Trend Macrolytics, LLC
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Data Insights: Covid-2019 Monitor

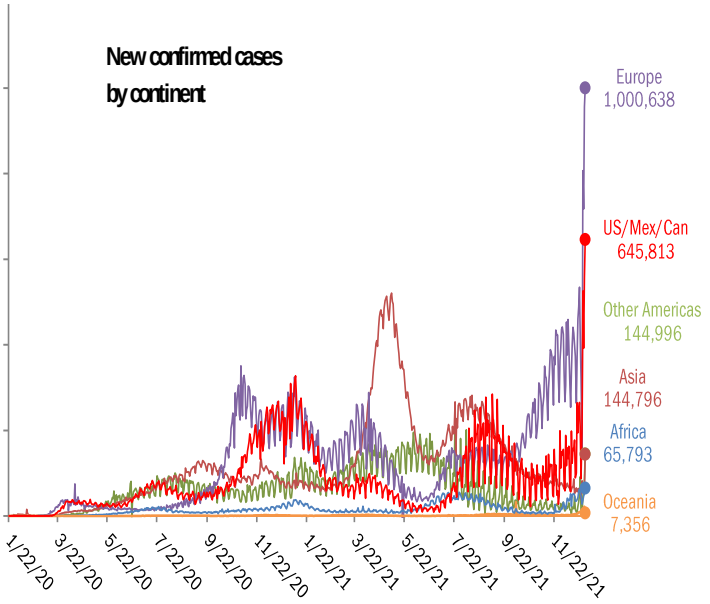
Friday, December 31, 2021

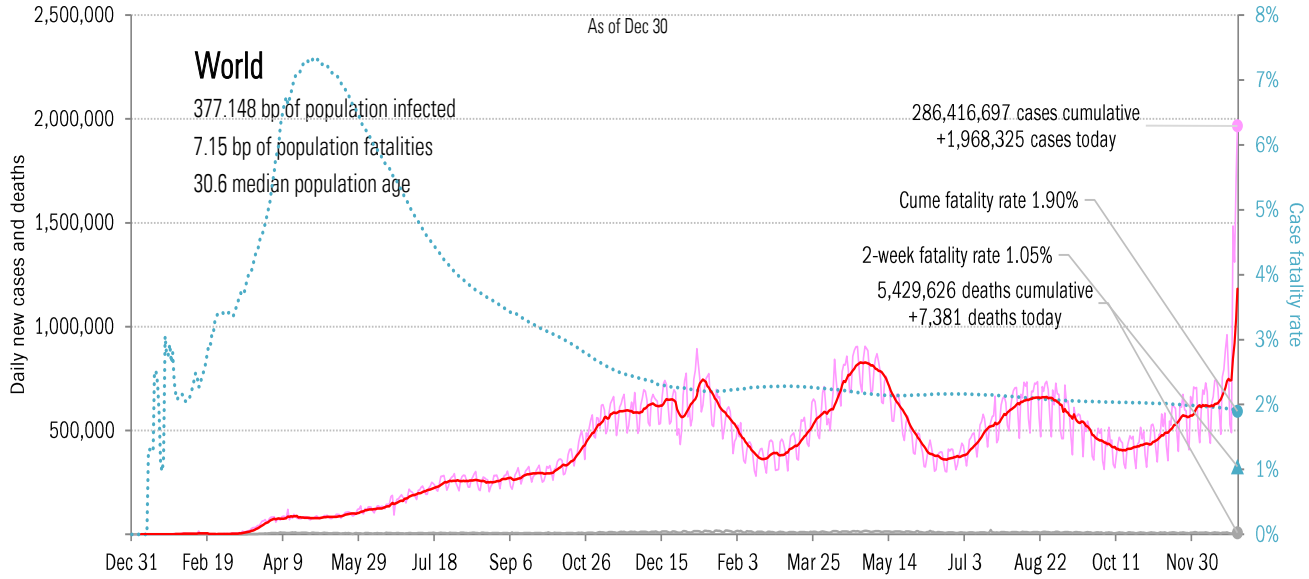
The global scorecard

Cases: 7-day average and daily Deaths: Daily

The worst ten countries

New cases		New Deaths	
United States	606,000	United States	1,338
France	206,546	Russia	905
United Kingdom	189,917	Poland	708
Spain	161,688	United Kingdom	336
Italy	127,000	Germany	322
Turkey	76,365	Ukraine	299
Argentina	50,506	Vietnam	291
Germany	42,070	Turkey	281
Greece	35,580	India	220
Canada	34,523	Mexico	188
	1,530,195		4,888
World	1,968,325	World	7,381
Top ten	78%	Top ten	66%





