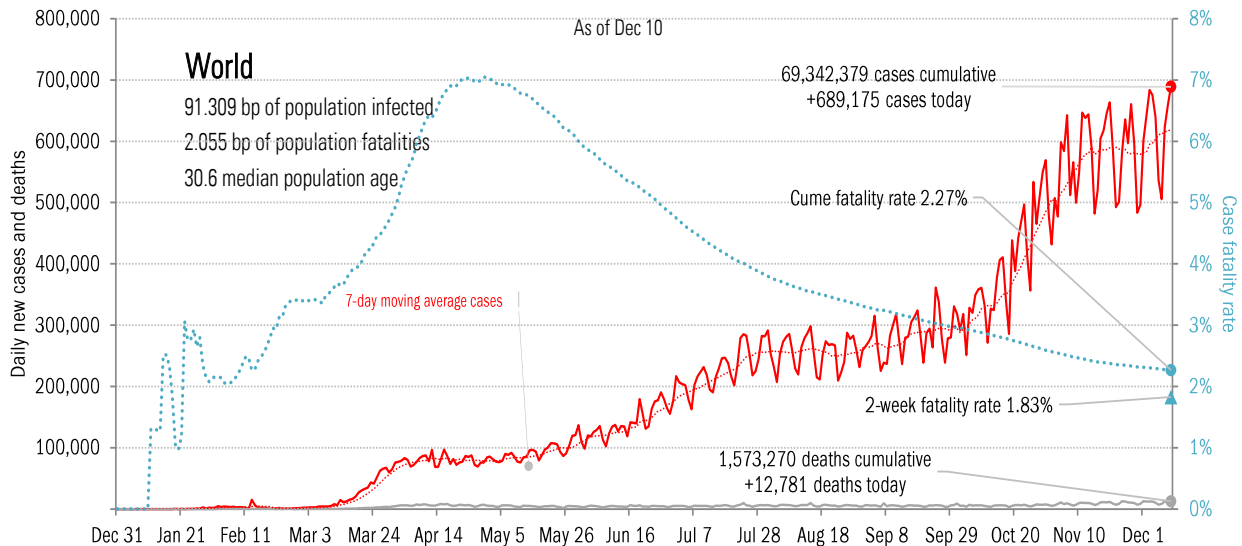
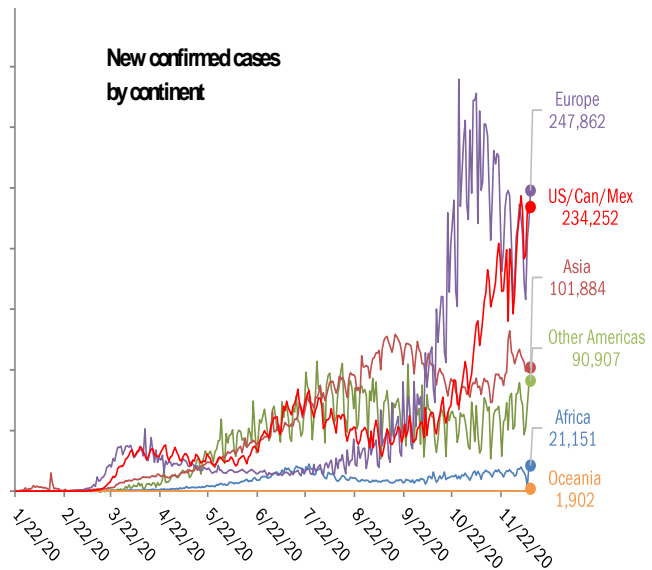


## Data Insights: Covid-2019 Monitor

Friday, December 11, 2020

### The global scorecard

The worst ten countries			
New cases		New Deaths	
United States	+215,669	United States	+3,067
Brazil	+53,347	Italy	+887
Germany	+32,734	Brazil	+770
Turkey	+30,424	Mexico	+671
India	+29,373	Germany	+604
Russia	+27,562	Russia	+549
United Kingdom	+21,066	United Kingdom	+516
Italy	+16,998	Poland	+470
Poland	+13,750	India	+413
Ukraine	+13,736	Spain	+325
<b>+454,659</b>		<b>+8,272</b>	
World	+689,175	World	+12,781
Top ten	66%	Top ten	65%



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

#### For more information contact us:

Donald Luskin: 312 273 6766 [don@trendmacro.com](mailto:don@trendmacro.com)

Thomas Demas: 704 552 3625 [tdemas@trendmacro.com](mailto: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

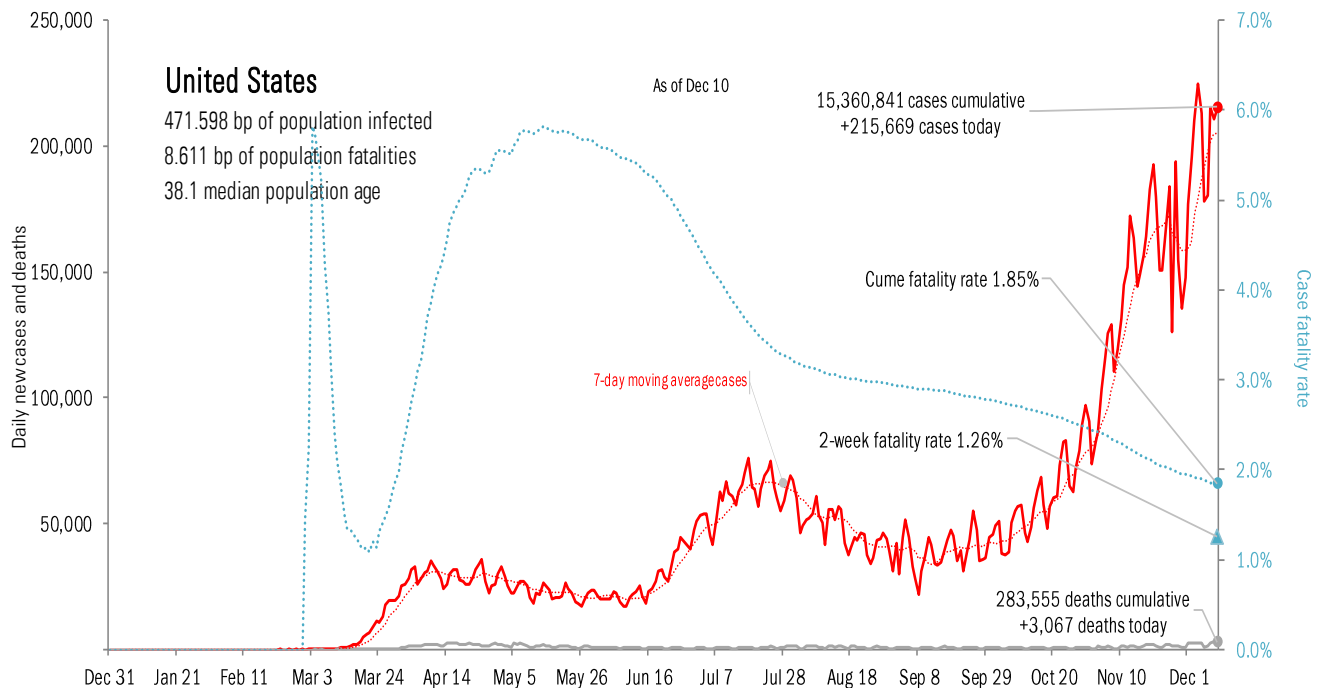
## The ten worst US states

New cases		New Deaths		New in hospital		Cume cases		Cume deaths		Cume in hospital	
CA	+29,677	PA	+248	CA	+512	CA	1,450,235	NY	27,498	NY	89,995
TX	+12,458	TX	+244	NY	+171	TX	1,296,132	TX	23,325	FL	58,226
PA	+11,972	IL	+232	AZ	+121	FL	1,076,547	CA	20,463	NJ	43,259
CH	+11,738	CA	+220	WA	+63	IL	823,531	FL	19,851	GA	37,017
IL	+11,101	MI	+194	MO	+62	NY	743,242	NJ	17,608	CH	31,142
FL	+11,071	FL	+135	AL	+59	CH	531,850	IL	14,845	IN	29,743
NY	+10,178	CH	+111	MS	+45	GA	462,175	PA	12,010	AZ	29,335
IN	+6,518	IA	+99	MA	+31	PA	457,289	MA	11,209	AL	27,618
MI	+6,302	IN	+97	WV	+29	WI	456,889	MI	10,900	MD	22,833
GA	+6,062	NY	+94	PA	+25	MI	454,720	GA	9,975	MN	19,029
<b>+117,077</b>		<b>+1,674</b>		<b>+1,118</b>		<b>7,752,610</b>		<b>167,684</b>		<b>388,197</b>	
All states	+215,669	All states	+3,067	All states	+553	All states	15,360,841	All states	283,555	All states	603,554
Top ten	54%	Top ten	55%	Top ten	202%	Top ten	50%	Top ten	59%	Top ten	64%

Some states not reporting

## Five most improved US states

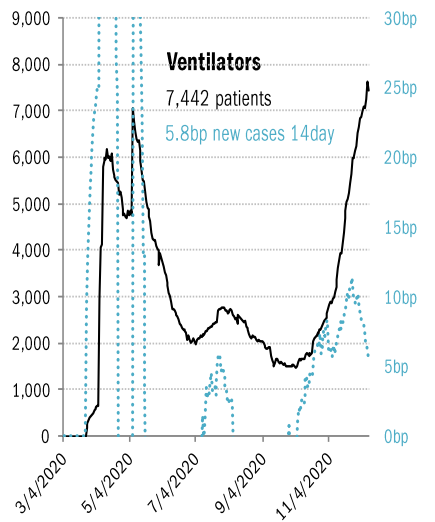
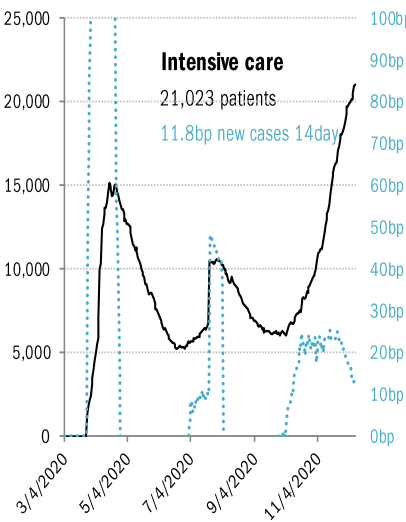
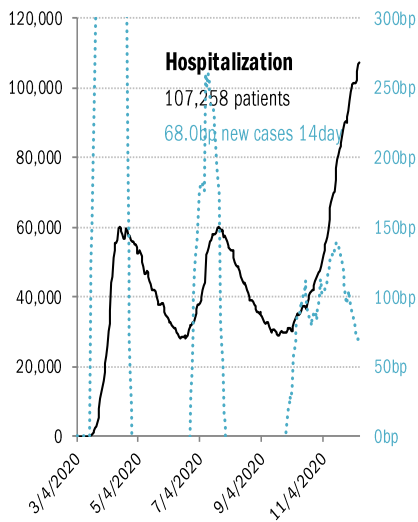
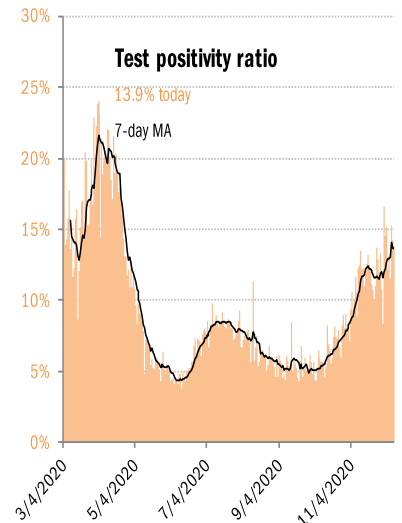
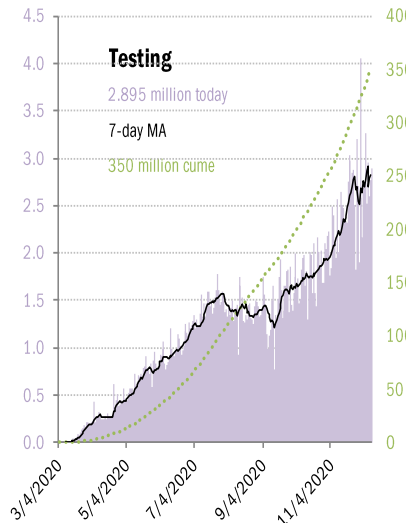
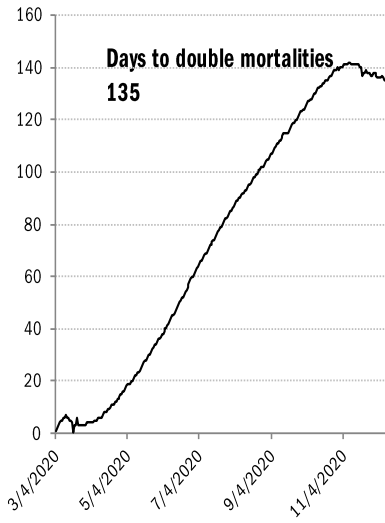
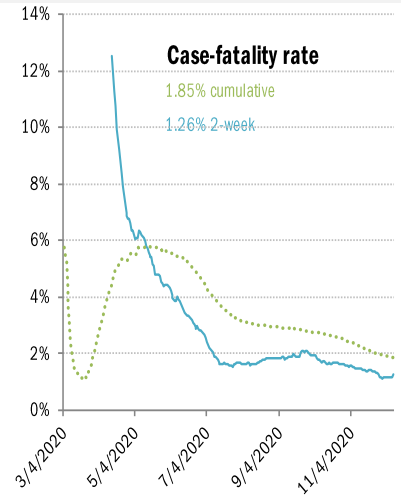
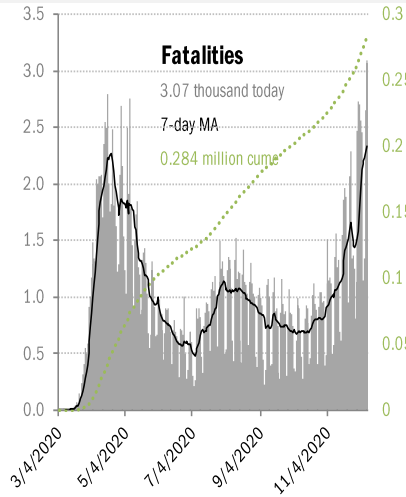
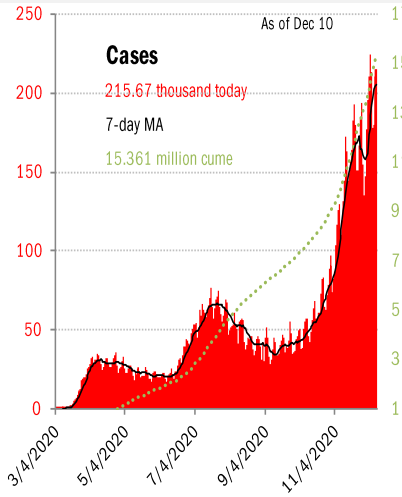
Fewer daily cases		Fewer new deaths		Fewer new hospitalizations		Most recoveries	
KS	-5,778	KS	-85	KS	-486	MA	+17,412
TN	-2,202	CO	-77	PA	-266	TX	+12,181
LA	-1,937	NJ	-50	IL	-231	CH	+10,040
CA	-1,174	MA	-47	CH	-105	PA	+6,944
MN	-1,017	AZ	-35	VA	-101	WI	+6,317



