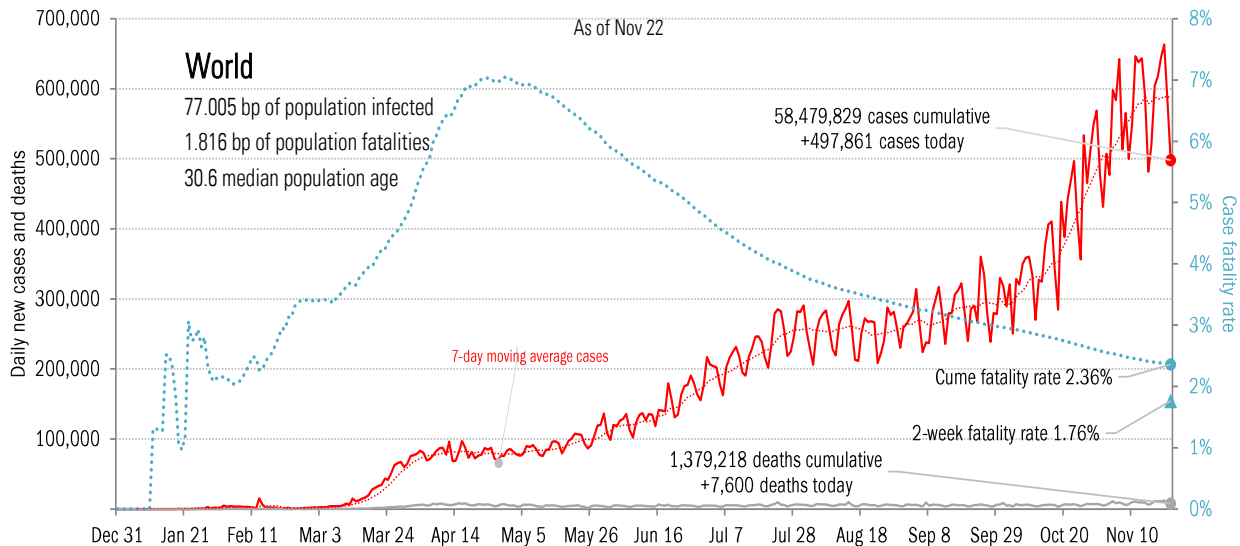
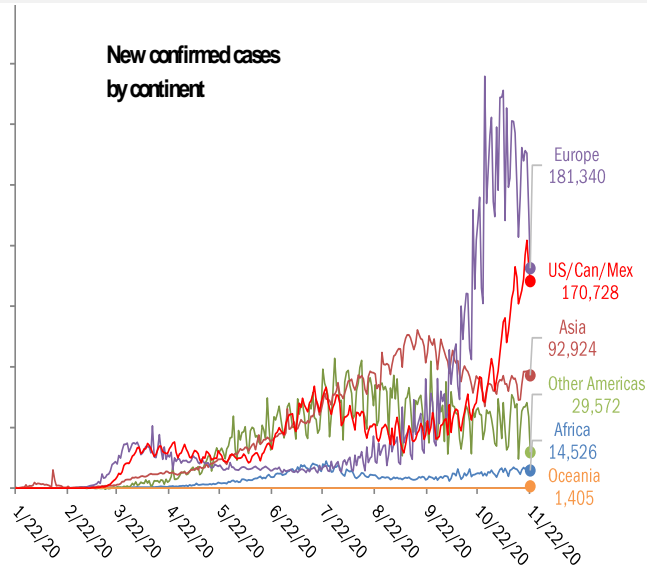


Data Insights: Covid-2019 Monitor

Monday, November 23, 2020

The global scorecard

The worst ten countries			
New cases		New Deaths	
United States	+150,098	United States	+889
India	+44,059	Mexico	+853
Italy	+28,337	Italy	+562
Russia	+24,295	India	+511
United Kingdom	+18,667	Iran	+475
Brazil	+18,615	United Kingdom	+399
Poland	+17,856	Russia	+396
Mexico	+15,906	Poland	+330
France	+13,157	Uruguay	+259
Iran	+13,053	France	+214
+344,043		+4,888	
World	+497,861	World	+7,600
Top ten	69%	Top ten	64%



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

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Thomas Demas: 704 552 3625 tdemas@trendmacro.com

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The US scorecard

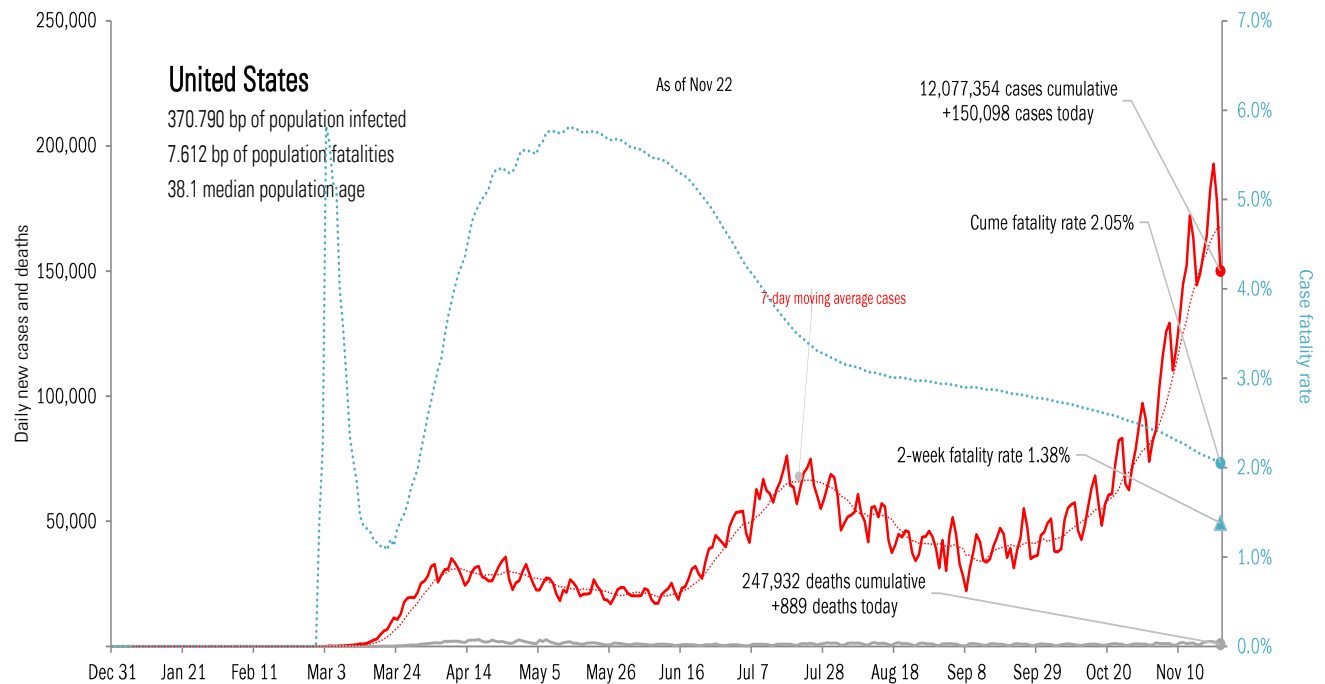
The ten worst US states

New cases		New Deaths		New in hospital		Curre cases		Curre deaths		Curre in hospital	
CA	+14,319	IL	+99	FL	+217	CA	1,102,033	NY	26,357	NY	89,995
IL	+10,012	TX	+89	CH	+194	TX	1,094,275	TX	20,556	FL	54,067
TX	+8,751	FL	+62	CA	+173	FL	924,614	CA	18,676	NJ	40,099
CH	+8,133	IN	+59	NY	+119	IL	656,298	FL	18,214	GA	34,057
MN	+7,205	TN	+55	PA	+85	NY	596,214	NJ	16,761	VA	24,602
PA	+7,075	SD	+42	GA	+57	GA	404,411	IL	12,051	CH	24,423
FL	+6,374	PA	+41	AR	+40	WI	376,238	MA	10,512	AZ	24,412
IN	+6,174	MN	+40	ID	+38	CH	351,419	PA	9,842	AL	23,449
NY	+5,392	CA	+33	AL	+32	TN	340,476	GA	9,198	IN	23,209
TN	+4,589	NM	+33	WA	+22	NC	336,775	MI	8,875	MD	19,636
+78,024		+553		+977		6,182,753		151,042		357,949	
All states	+150,098	All states	+889	All states	+555	All states	12,077,354	All states	247,932	All states	543,179
Top ten	52%	Top ten	62%	Top ten	176%	Top ten	51%	Top ten	61%	Top ten	66%