Source: Johns Hopkins, TrendMacro calculations

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The US scorecard

Cases: 7-day average and daily Deaths: Daily

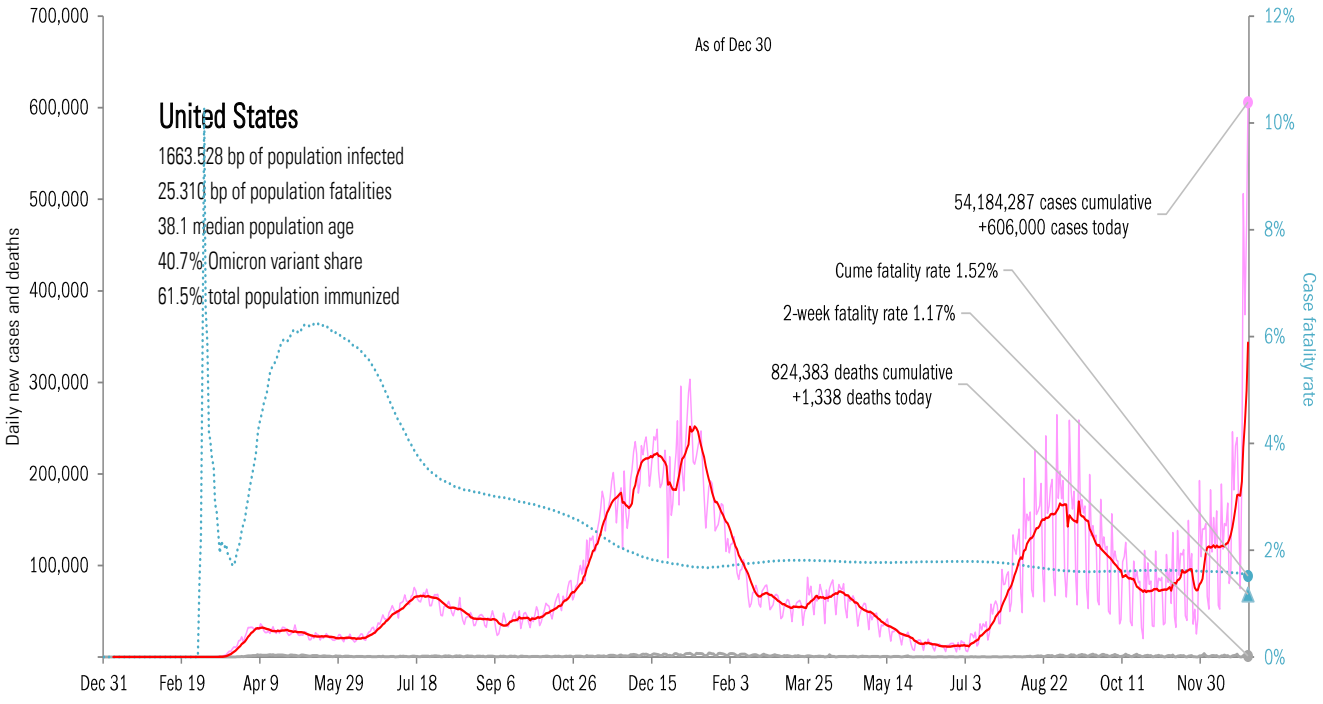
The ten worst US states

New cases		New Deaths		New in hospital		Cume cases		Cume deaths		Cume in hospital		Hospital use		ICU use	
NJ	95,099	PA	135	FL	644	CA	5,456,421	CA	76,437	TX	400,458	RI	87%	RI	95%
NY	71,787	TX	105	TX	637	TX	4,581,099	TX	75,744	FL	334,998	MA	86%	KY	93%
CA	49,111	CA	101	CA	505	FL	3,967,532	FL	62,562	CA	334,201	GA	85%	IN	90%
FL	36,781	NY	98	NY	430	NY	3,402,190	NY	59,434	NY	191,085	MN	84%	NM	90%
IL	30,386	IL	87	GA	396	IL	2,149,548	PA	36,639	GA	169,840	MD	84%	MO	89%
GA	24,420	TN	69	NJ	278	PA	2,015,367	GA	31,418	OH	154,196	NC	84%	AL	88%
MA	22,086	GA	64	IL	201	OH	1,995,497	IL	30,254	PA	142,546	PA	83%	NH	88%
TX	20,115	NC	60	PA	182	GA	1,816,441	MI	29,020	IL	125,459	MO	83%	VT	87%
OH	19,774	MD	55	OH	175	MI	1,710,325	NJ	29,000	KY	120,100	WA	83%	TX	87%
PA	19,127	MN	54	MD	128	NC	1,667,493	OH	28,780	MI	117,053	WV	82%	OK	86%
	388,686		828		3,576		28,761,913		459,288		2,089,936				
All states	606,000		1,338		5,074	All states	54,184,287		824,383		3,776,499	All states	70%		67%
Top ten	64%		62%		70%	Top ten	53%		56%		55%	Median	77%		81%