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

# US deep-dive

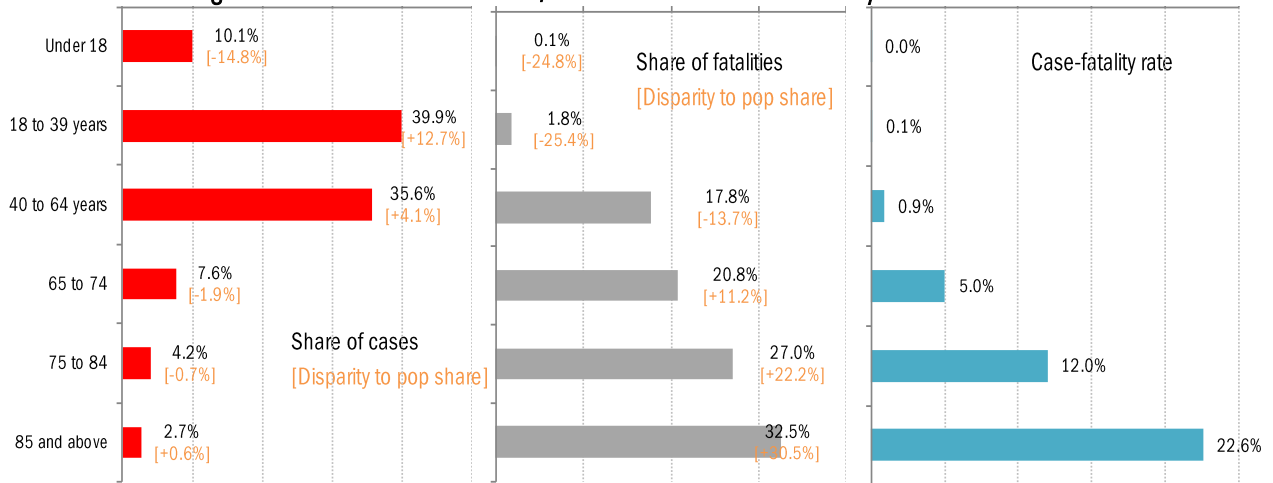
National and state-by-state data do not line up because of different sources



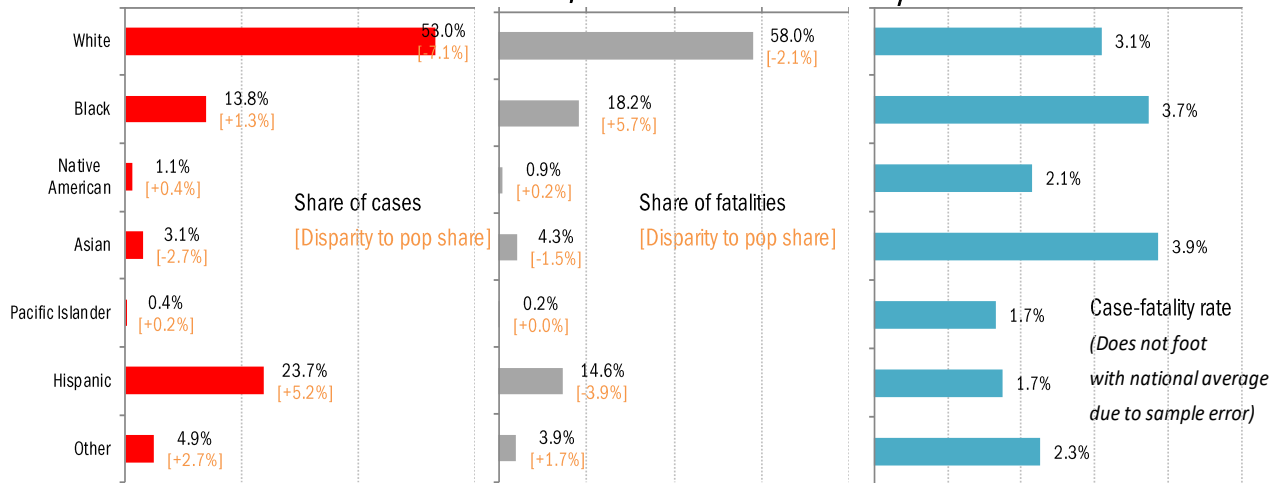
Source: [Covid Tracking Project](https://covidtracking.com/), TrendMacro calculations

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

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

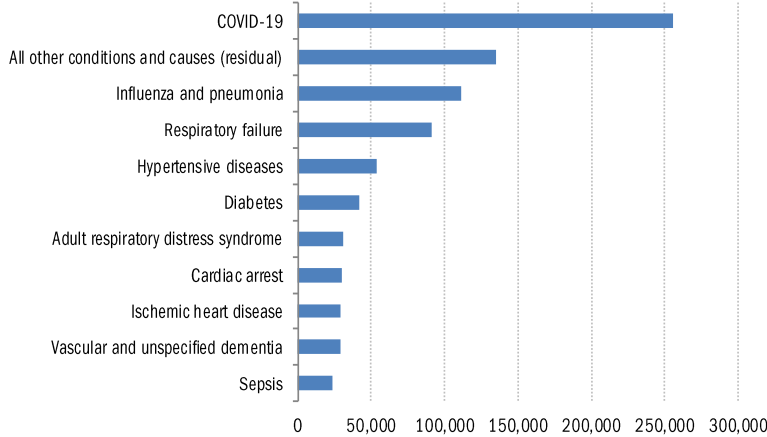


## Racial distribution of US cases, fatalities and case-fatality rates



## 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 2.9 additional conditions or causes per death.

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

## Recommended reading

### [A Shot \(Instead of Two\) at Saving Lives](#)

Michael Segal  
*Wall Street Journal*  
December 10, 2020

### [California city redesignates existing outdoor dining locations as 'public seating' to help small businesses, restaurants](#)

Lucas Manfredi  
*Fox Business*  
December 8, 2020

### [Where Is the Data to Support Closing Outdoor Dining in LA? It's Complicated](#)

Farley Elliott  
*Eater*  
December 1, 2020

### [L.A. Restaurant Owner Fights Back Against Government's COVID-19 Double Standards](#)

Patrice Onwuka  
*Independent Women's Forum*  
December 7, 2020

### [Combined Diagnostics, Modeling Population Heterogeneity by Providing Personalized COVID Diagnostics](#)

Freddy Bunbury, Nina Miolane, Claire Donnat  
*C3.ai COVID-19 Grand Challenge*  
December 2020

### [George W. Bush and the Covid Vaccine](#)

Karl Rove  
*Wall Street Journal*  
December 9, 2020

### [Ten Fatal Errors: Scientists Attack Paper That Established Global PCR Driven Lockdown](#)

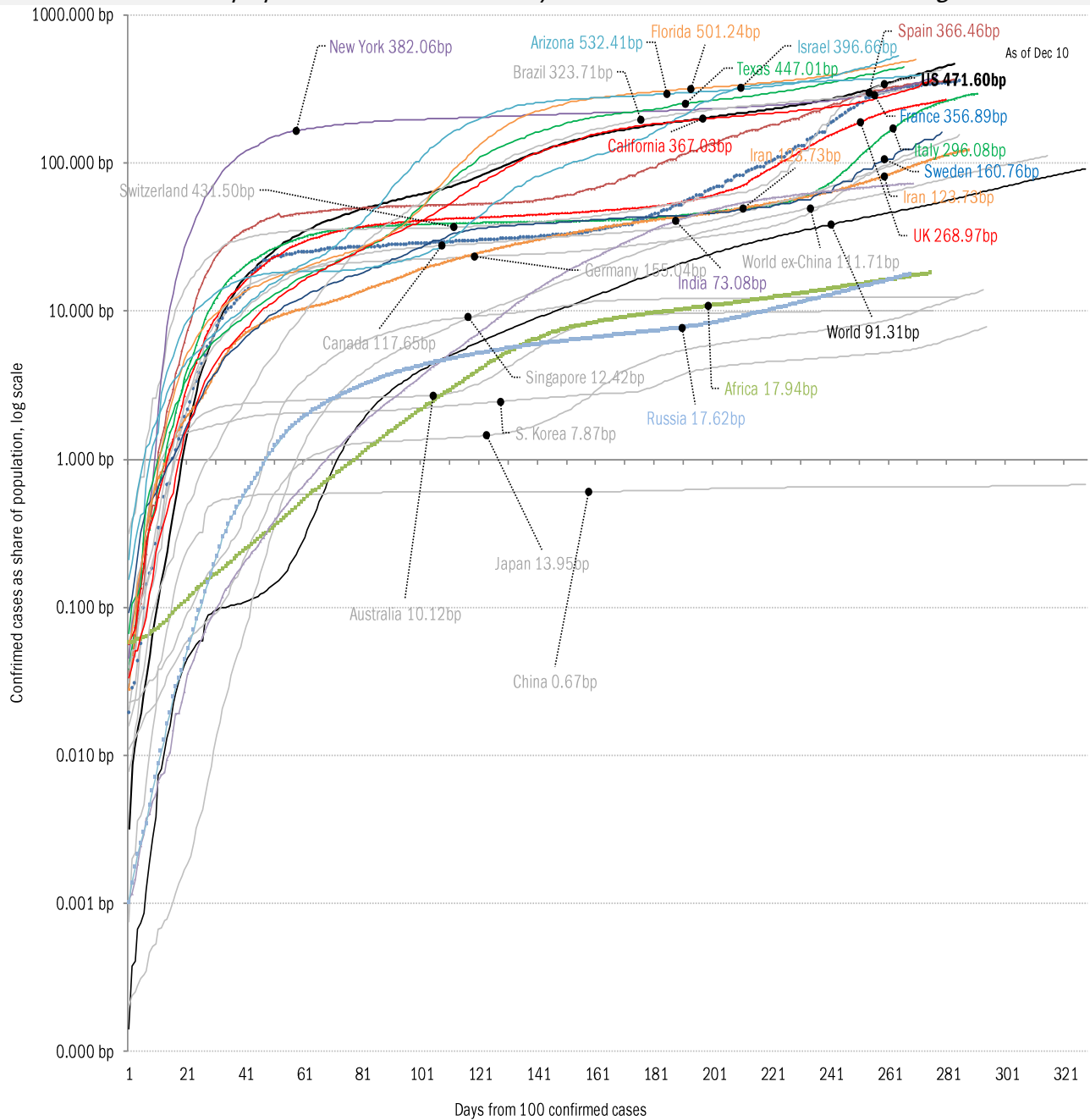
Celia Garber  
*Insider DC*  
December 3, 2020