Some states not reporting

Five most improved US states

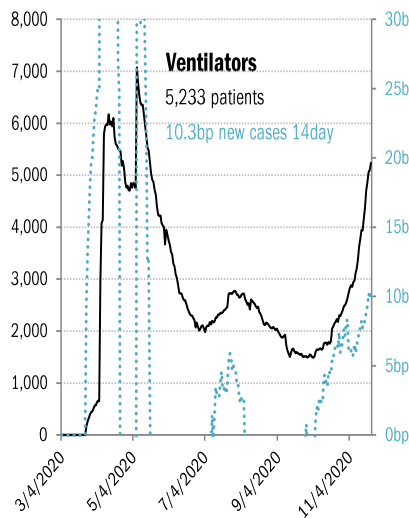
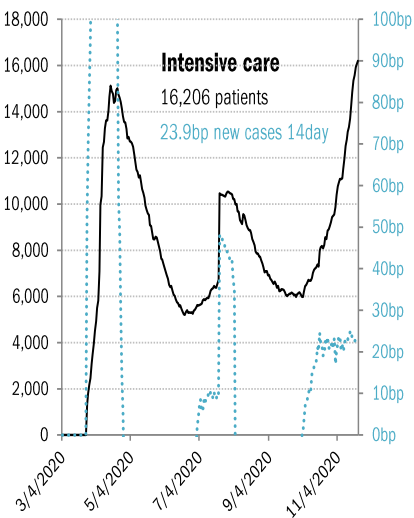
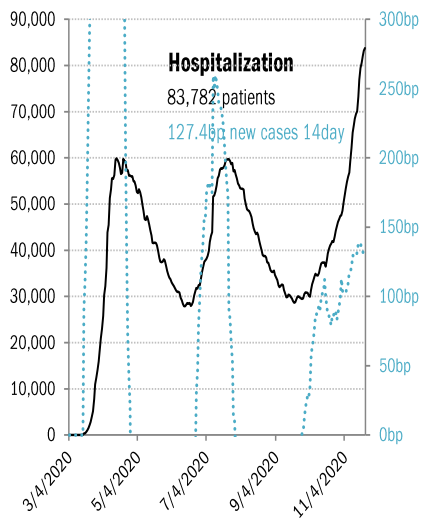
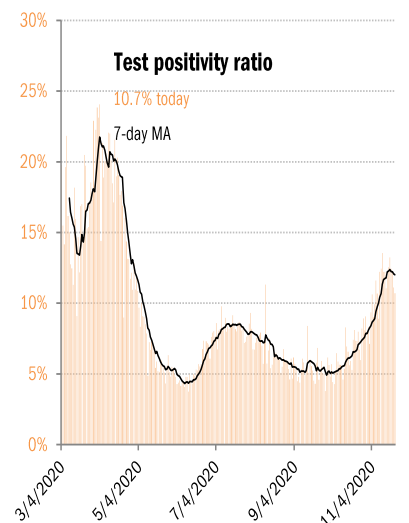
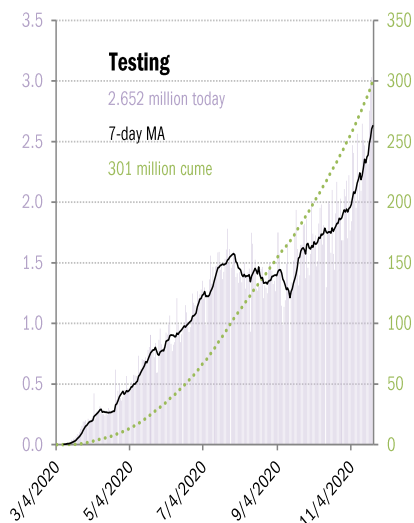
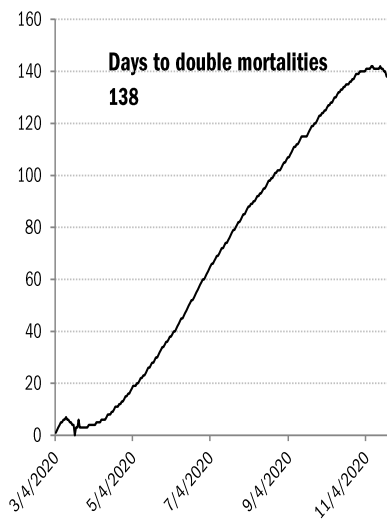
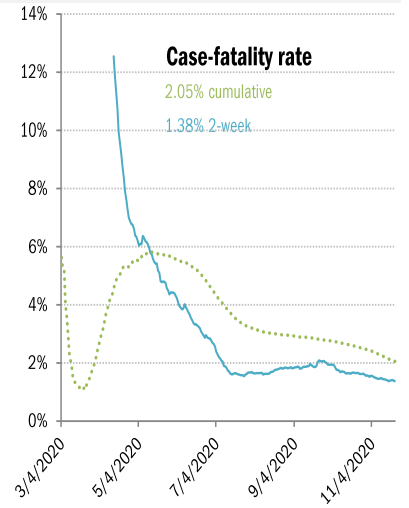
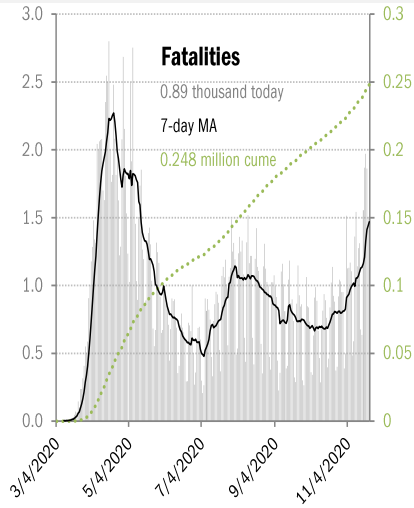
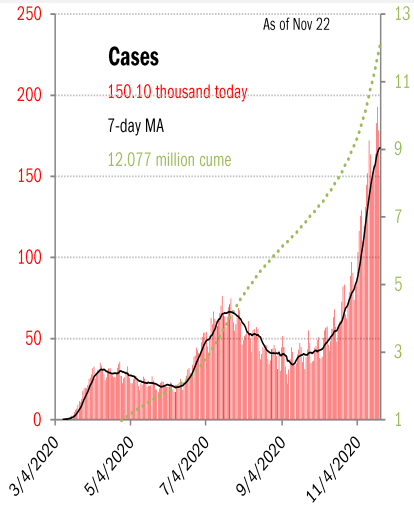
Fewer daily cases		Fewer new deaths		Fewer new hospitalizations		Most recoveries	
MI	-7,840	MI	-101	IL	-167	MN	+8,207
TX	-4,075	TX	-82	TX	-152	TX	+4,659
WI	-3,010	PA	-71	MO	-151	WI	+4,394
CO	-2,192	IL	-58	IN	-115	CH	+3,208
IL	-1,879	CA	-53	WI	-88	OK	+2,425



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

Recommended reading

[Letter to Steven Mnuchin](#)

Jerome Powell
Federal Reserve
November 20, 2020

[Mnuchin, McConnell Want to Tap Unused Fed Funds for Stimulus](#)

Erik Wasson and Saleha Mohsin
Bloomberg
November 20, 2020

[More New Research Shows Only Those With Symptoms Spread COVID-19. Masks School Closings & Lockdowns Couldn't Have Been More Pointless.](#)