Some states not reporting

Five most improved US states

Fewer daily cases		Fewer new deaths		Fewer new hospitalizations		Most pop immunity growth	
MI	-29,279	MI	-373	NH	-29	PA	+20 bp
SC	-9,557	PA	-169	NM	-26	PR	+20 bp
KS	-7,275	AZ	-135	SD	-14	RI	+20 bp
KY	-5,513	FL	-134	NV	-13	AZ	+10 bp
AK	-992	NY	-69	PR	-13	CA	+10 bp



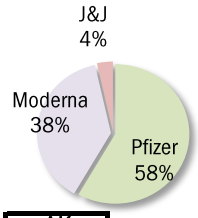
Source: Johns Hopkins, Dept. of Health and Human Services, CDC, TrendMacro calculations

Rolling out the vaccines in the US and the world

Administered	Cumulative				Today
Doses	520,901,960				+1.366 million
Boosters	69,843,701				+0.835 million
	One dose	% Pop	Immune	% pop	New immune today
Total population	249,513,525	75%	210,949,398	63%	+0.175 million
Age 12 to 17	15,176,486	64%	12,765,868	54%	+0.015 million
Age 18 to 64	168,874,428	83%	143,479,478	71%	+0.074 million
Age 65 and over	57,700,736	100%	49,630,282	91%	+0.007 million

Immunity	Full	Partial
US	61.5%	73.4%
UK	69.5%	75.9%
France	73.2%	78.2%
Spain	81.0%	84.8%
Germany	70.5%	73.5%
Italy	74.1%	80.1%
Australia	76.6%	79.3%
Israel	63.7%	70.6%
Canada	77.2%	83.3%
Japan	78.3%	79.7%
Africa	9.1%	14.1%
India	42.7%	60.5%
Brazil	67.0%	77.7%
China	83.6%	87.2%

Global data differs due to sources, timing



State
At least partial immunity as % population
Full immunity as % population

Best
Middle
Worst

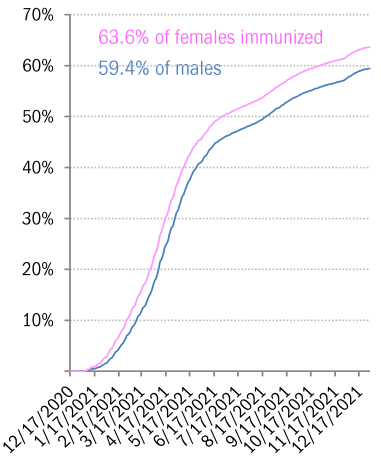
Every American >18 immunized in
581 days
by Aug 2, 2023

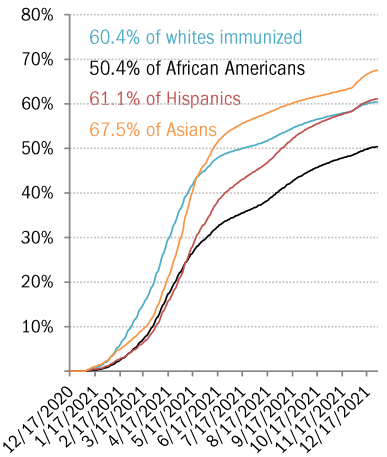
74.8% of population >18 immunized
19.1% previously tested positive
93.9% vs 60% adult herd immunity

