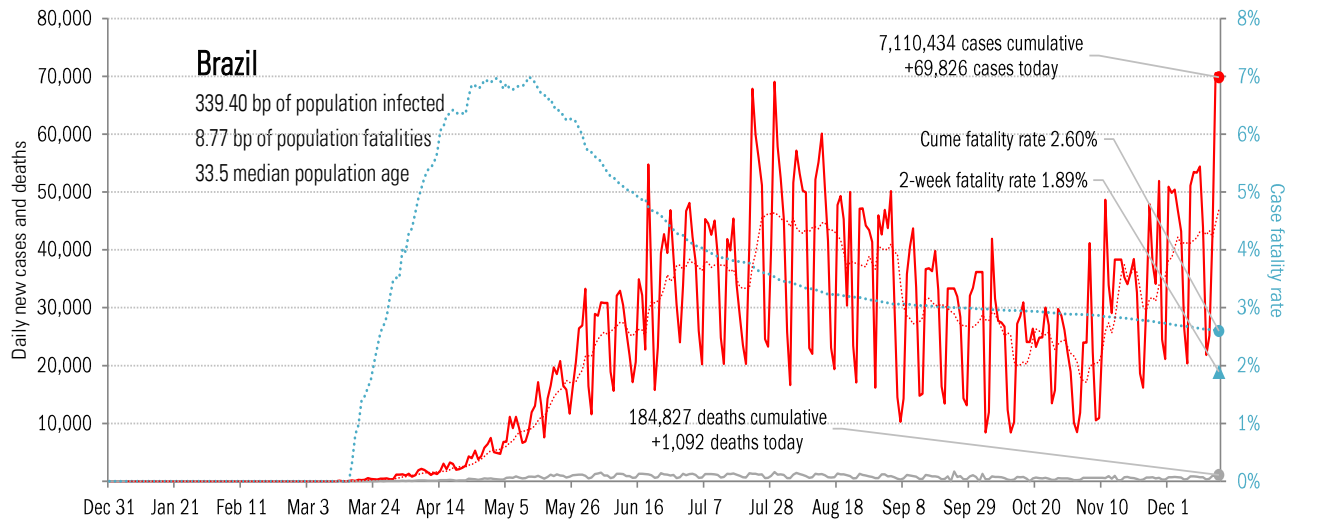
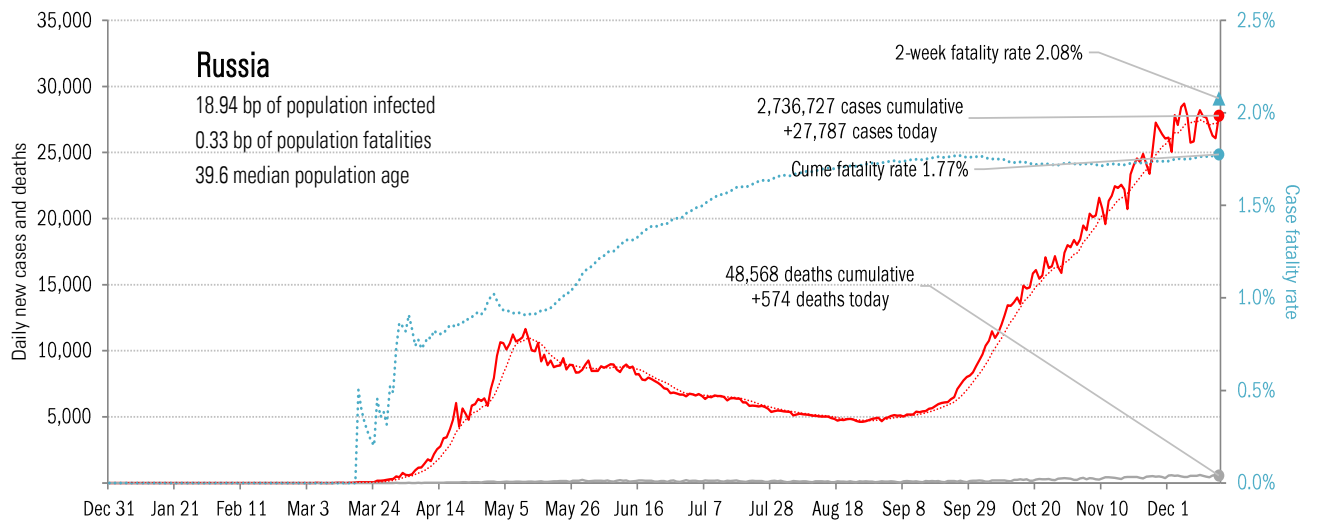
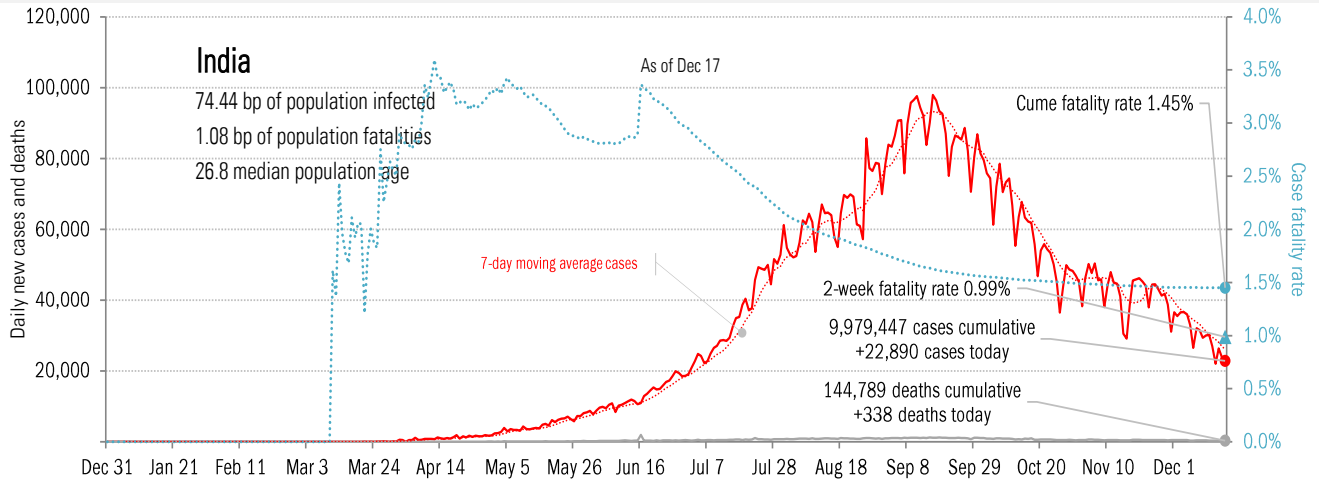
Source: [Johns Hopkins](#), TrendMacro calculations