## Meme of day



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

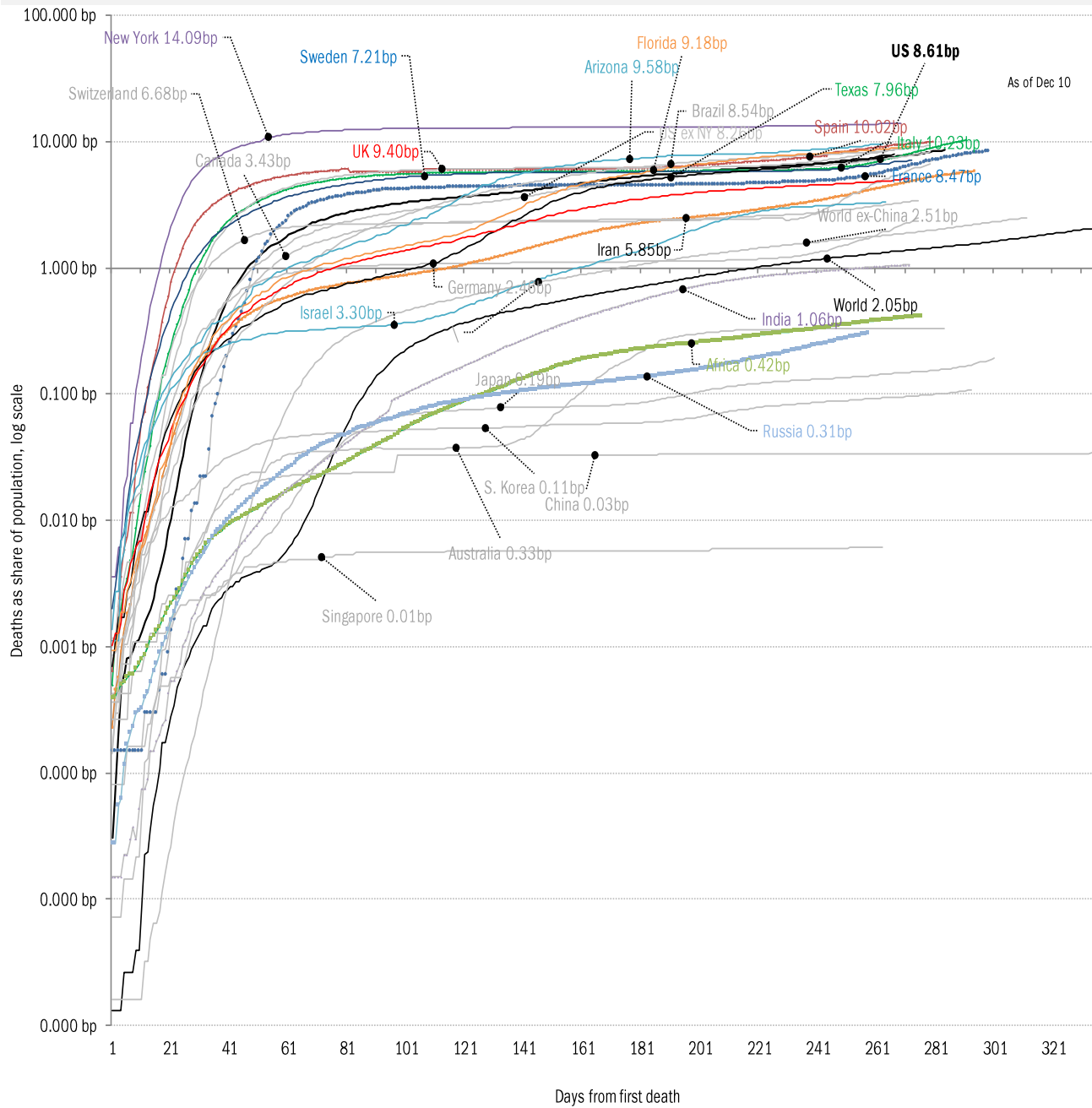
The coronavirus case accelerometer... tracking the world's infection curves  
*Share of infected population from first day with 100 confirmed cases, log scale*