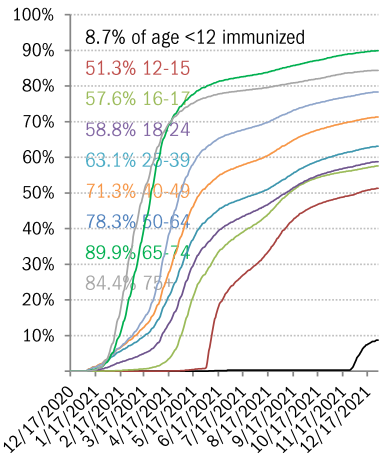
As of Dec 30

AK					WI					ME
65.0%					68.2%					85.9%
56.3%					62.0%					75.8%
WA	ID	MT	ND	MN	IL	MI		NY	VT	NH
75.7%	52.1%	62.1%	62.2%	71.4%	72.0%	63.5%		84.0%	89.3%	95.0%
67.9%	46.2%	54.0%	52.6%	65.4%	64.0%	56.8%		71.8%	77.4%	67.2%
OR	NV	WY	SD	IA	IN	OH	PA	NJ	MA	
74.0%	69.5%	55.9%	70.9%	64.9%	57.9%	60.4%	78.2%	83.7%	90.6%	
66.5%	56.4%	47.5%	57.1%	59.0%	52.0%	55.2%	63.9%	70.5%	74.6%	
CA	UT	CO	NE	MO	KY	WV	VA	MD	CT	RI
82.7%	67.4%	74.6%	66.4%	62.3%	62.5%	61.9%	79.0%	80.4%	88.6%	89.0%
66.1%	58.8%	66.2%	59.9%	53.0%	54.2%	55.1%	68.0%	70.4%	74.6%	76.5%
	AZ	NM	KS	AR	TN	NC	SC	DC	DE	
	67.3%	80.7%	69.3%	62.7%	58.7%	76.4%	62.8%	88.5%	76.7%	
	57.0%	66.2%	57.0%	51.2%	51.4%	56.7%	53.1%	67.6%	64.2%	
			OK	LA	MS	AL	GA			
			66.0%	57.4%	55.3%	58.5%	61.3%			
			53.5%	50.3%	48.1%	47.6%	51.1%			
HI			TX					FL		PR
88.2%			66.8%					74.5%		88.9%
63.6%			57.0%					63.4%		77.0%

The demographics of US vaccination



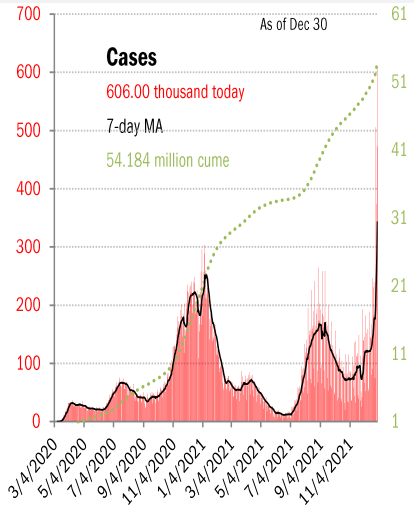


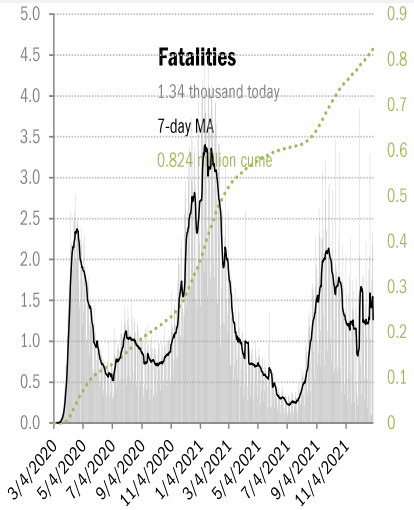


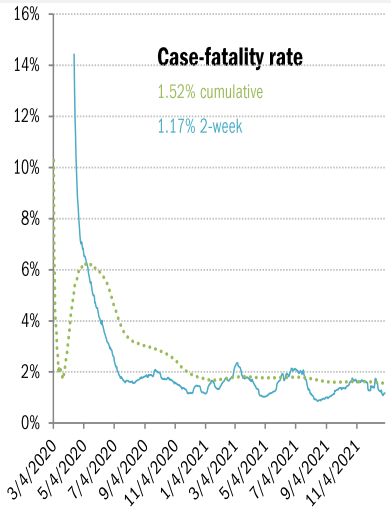
Source: CDC, CDC, Our World in Data, TrendMacro calculations