Impact in other hot-spots



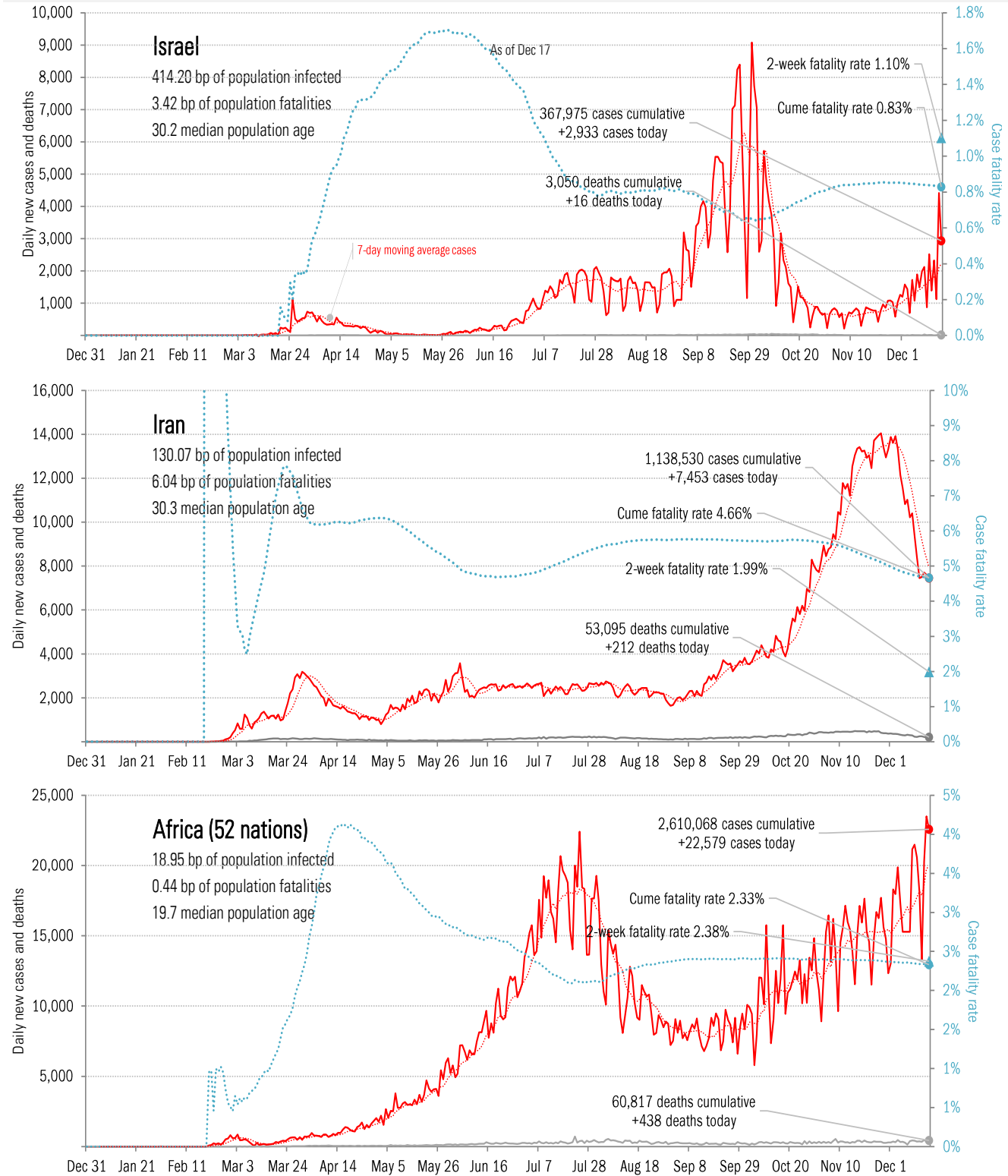
Source: [Johns Hopkins](#), TrendMacro calculations

Impact in the BRICs ex-China



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

Impact in the Middle East and Africa



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