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

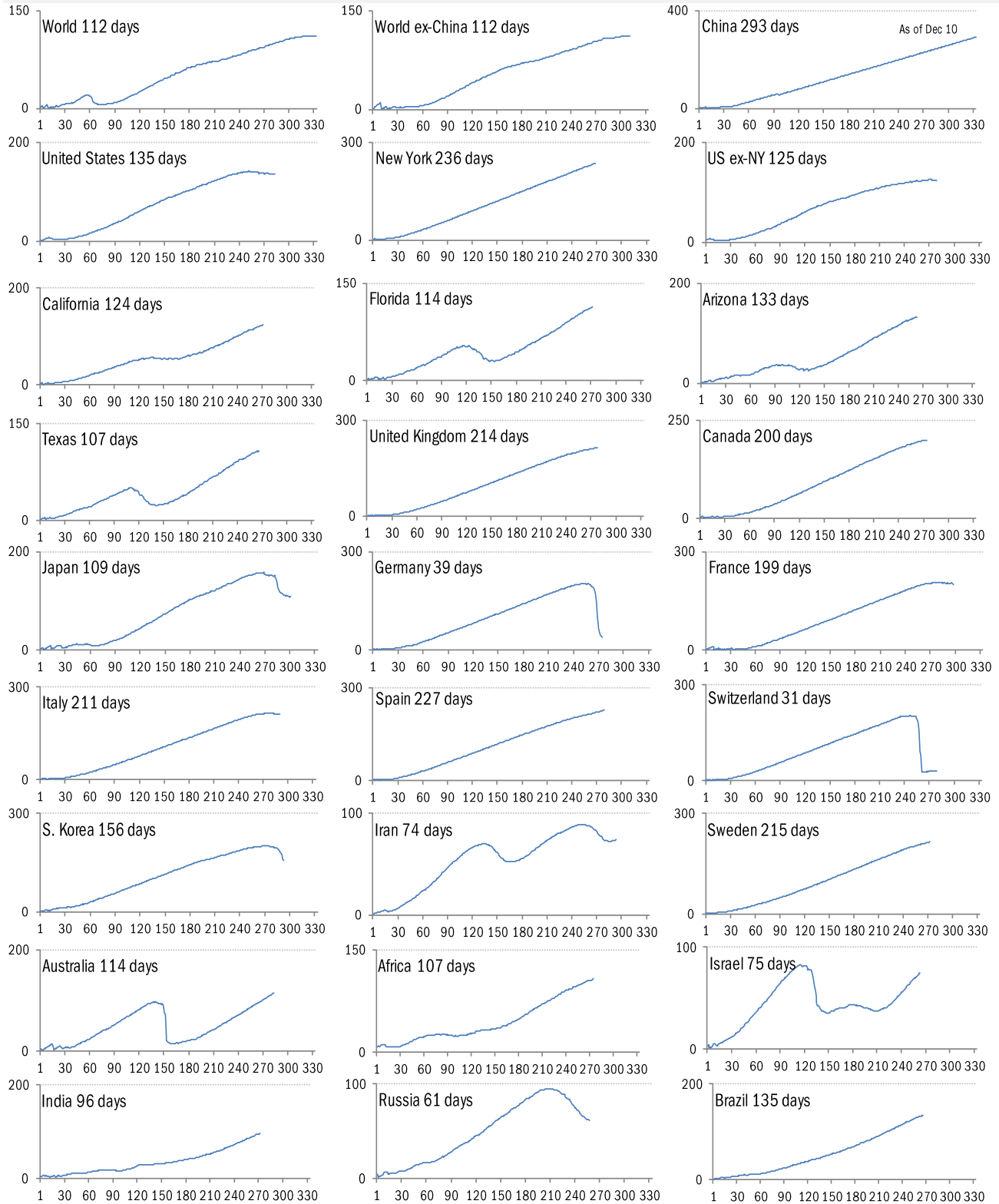


Source: [Johns Hopkins](#), [Covid Tracking Project](#), TrendMacro calculations

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

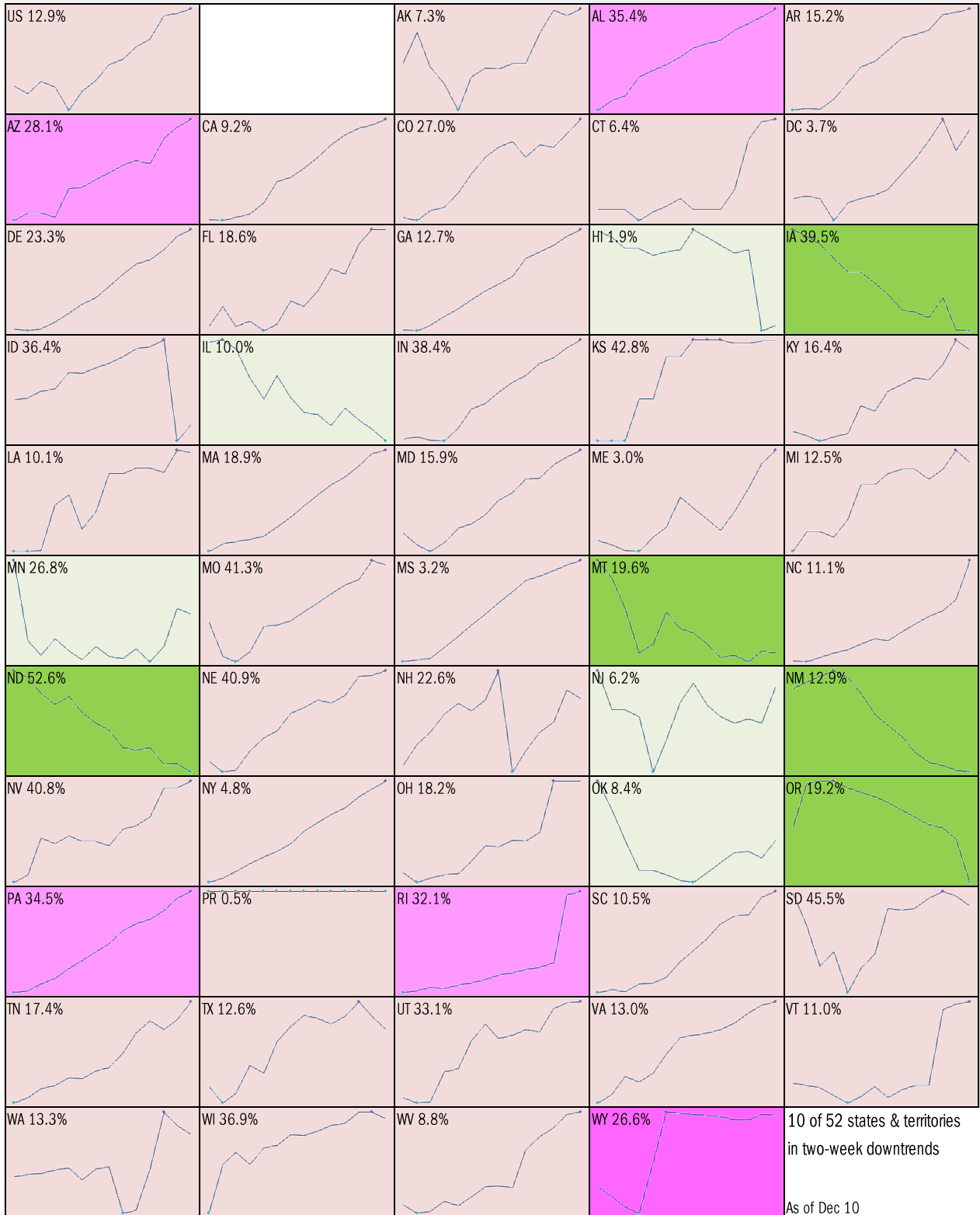


Source: [Covid Tracking Project](#), TrendMacro calculations

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



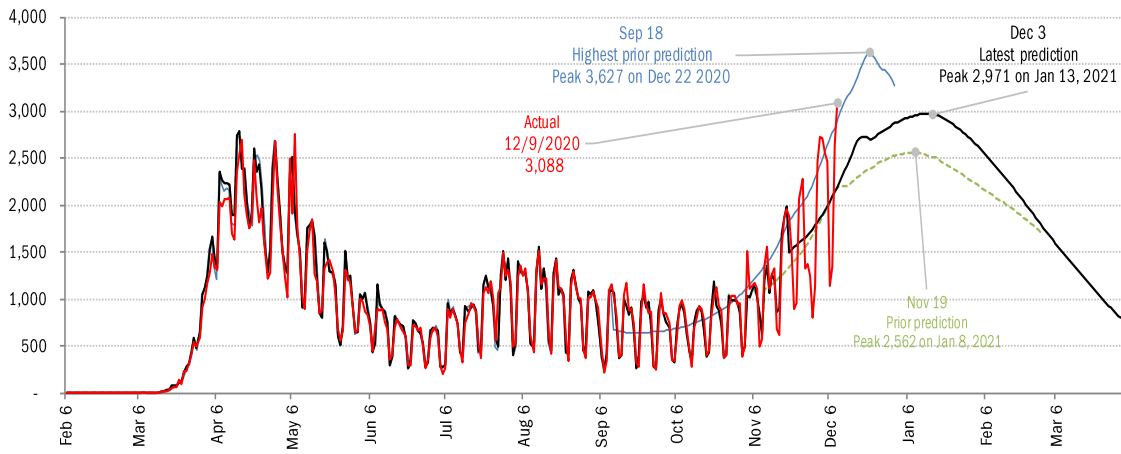
Source: [Covid Tracking Project](#), TrendMacro calculations

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

## New daily fatalities

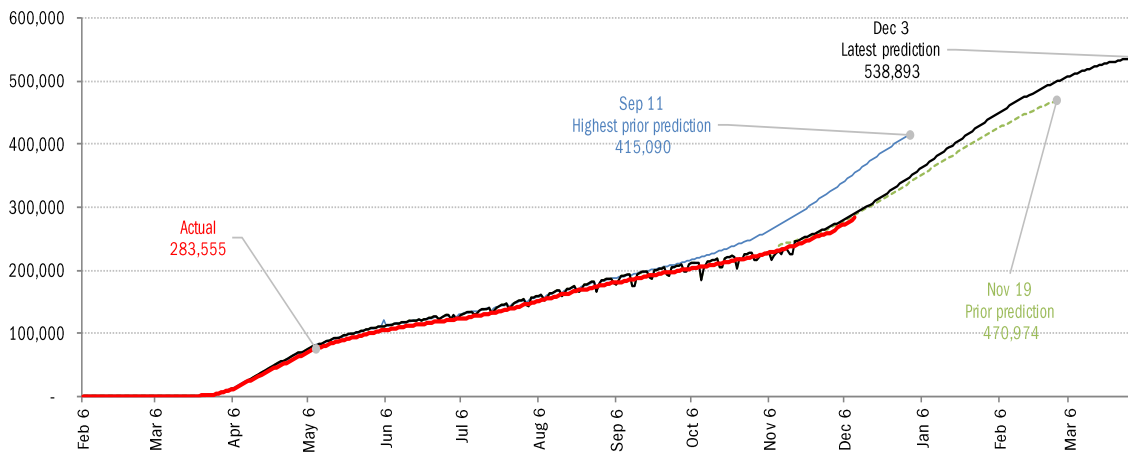
As of Dec 10

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

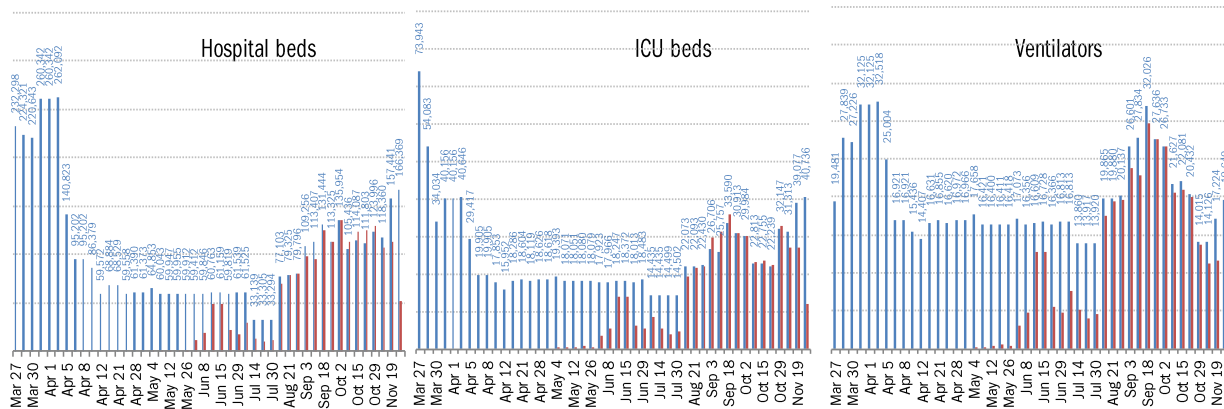


## Cumulative fatalities

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

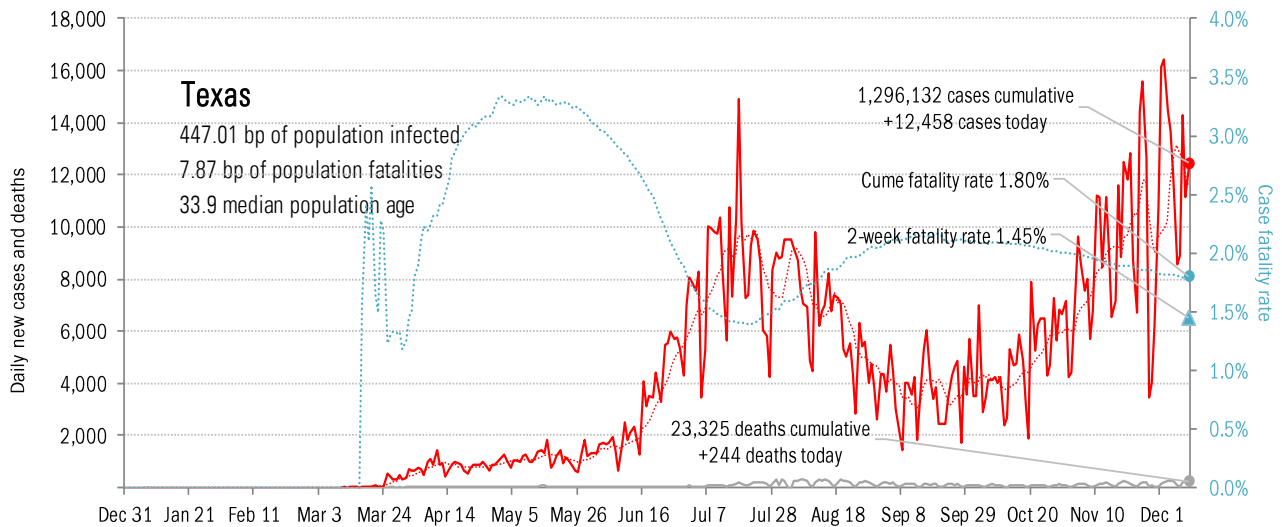
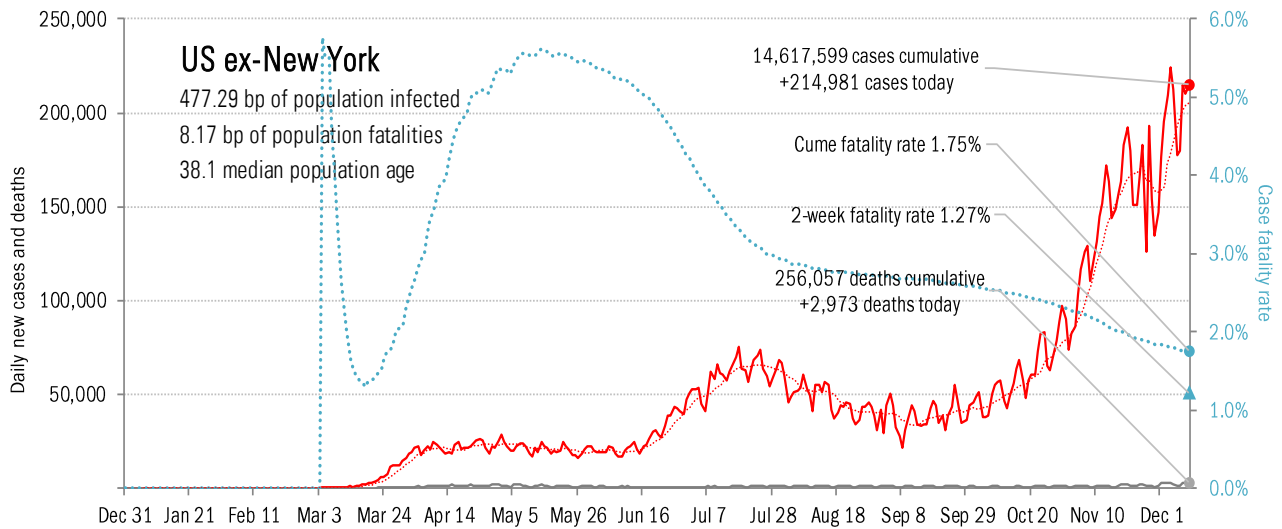
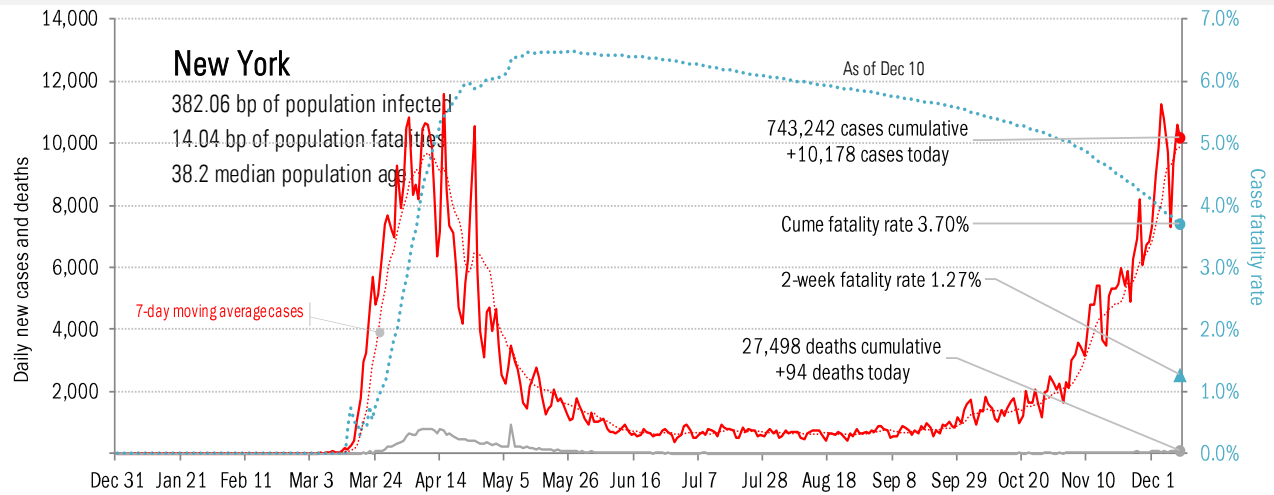