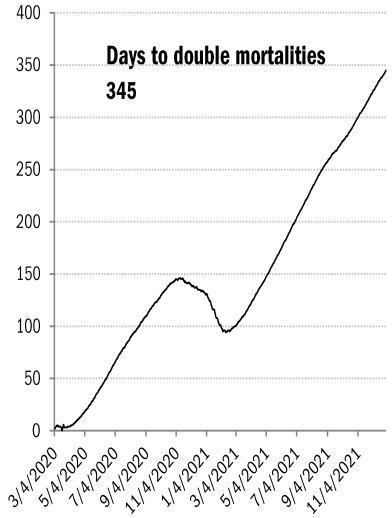
US deep-dive

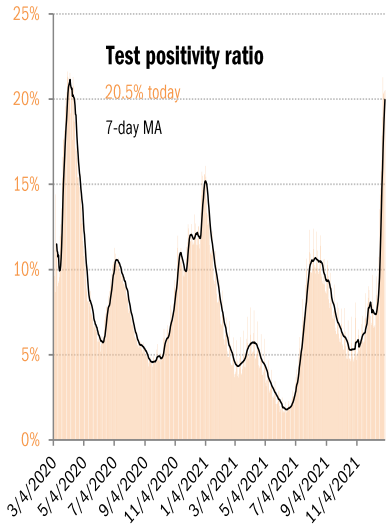
National and state-by-state data do not line up because of different sources

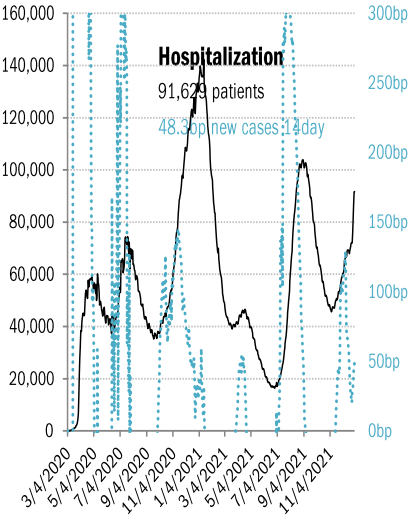


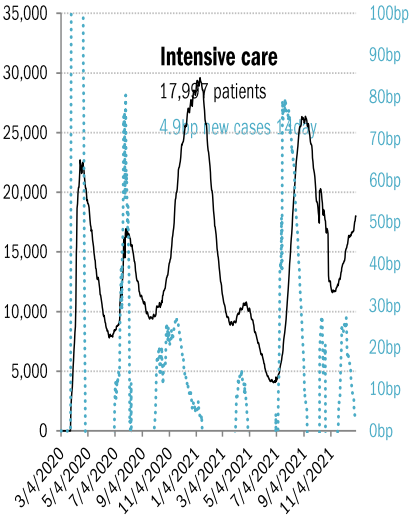


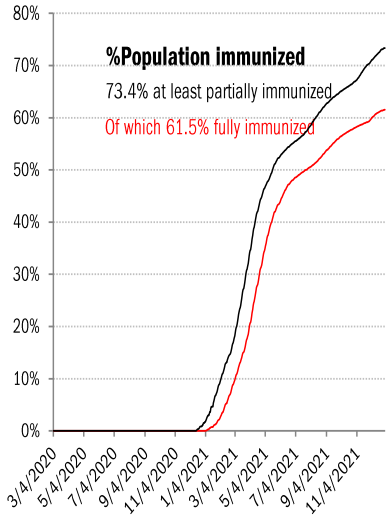












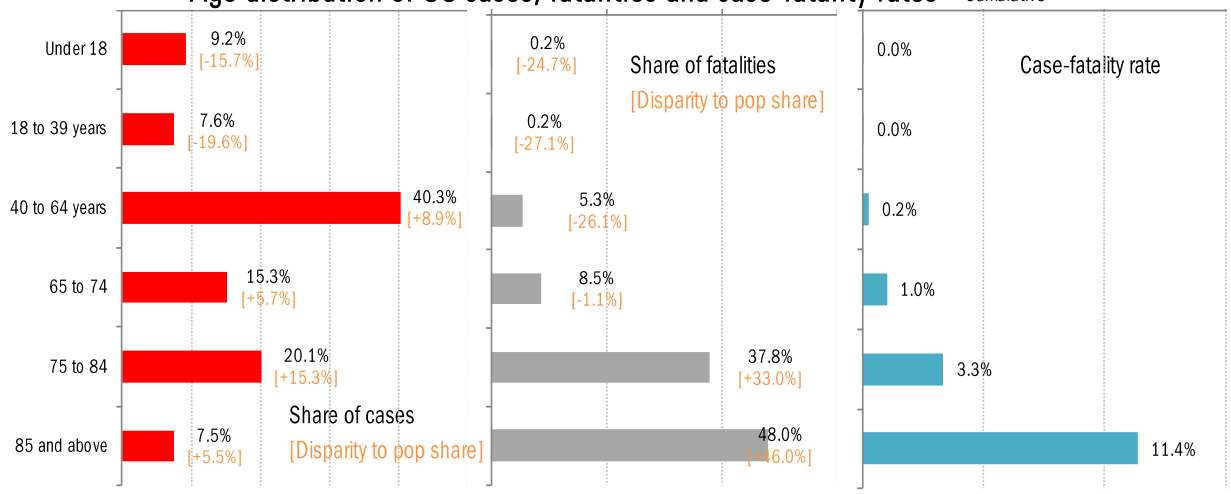
Source: Johns Hopkins, Covid Act Now, TrendMacro calculations