Michael Thau
Red State
November 21, 2020

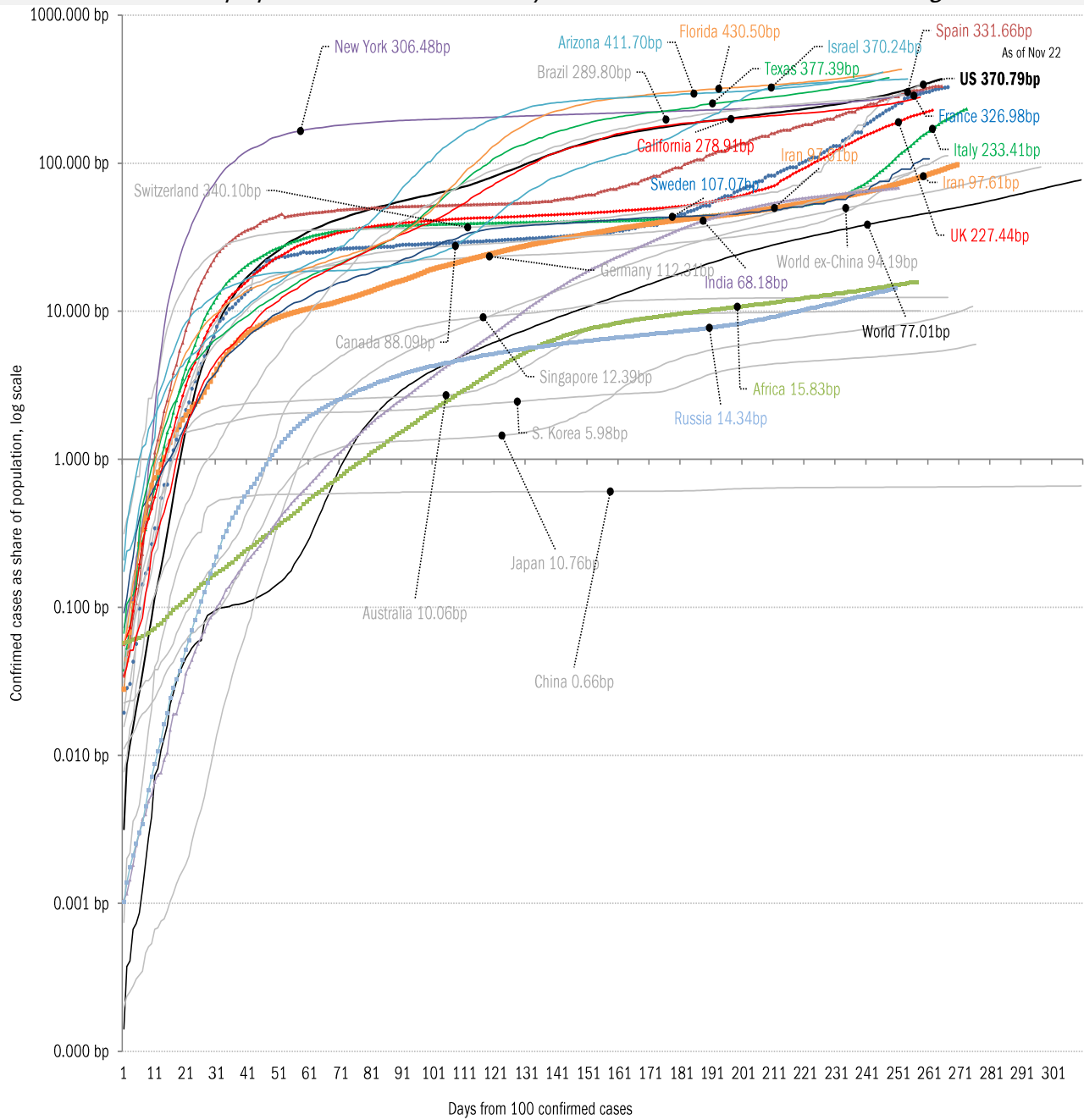
Meme of day



COME AND TAKE IT

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

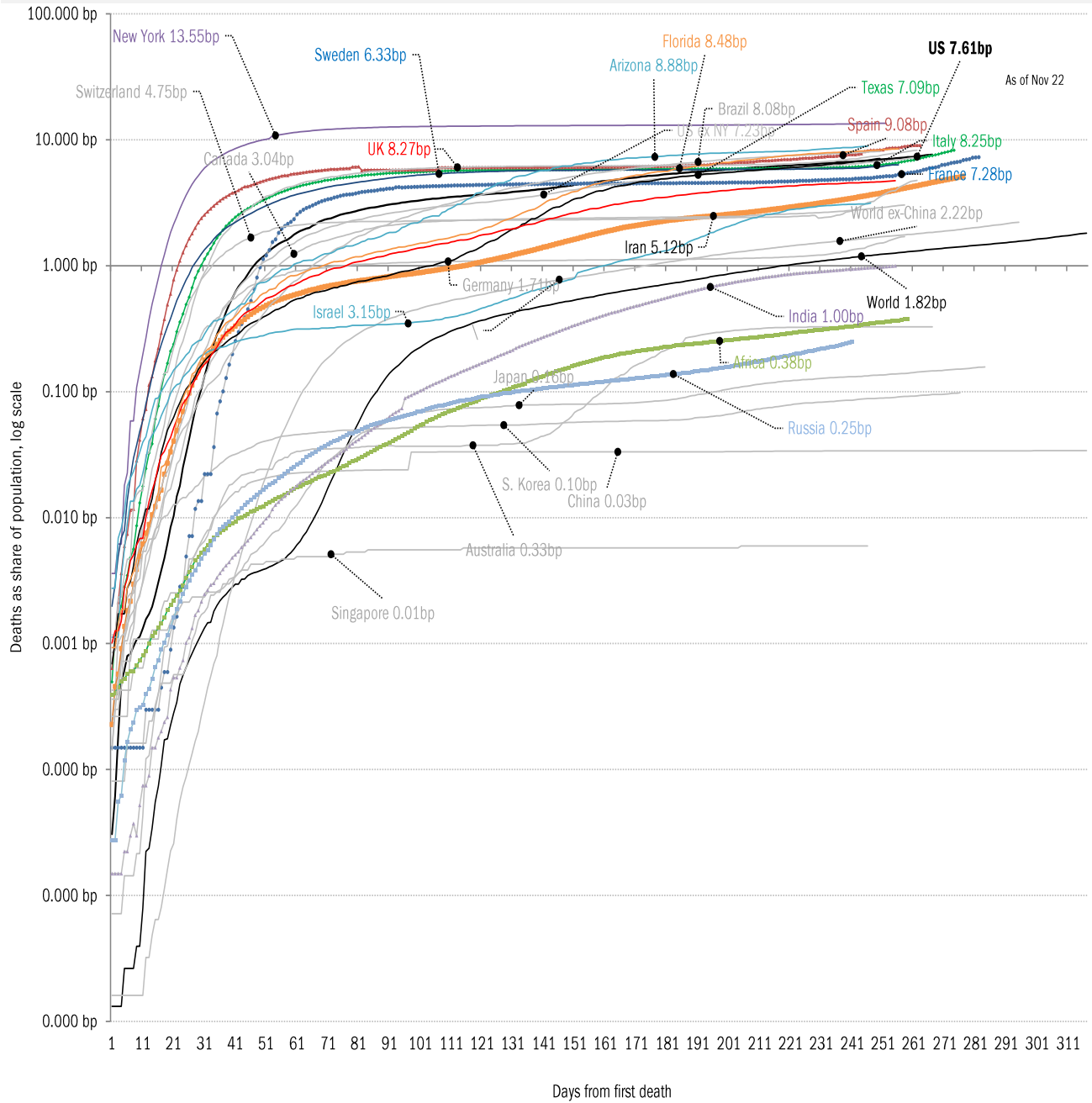
The coronavirus case accelerometer... tracking the world's infection curves
Share of infected population from first day with 100 confirmed cases, log scale



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

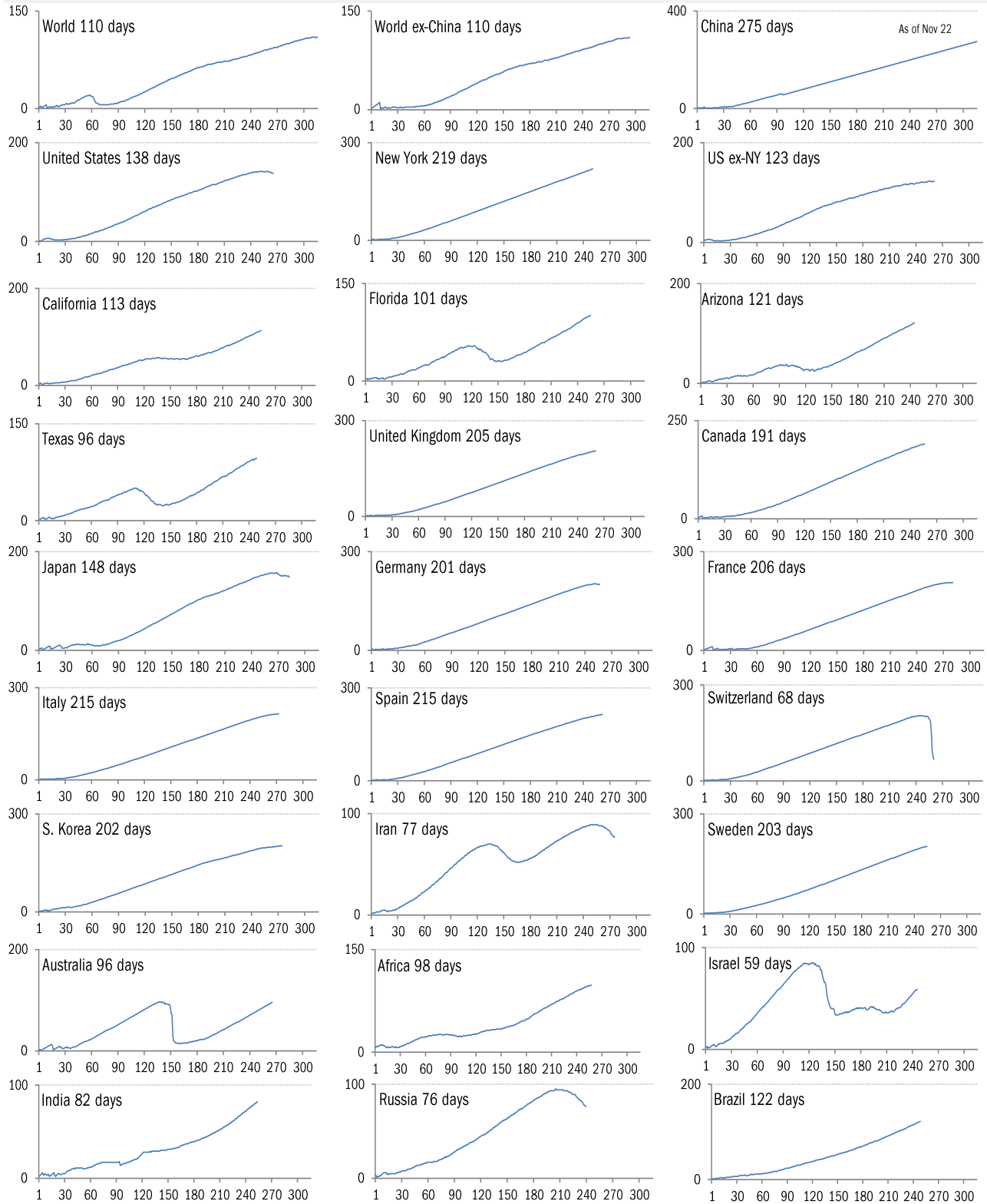


Source: [Johns Hopkins](#), [Covid Tracking Project](#), TrendMacro calculations

Our most reliable evidence of slowing exponential growth 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