## Healthcare system stress, peak and ultimate estimated at each model revision



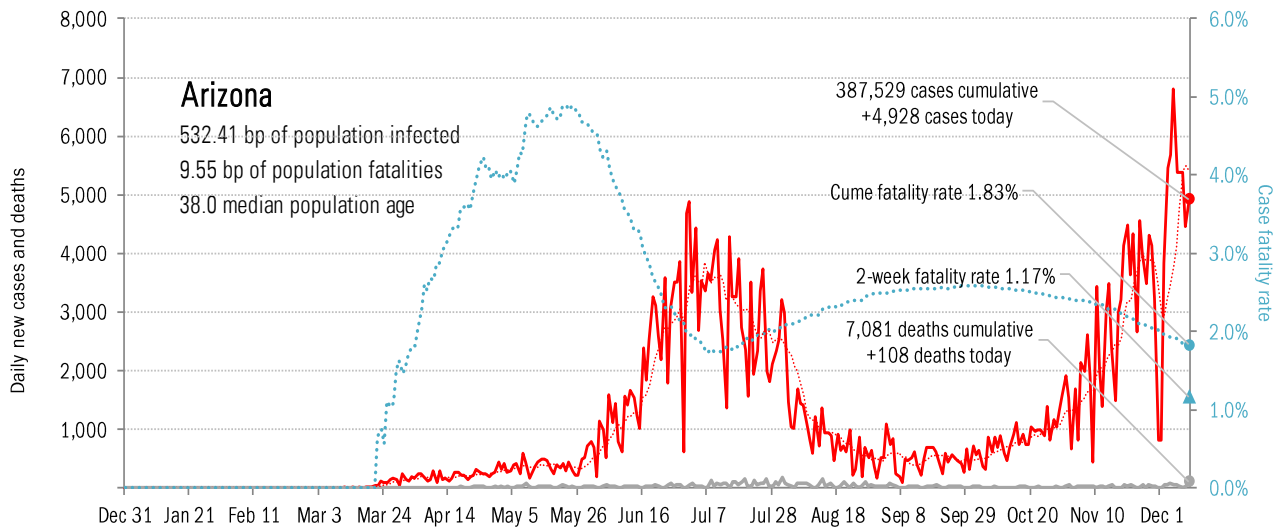
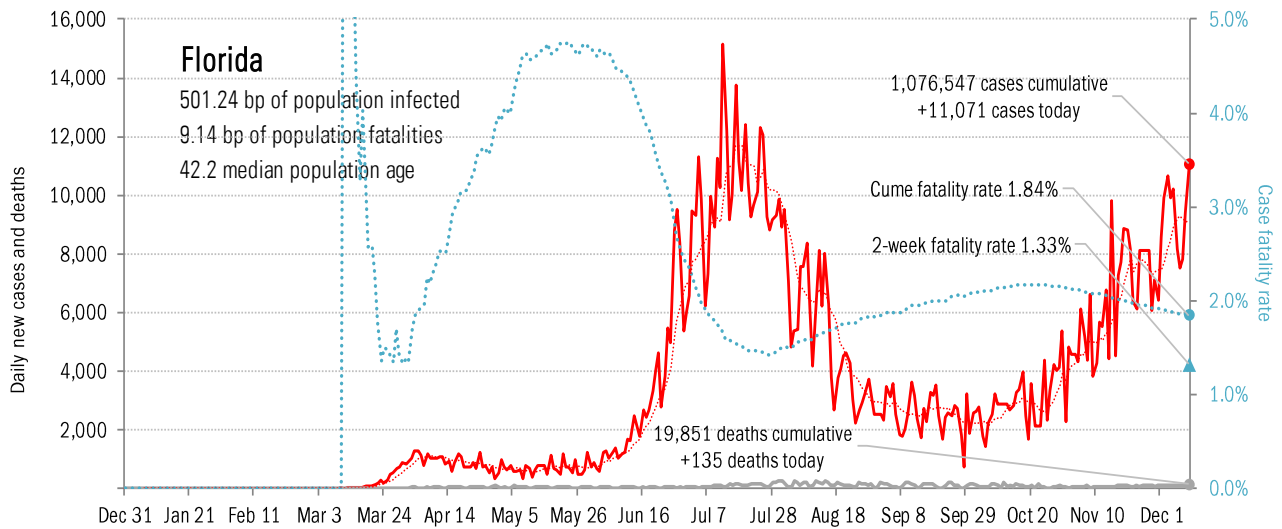
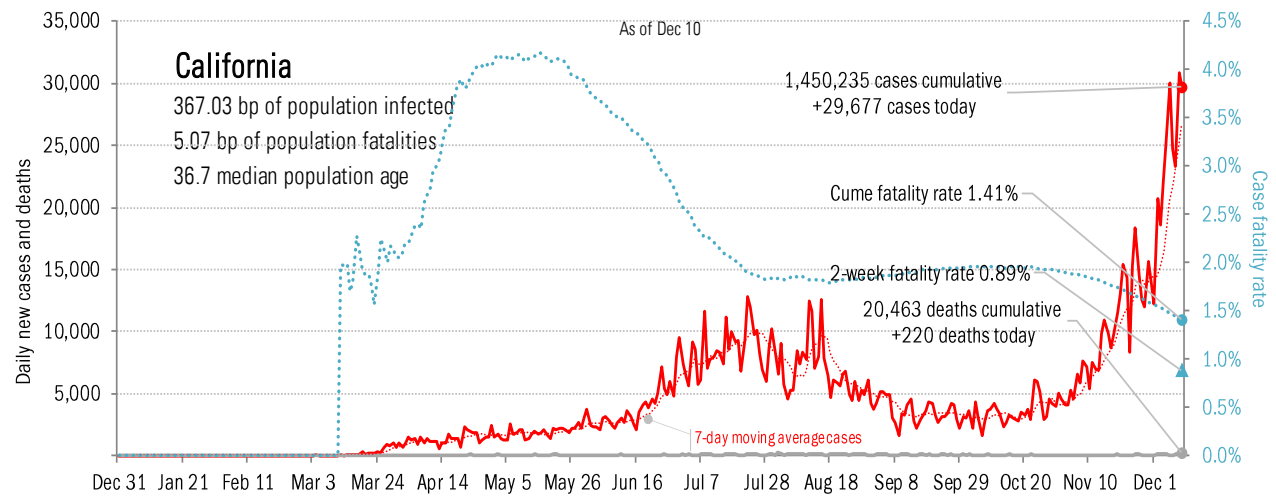
Source: [IHME Covid Tracking Project](#), TrendMacro calculations

From Ground Zero to the Rio Grande



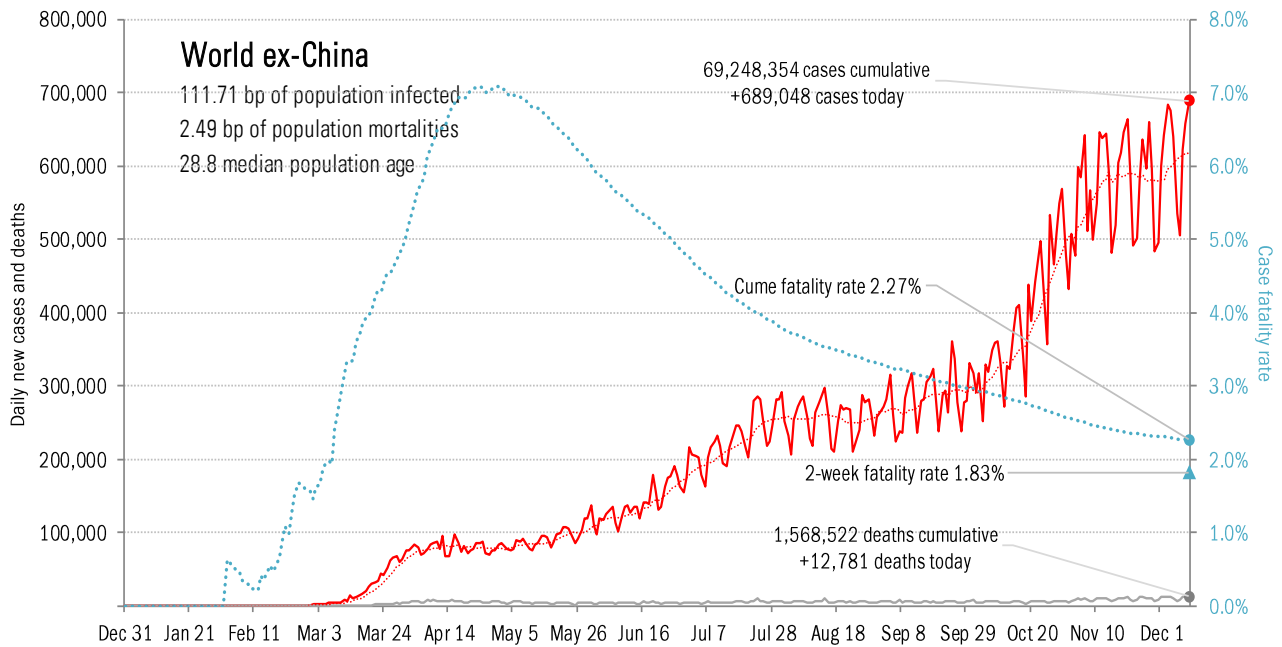
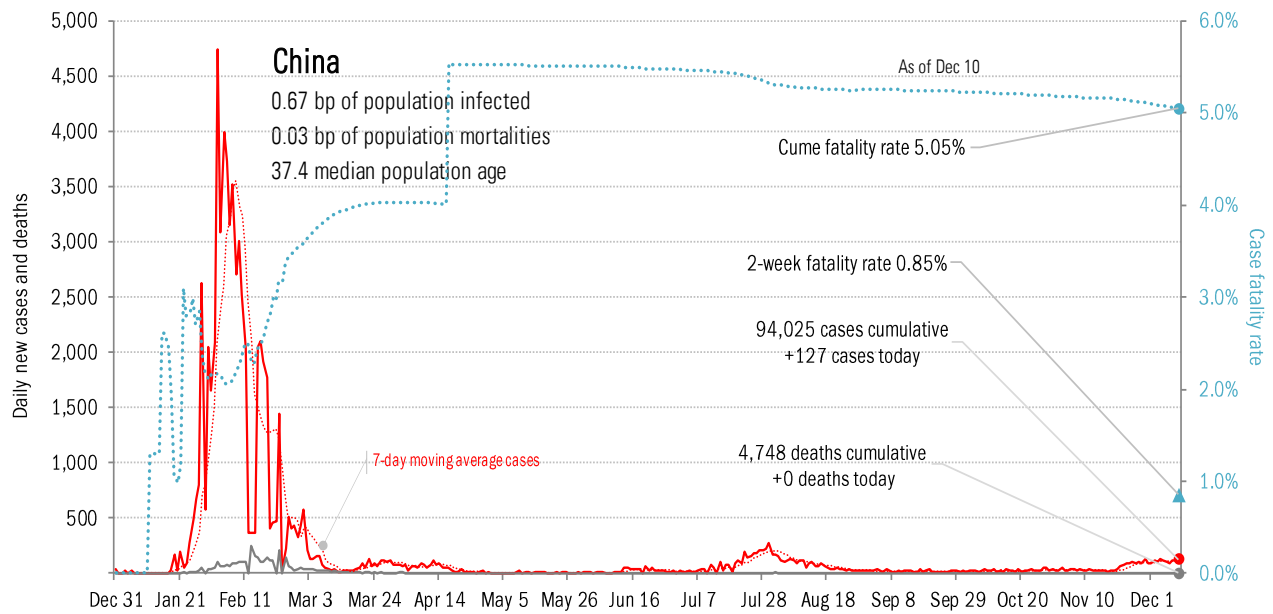
Source: [Covid Tracking Project](#), TrendMacro calculations

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



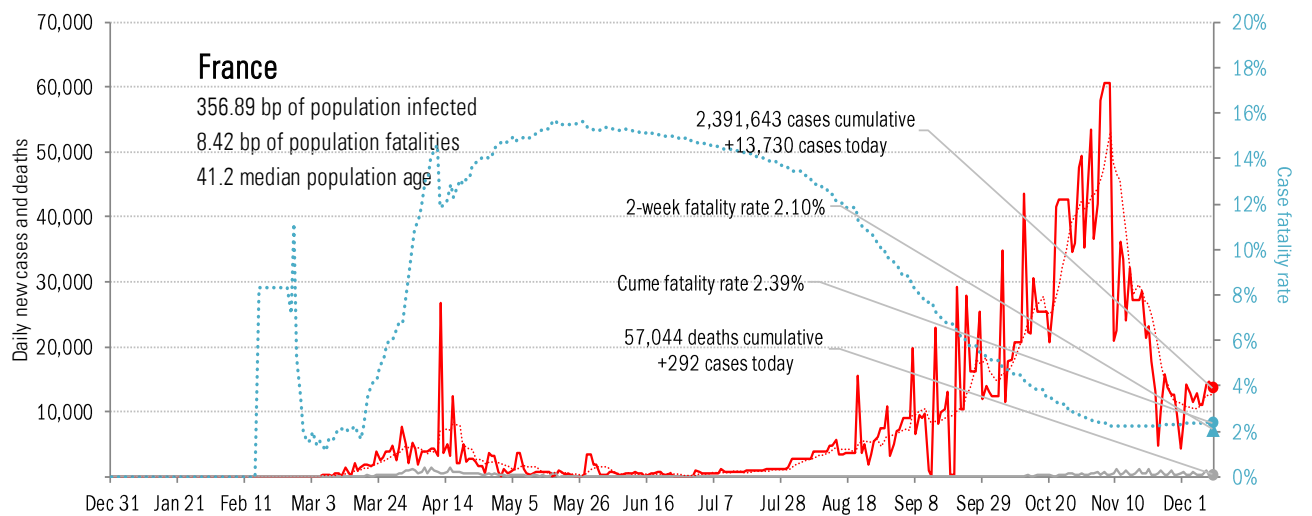
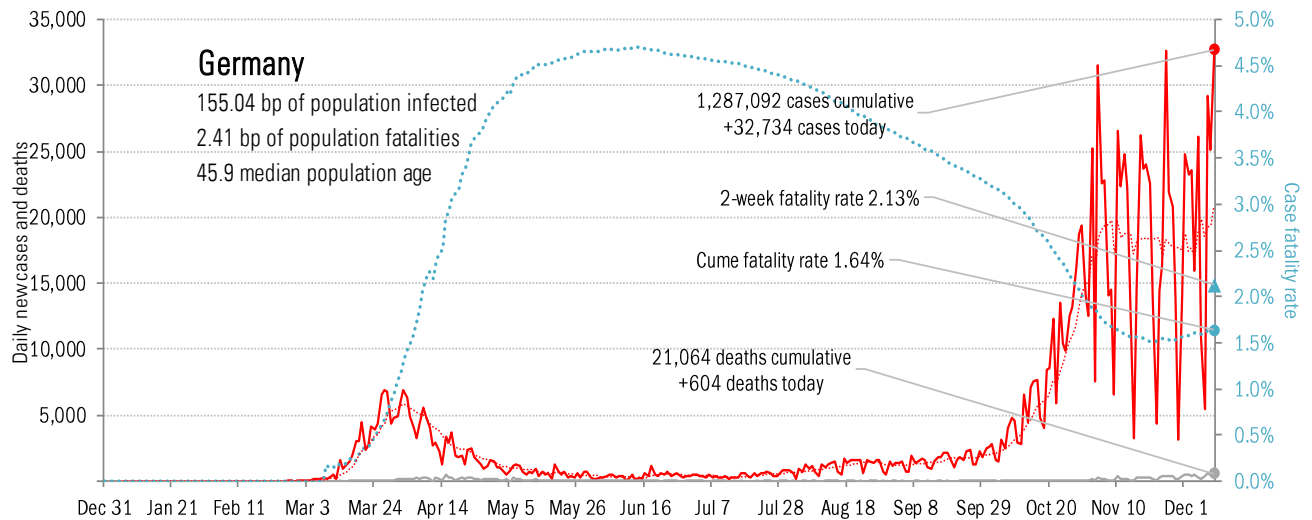
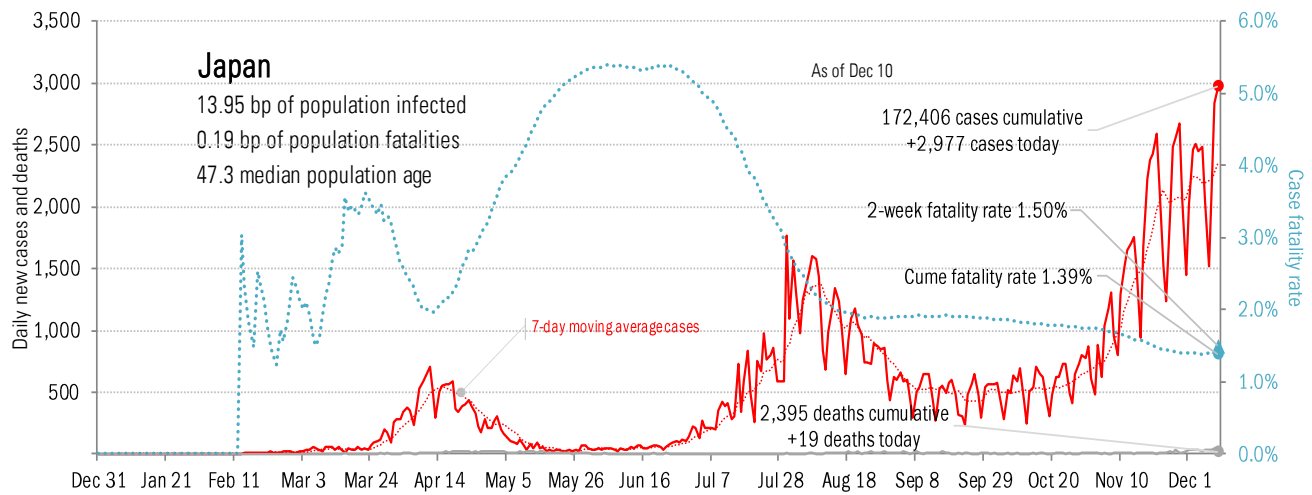
Source: [Covid Tracking Project](#), TrendMacro calculations

Patient zero... and then everyone else



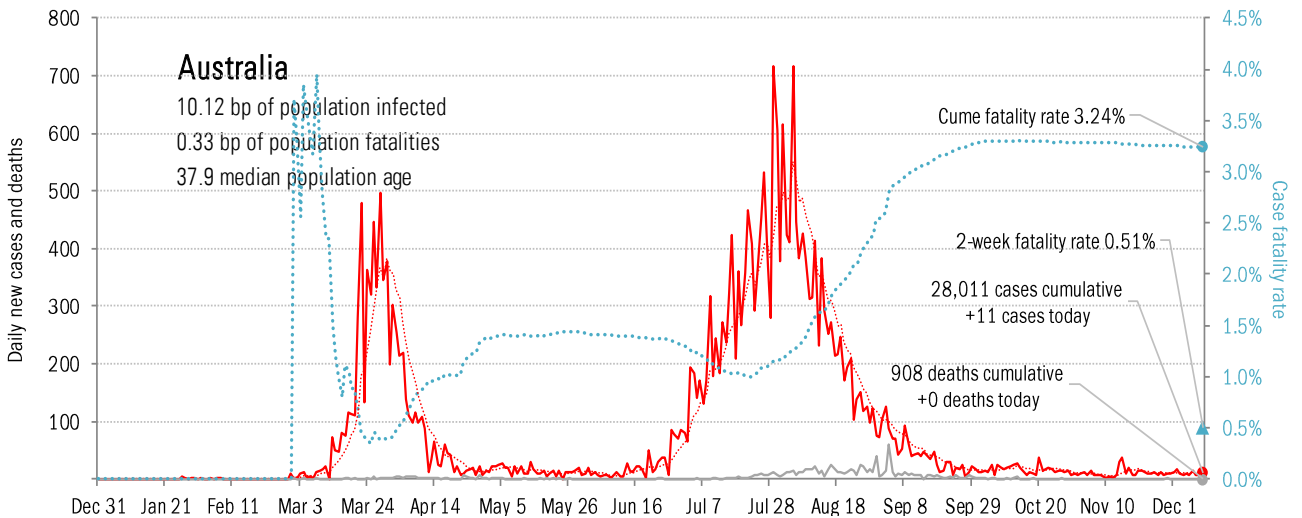
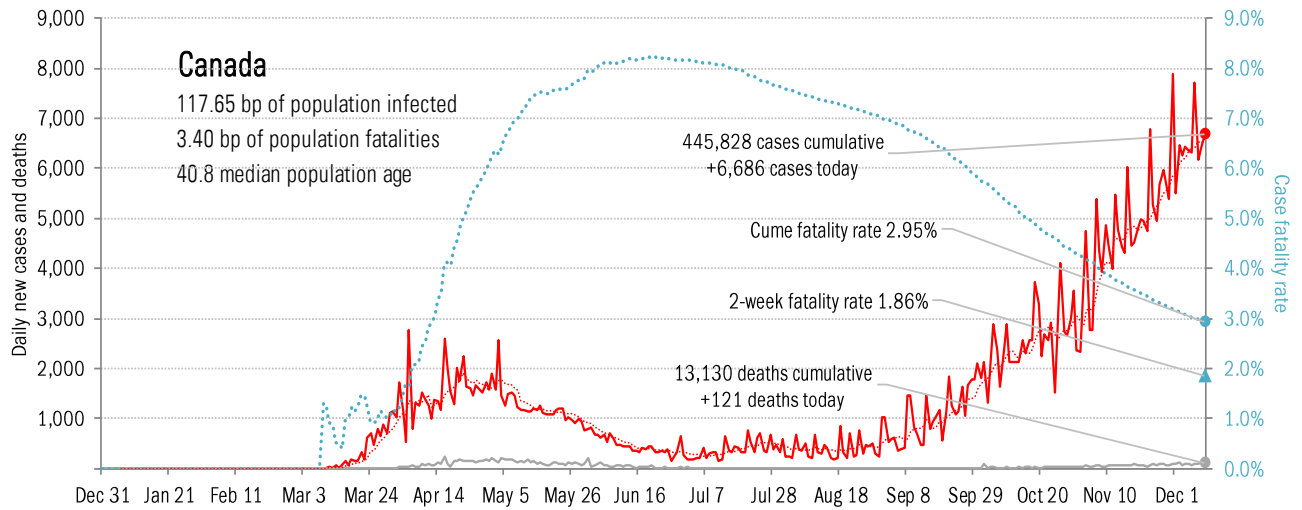
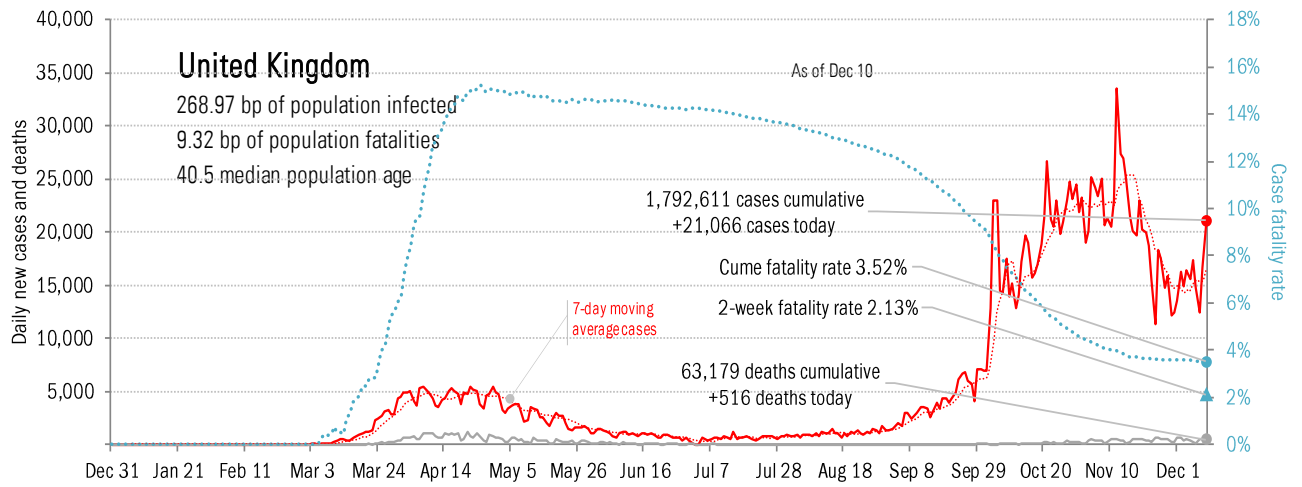
Source: [Johns Hopkins](#), [Covid Tracking Project](#), TrendMacro calculations