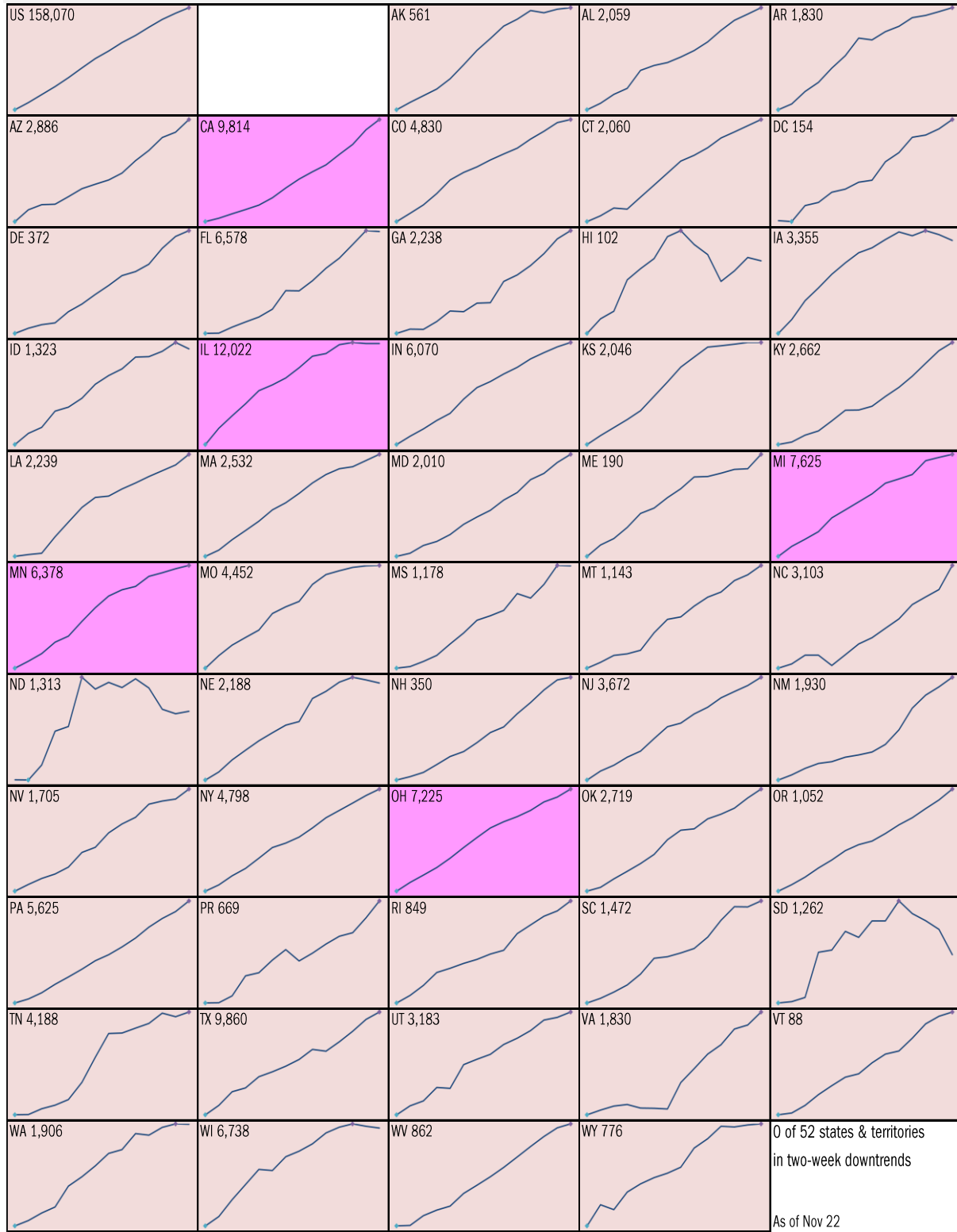


Source: [Johns Hopkins, Covid Tracking Project](#), TrendMacro calculations

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

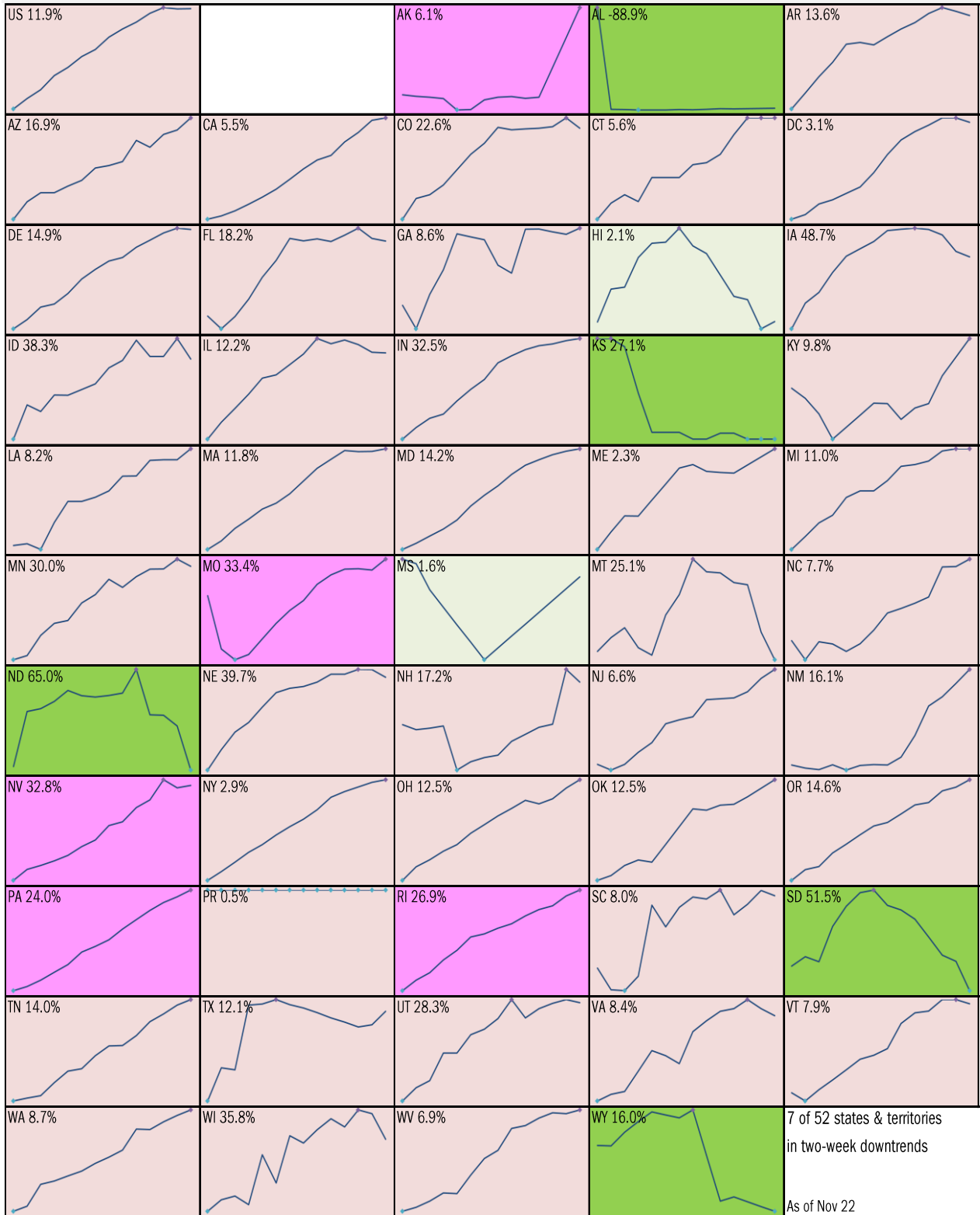


Source: [Covid Tracking Project](#), TrendMacro calculations

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



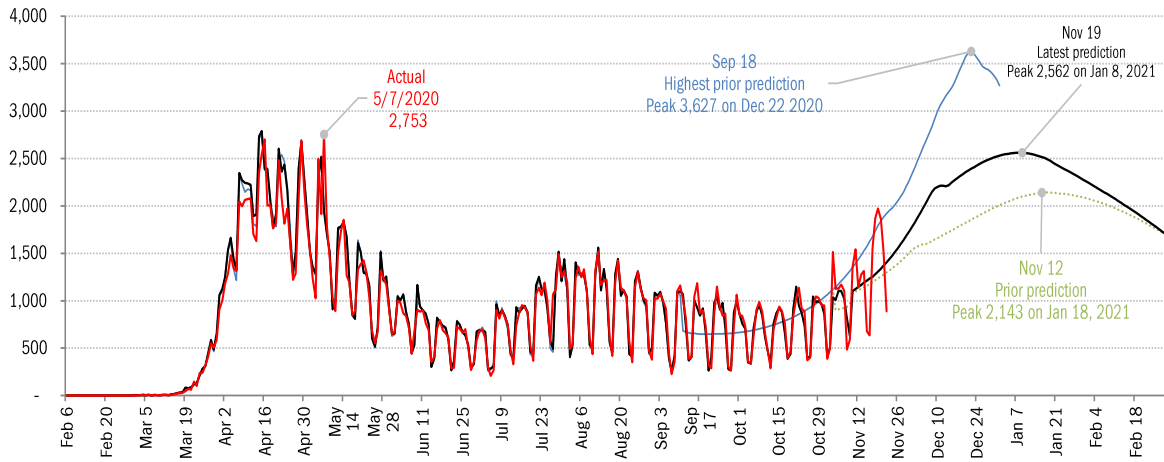
Source: [Covid Tracking Project](#), TrendMacro calculations