## Impact in the largest economies



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

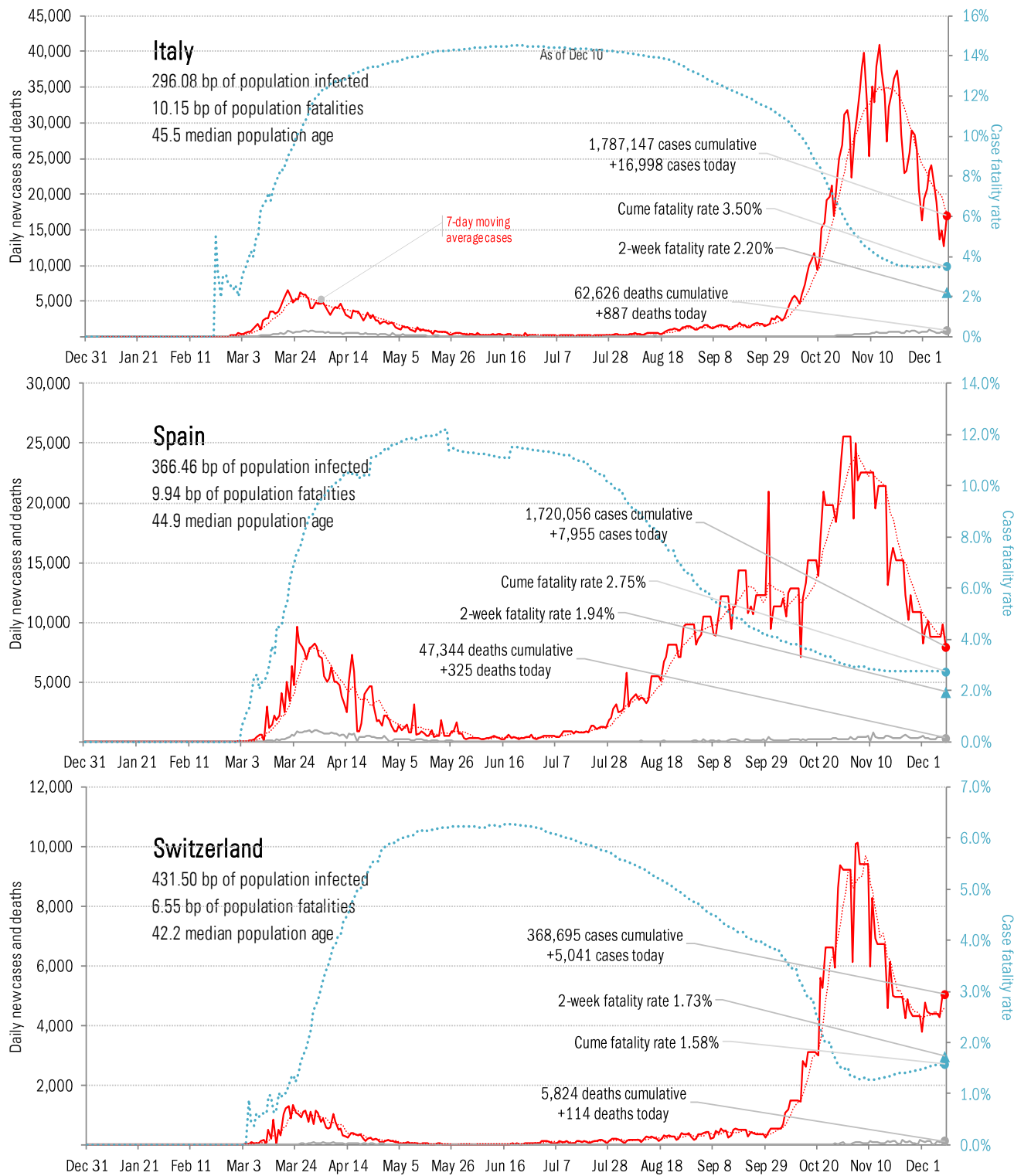
## Impact in The Anglosphere



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

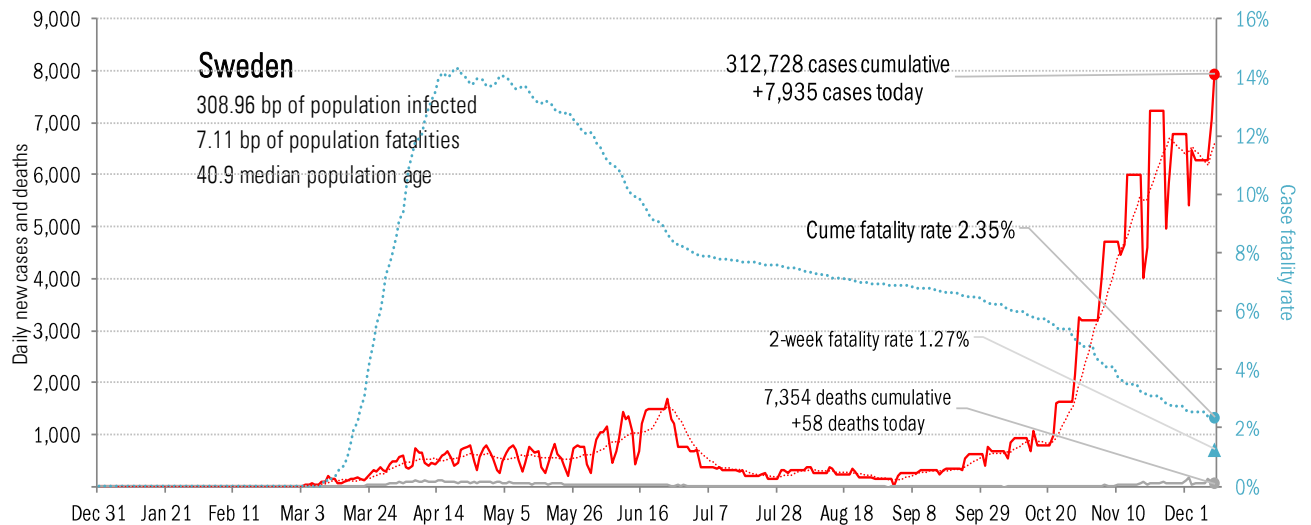
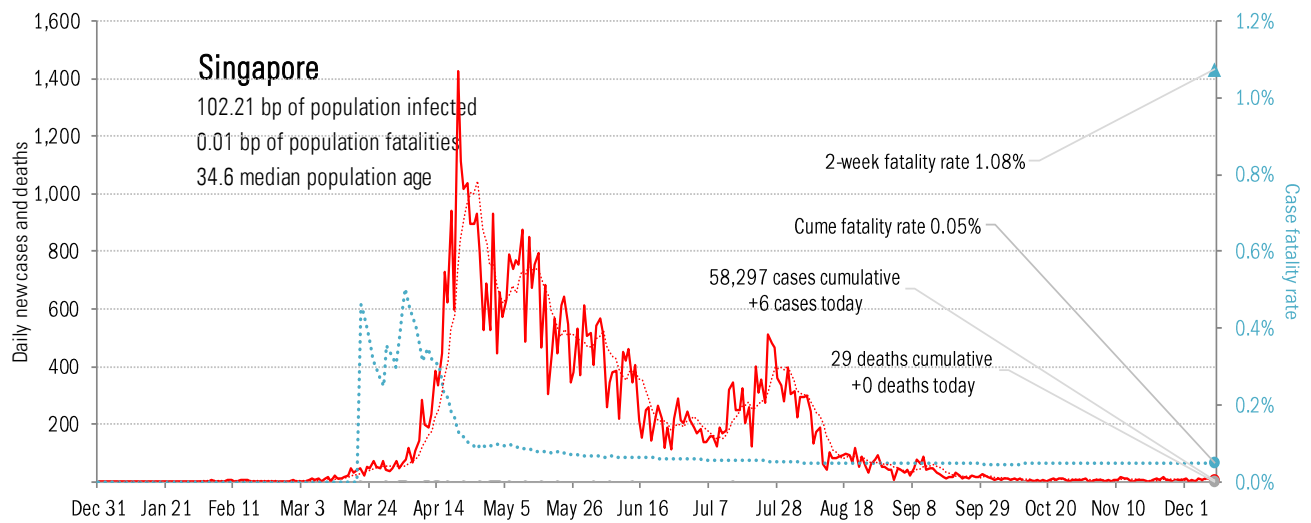
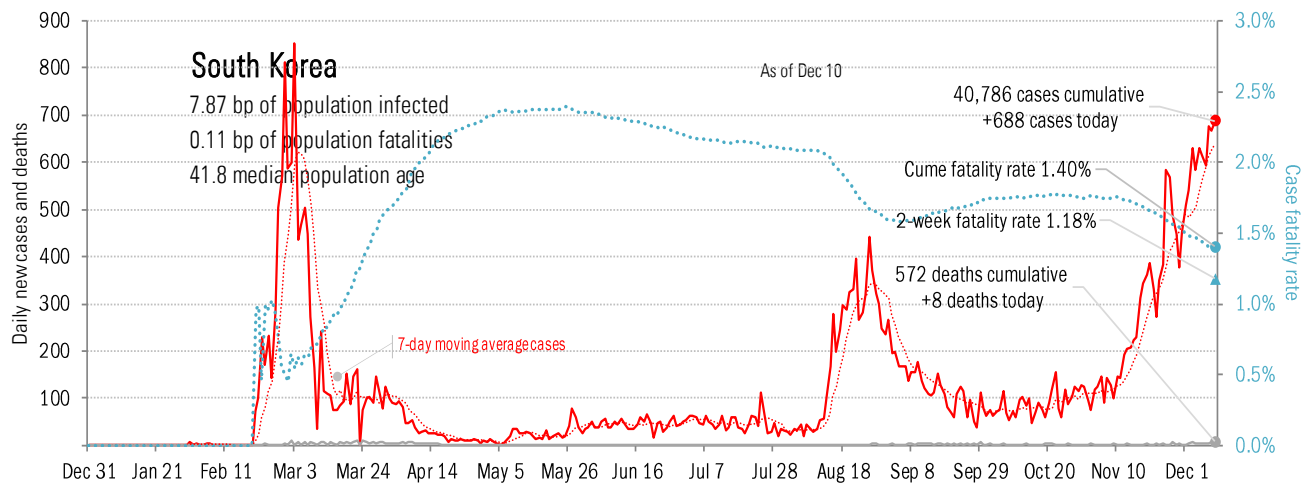
## Impact in continental Europe