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

New daily fatalities

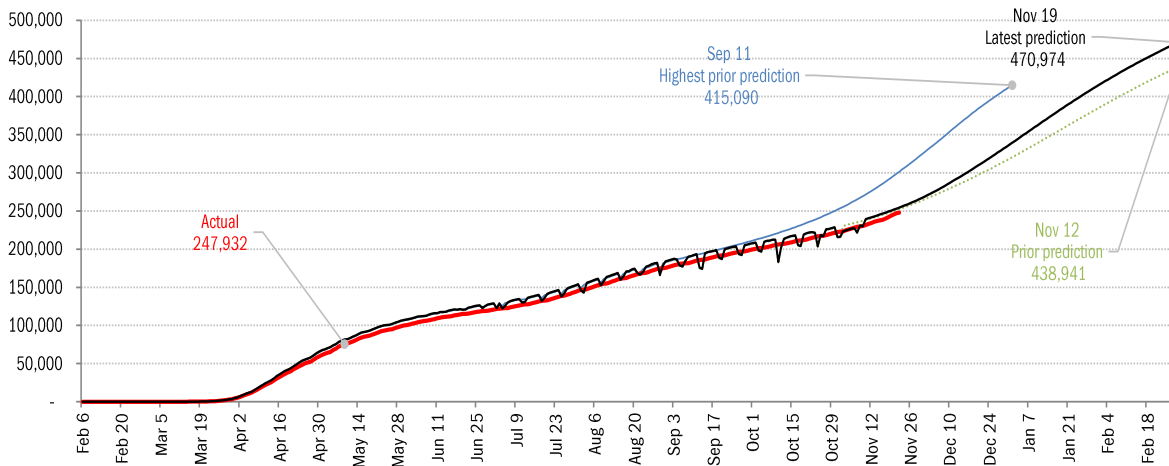
As of Nov 22

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

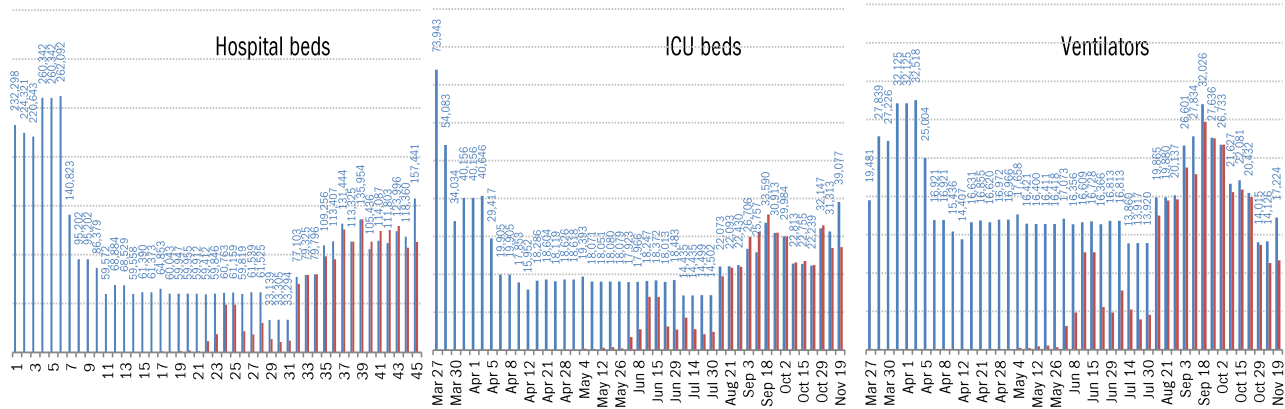


Cumulative fatalities

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

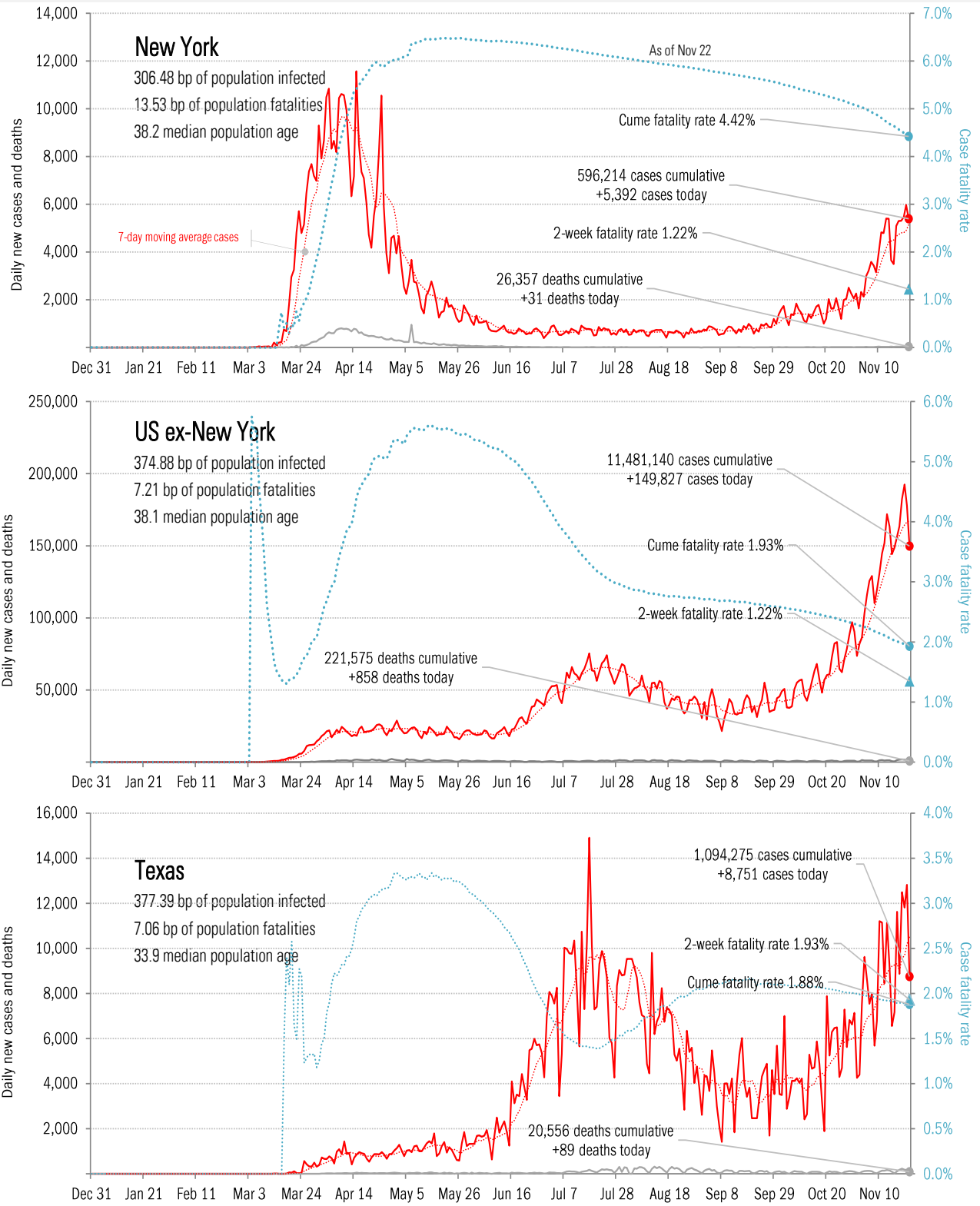


Healthcare system stress, **peak** and **ultimate** estimated at each model revision



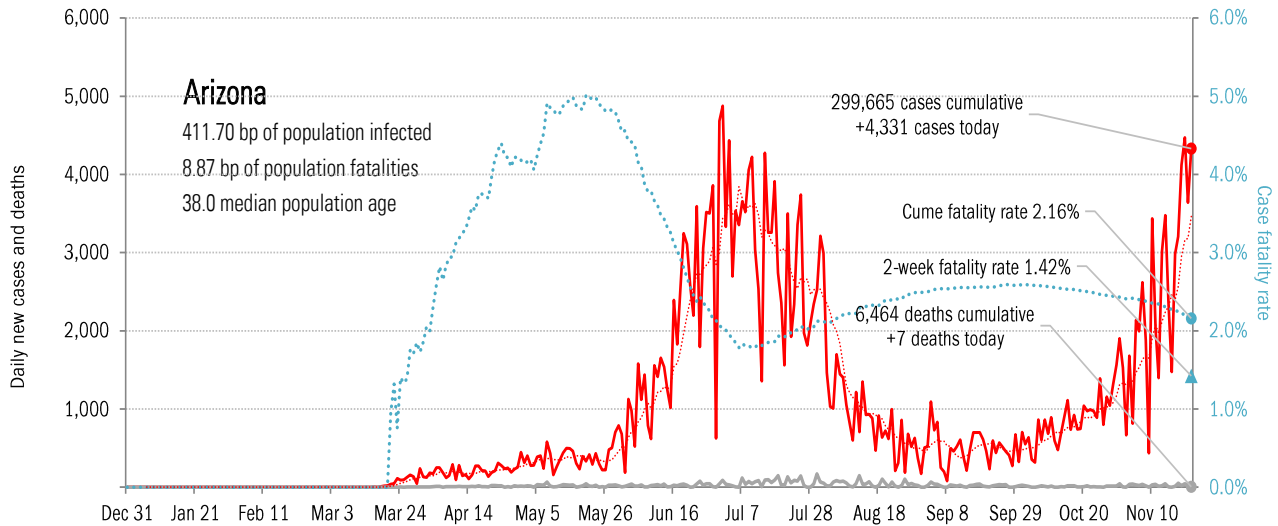
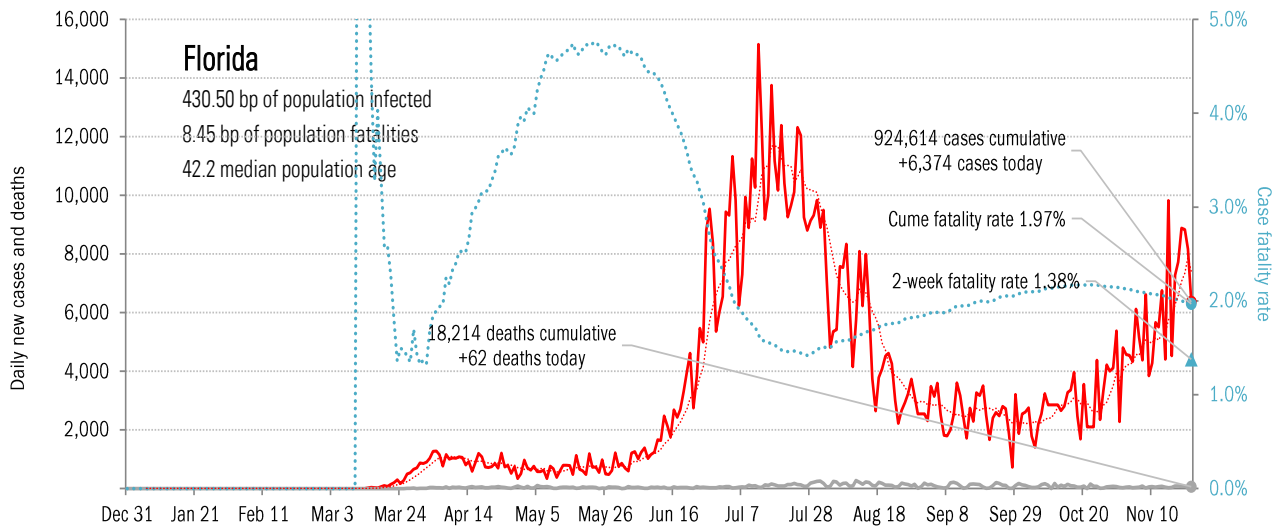
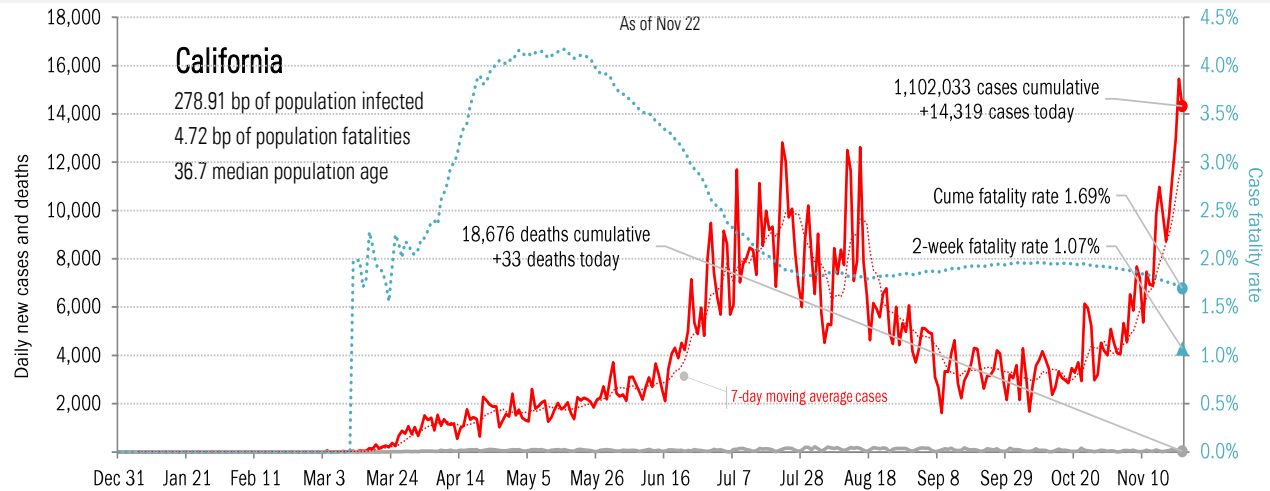
Source: [Covid Tracking Project](#), [IHME](#), TrendMacro calculations

From Ground Zero to the Rio Grande



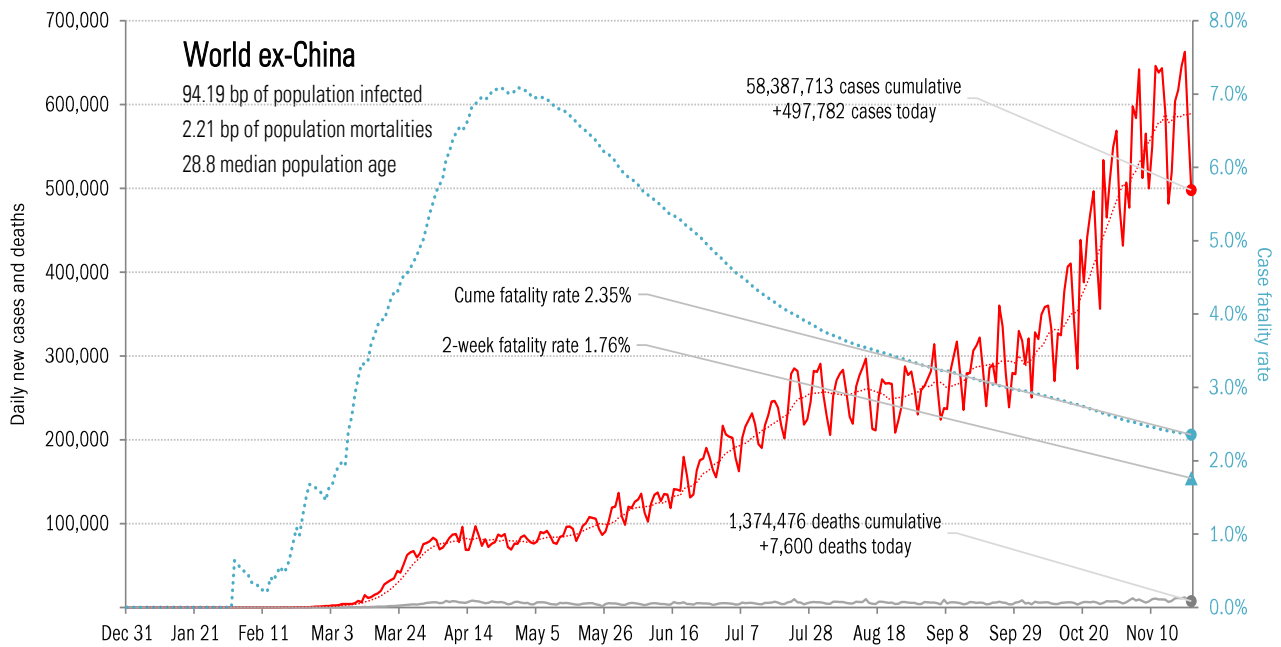
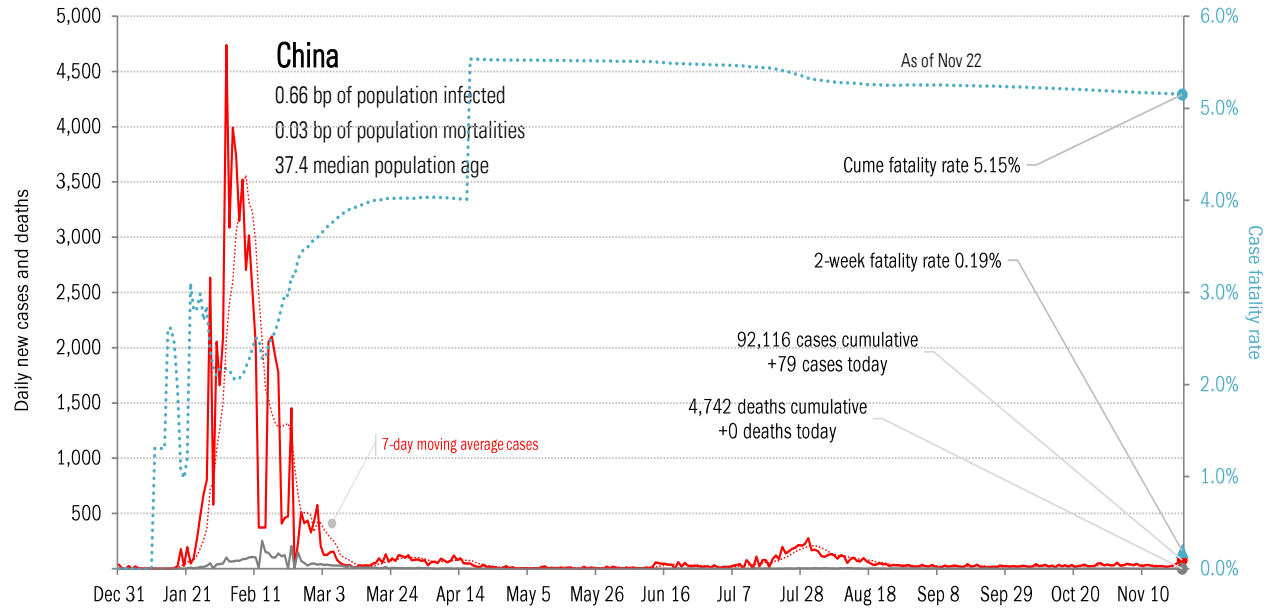
Source: [Covid Tracking Project](#), TrendMacro calculations

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



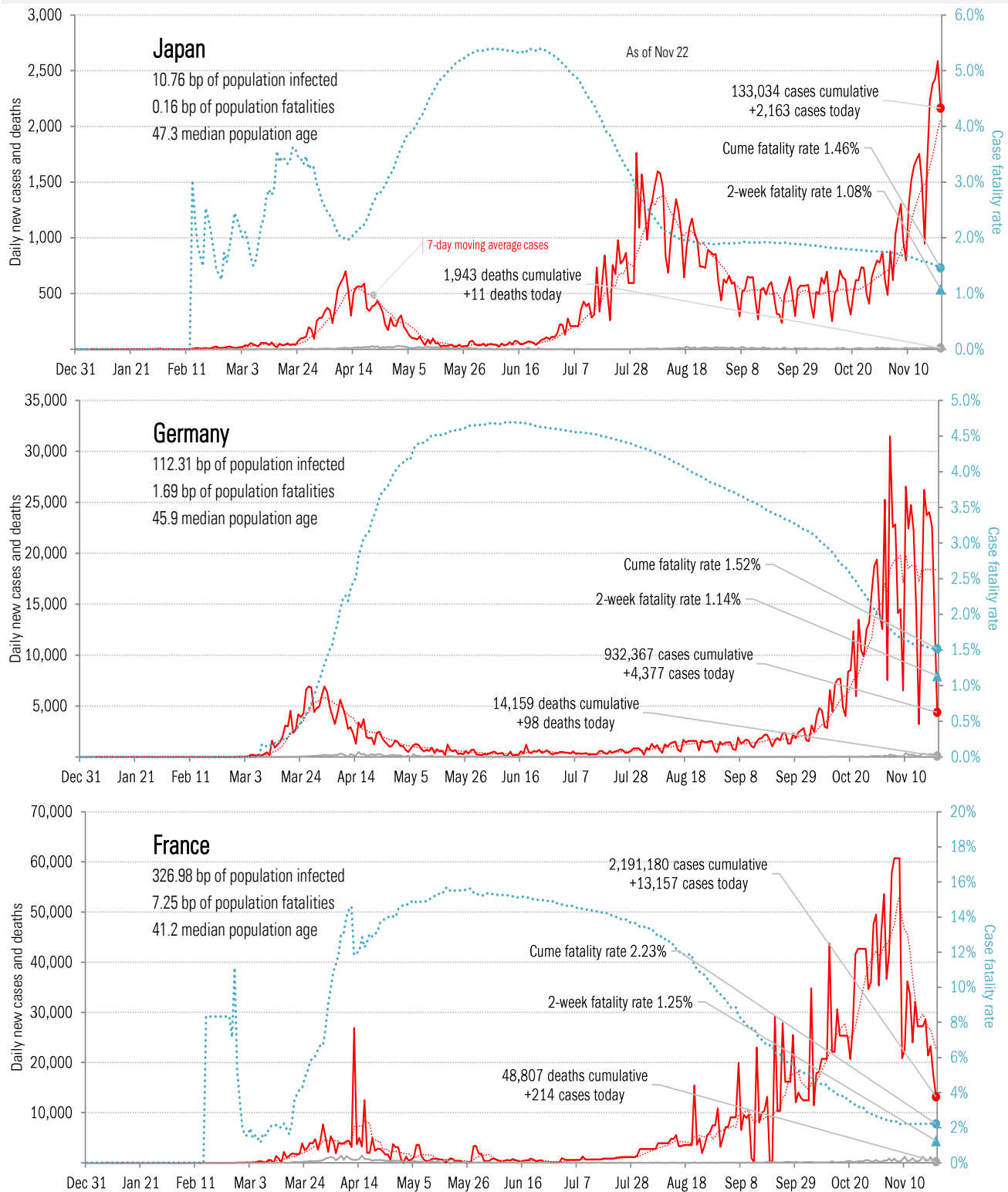
Source: [Covid Tracking Project](#), TrendMacro calculations

Patient zero... and then everyone else



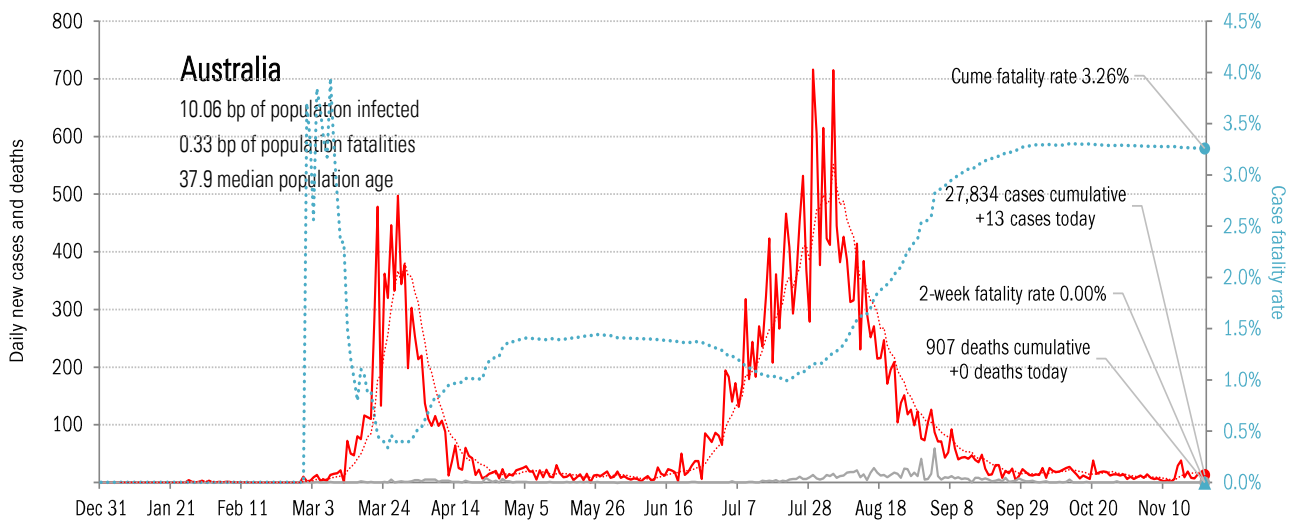
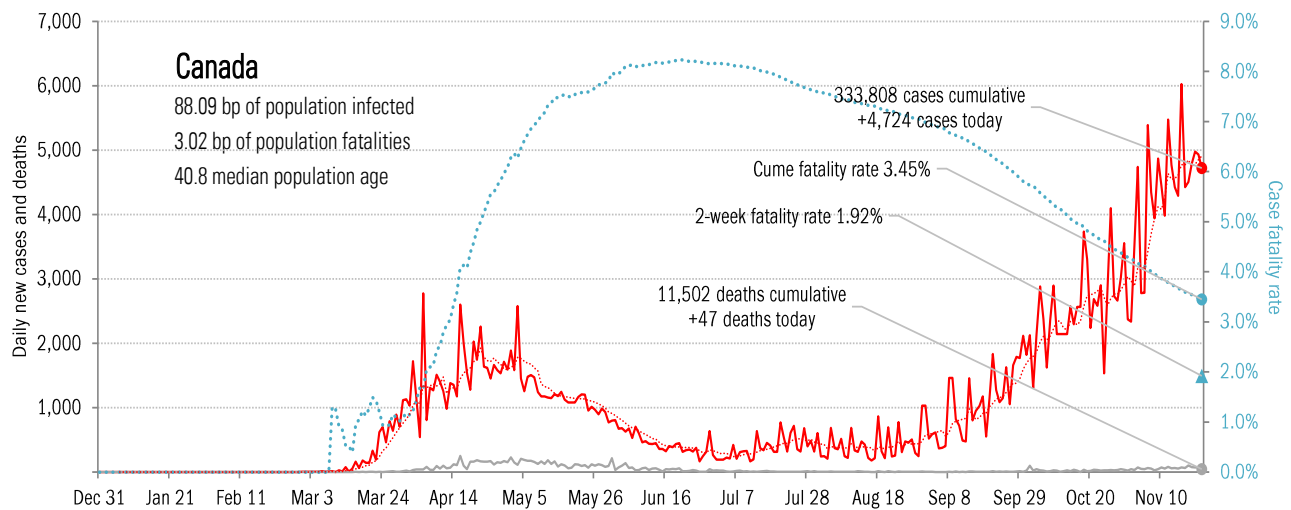
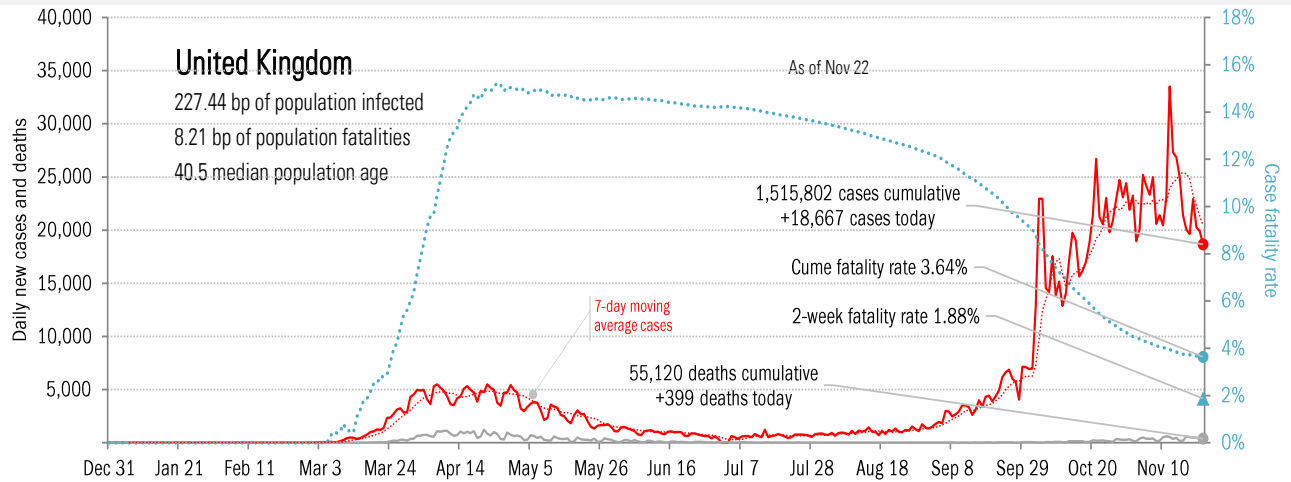
Source: [Johns Hopkins](#), [Covid Tracking Project](#), TrendMacro calculations