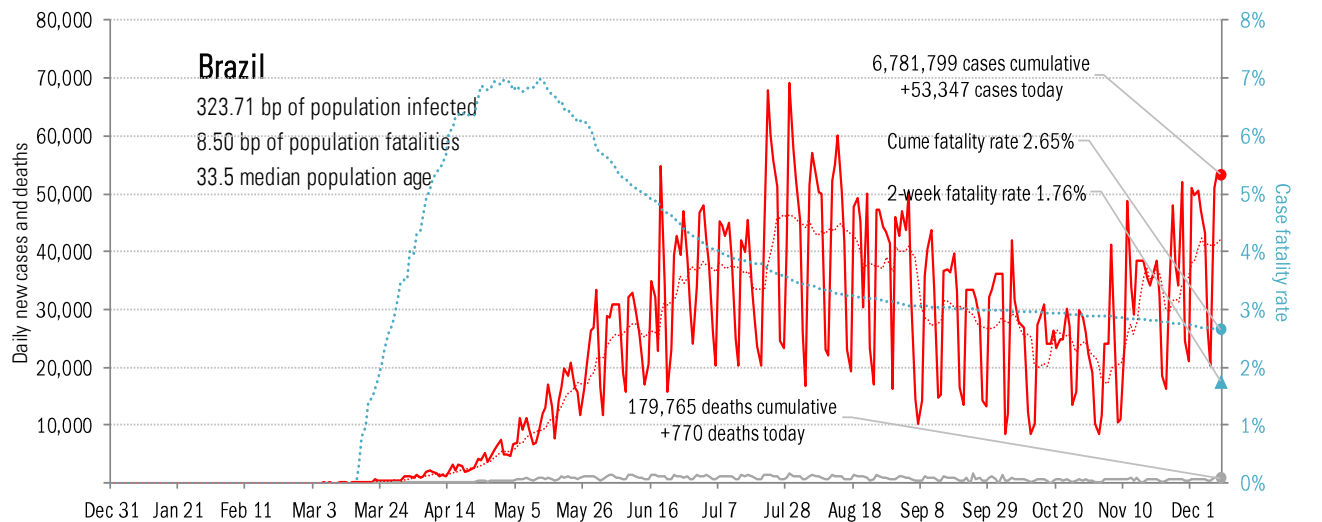
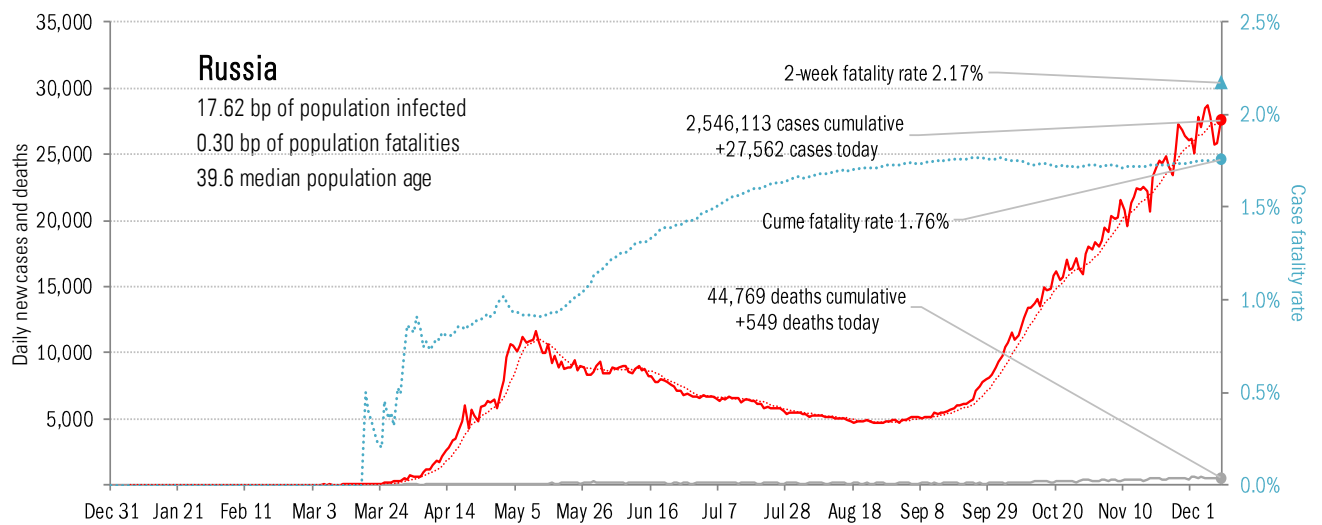
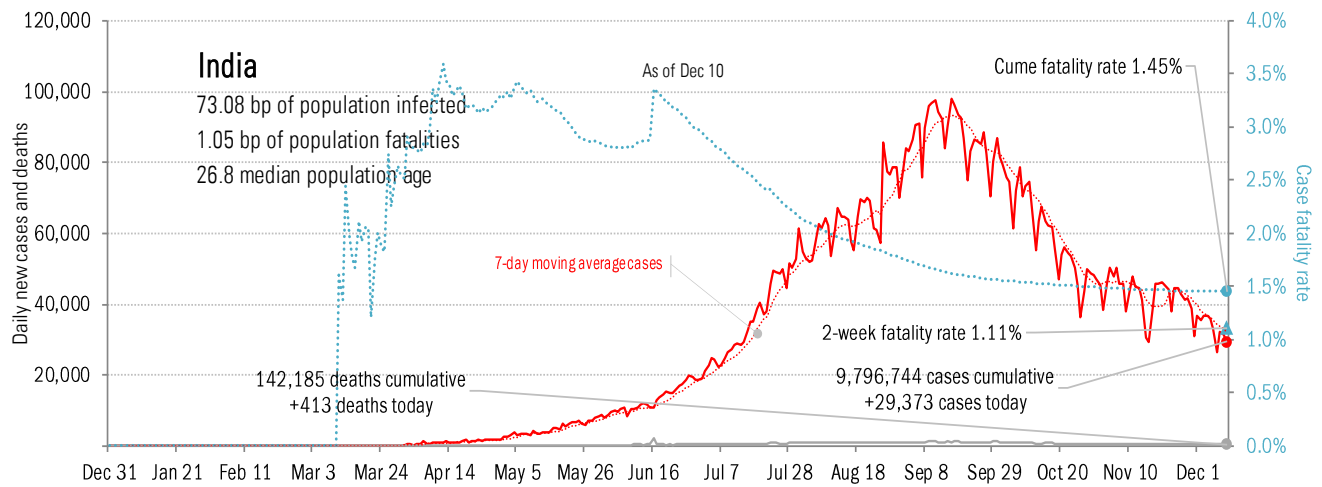
Source: [Johns Hopkins](#), TrendMacro calculations

## Impact in other hot-spots



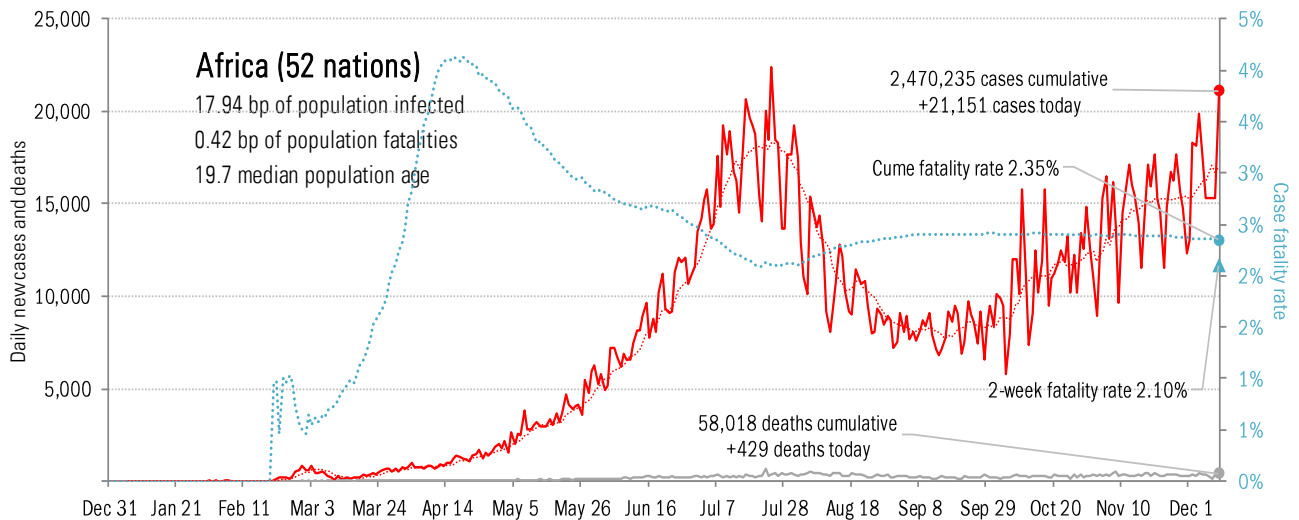
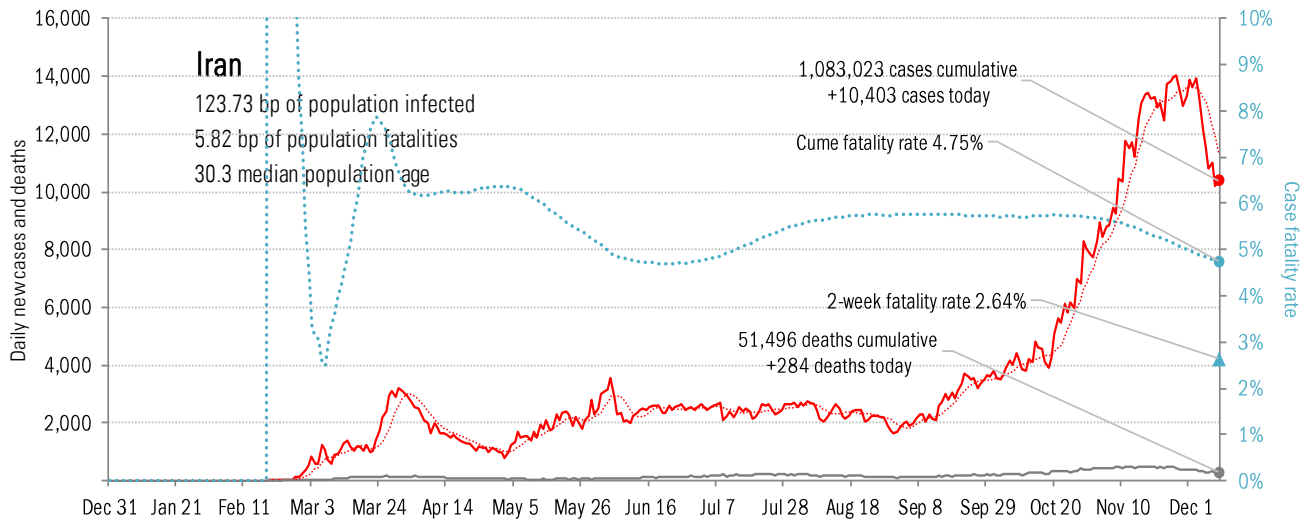
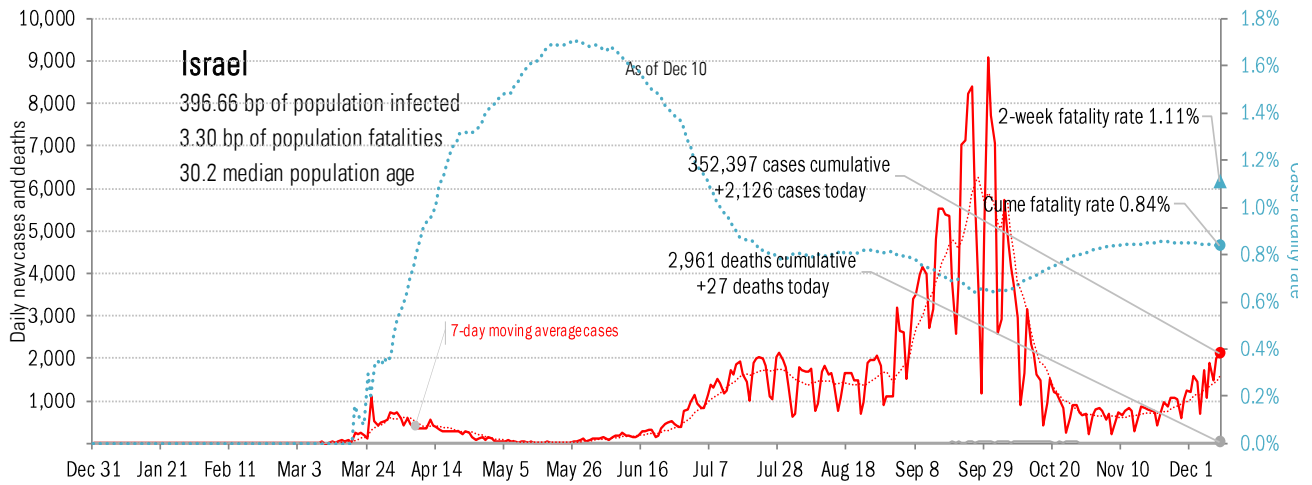
Source: [Johns Hopkins](#), TrendMacro calculations

## Impact in the BRICs ex-China



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

## Impact in the Middle East and Africa



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