Impact in the largest economies



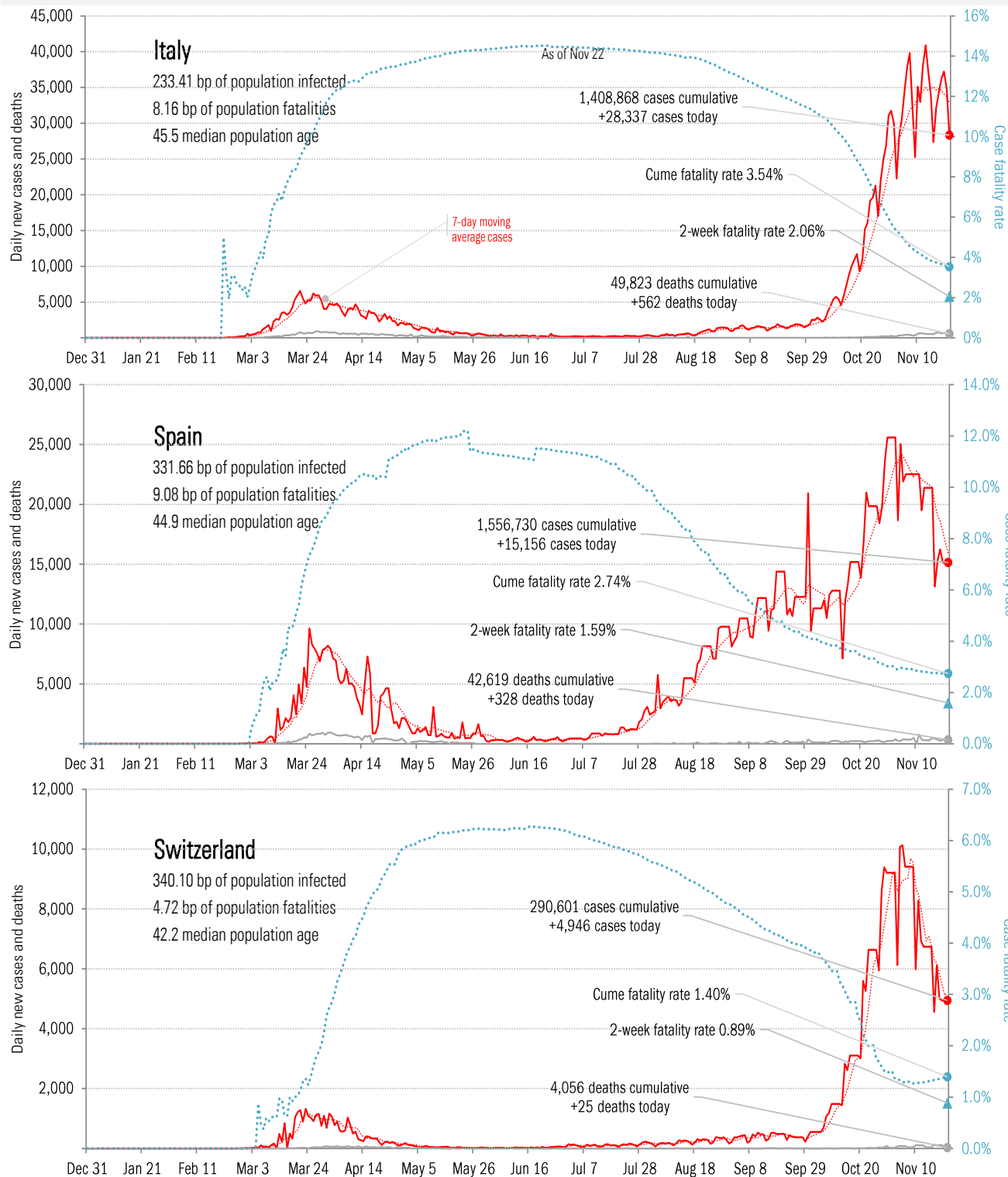
Source: [Johns Hopkins](#), TrendMacro calculations

Impact in The Anglosphere



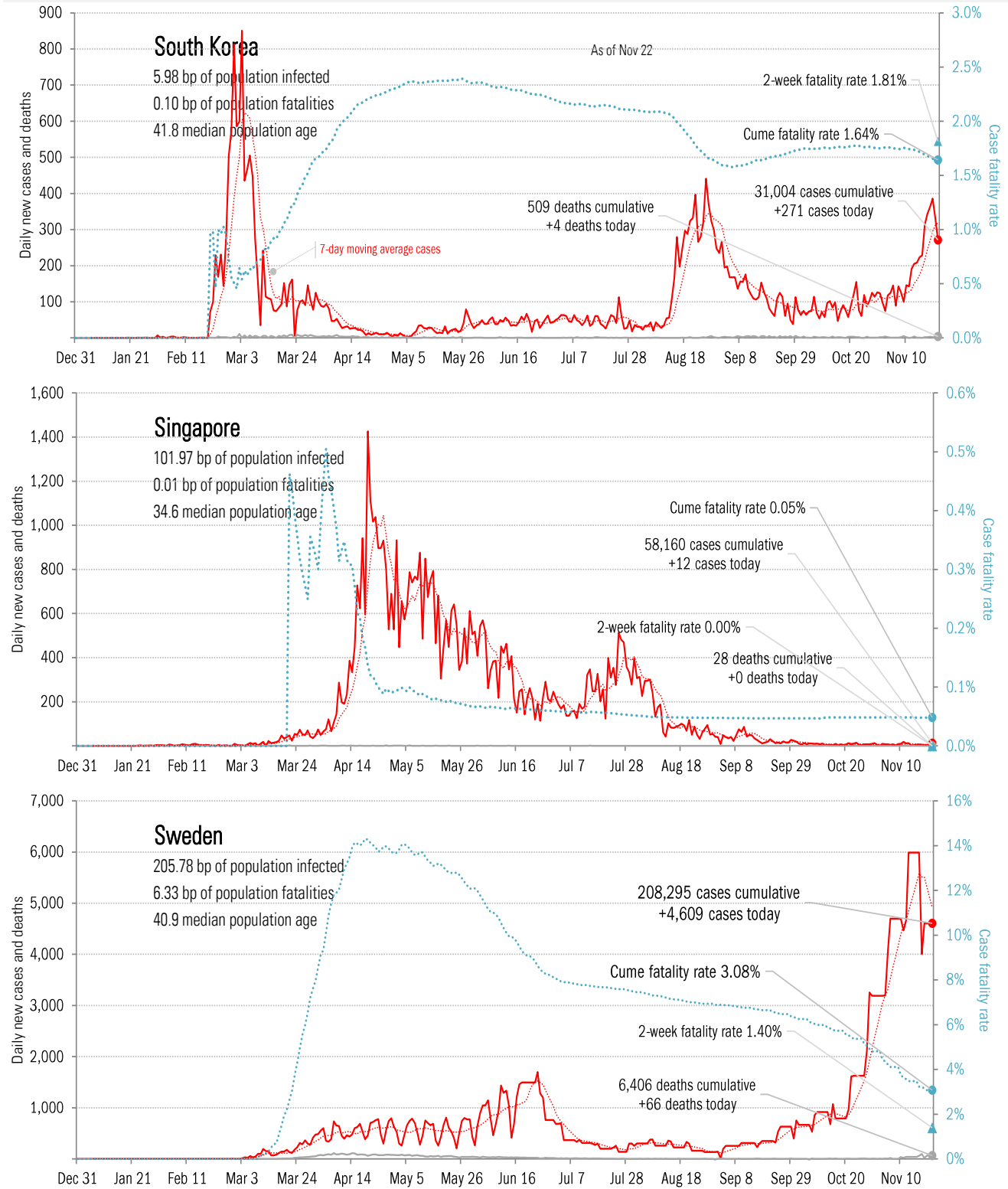
Source: [Johns Hopkins](#), TrendMacro calculations

Impact in continental Europe



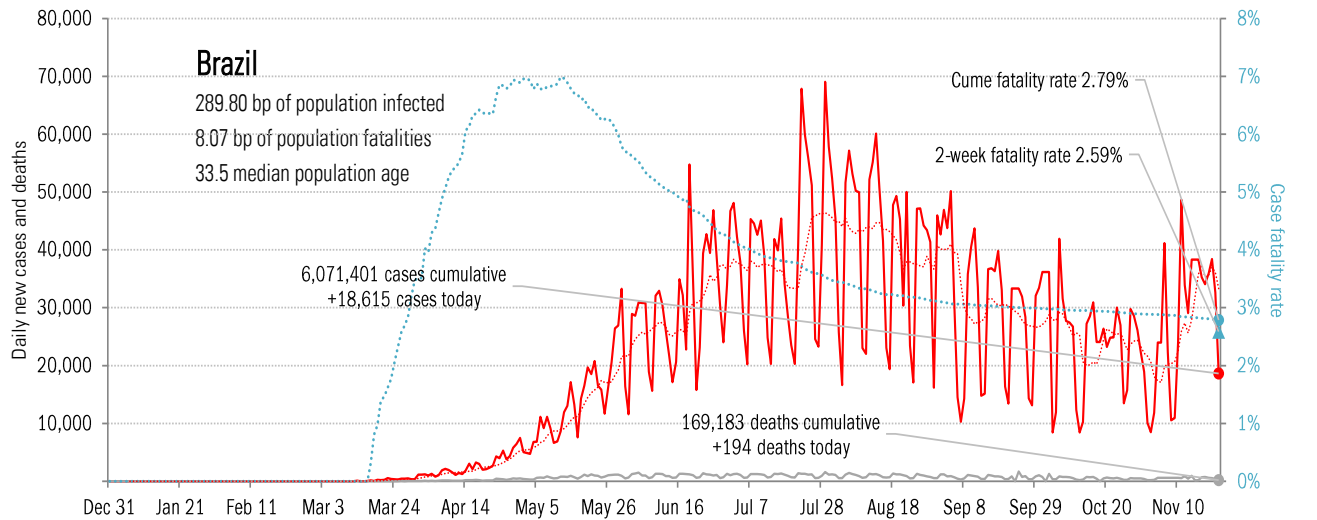
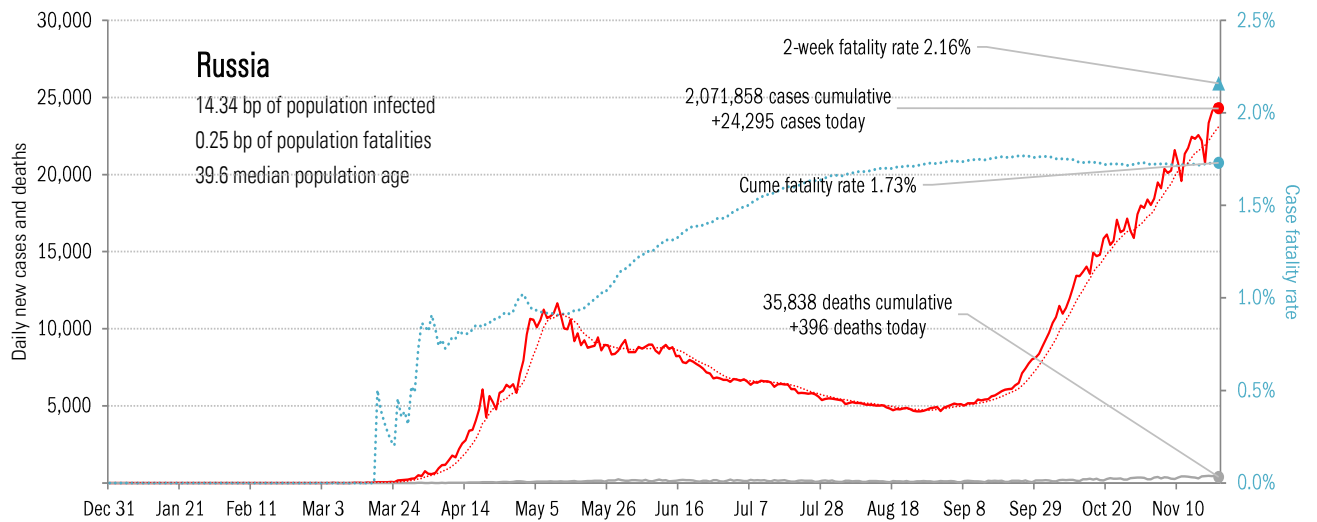
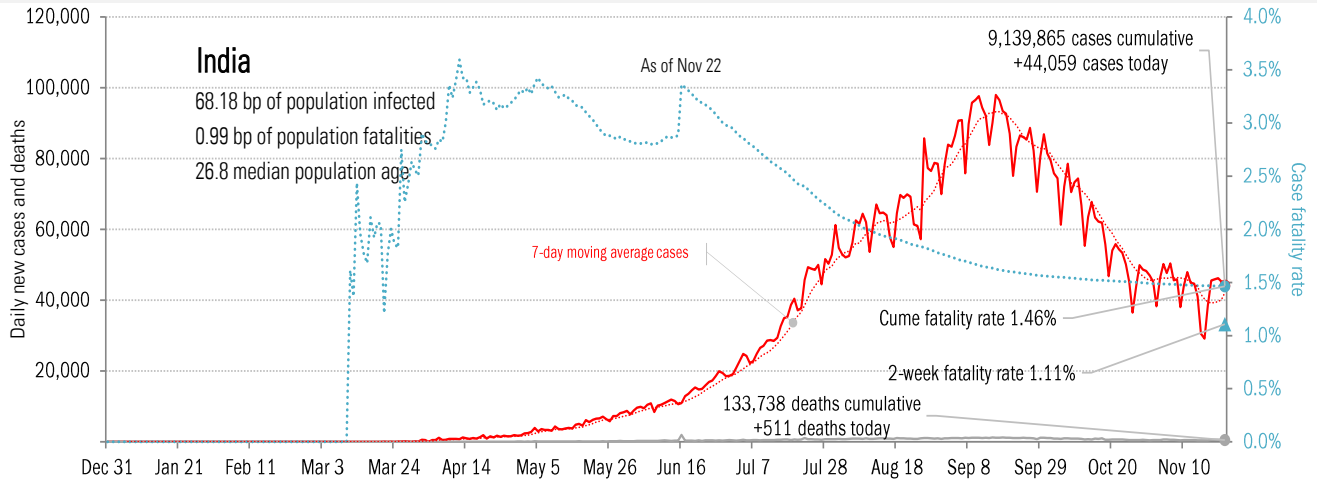
Source: [Johns Hopkins](#), TrendMacro calculations

Impact in other hot-spots



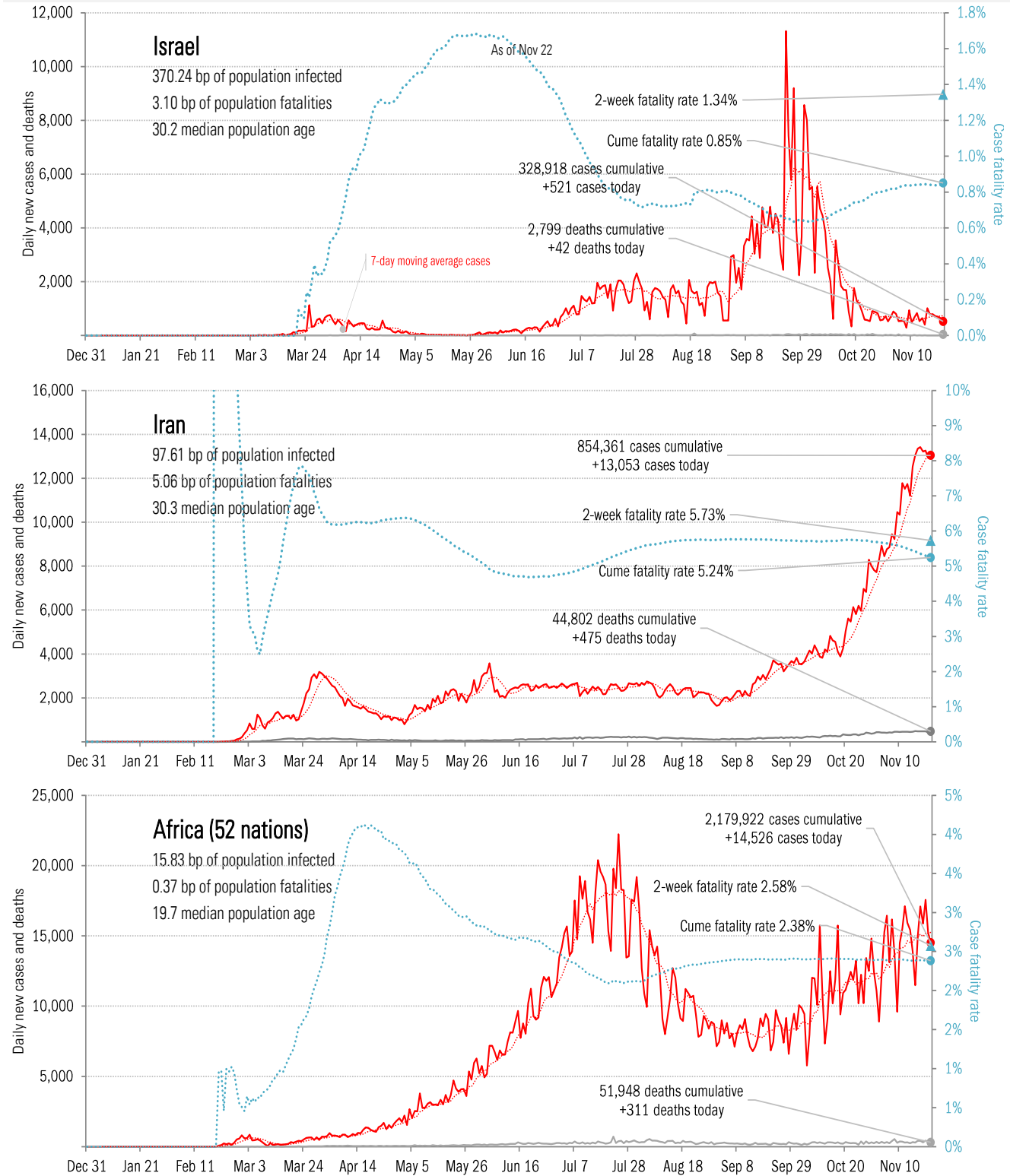
Source: [Johns Hopkins](#), TrendMacro calculations

Impact in the BRICs ex-China



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

Impact in the Middle East and Africa



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