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

Updates weekly on Sundays

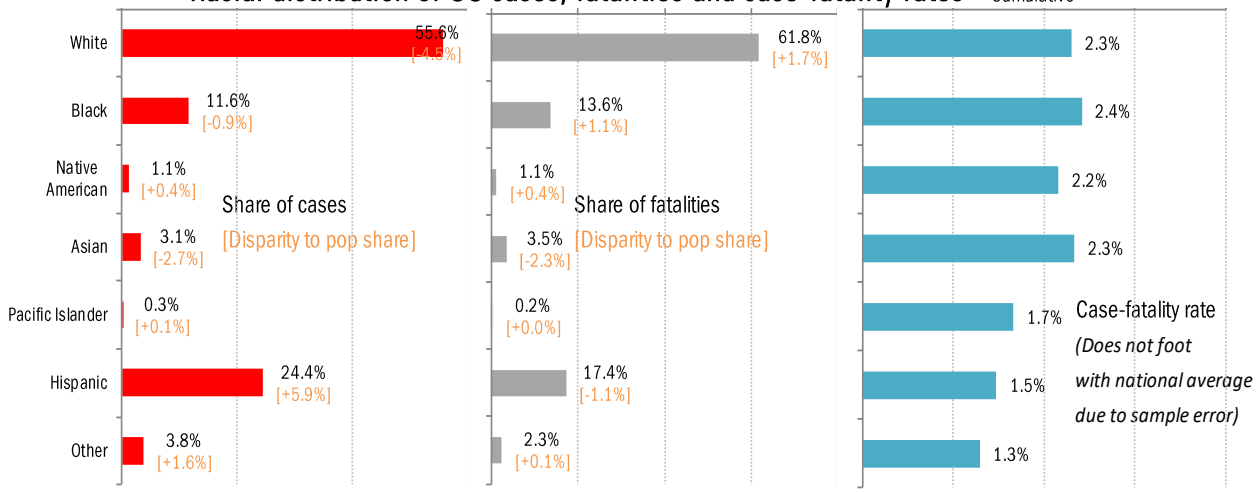
Age distribution of US cases, fatalities and case-fatality rates

Cumulative



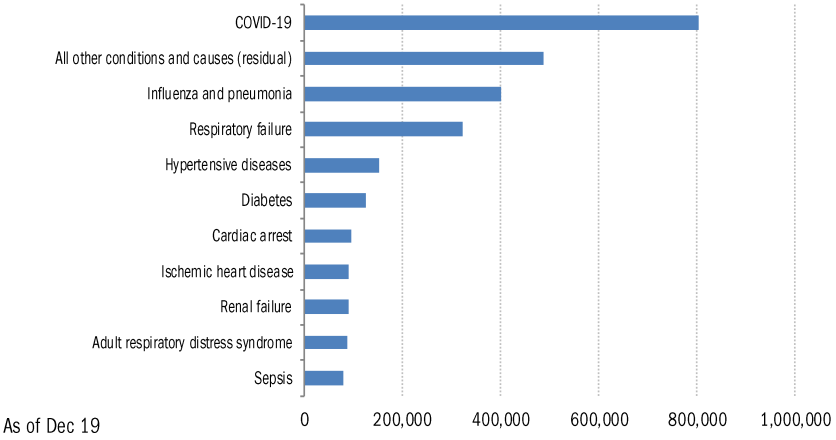
Racial distribution of US cases, fatalities and case-fatality rates

Cumulative



Comorbidities

Top-ten joint causes of Covid mortalities, cumulative



As of Dec 19

For over 5% of these deaths, COVID-19 was the only cause mentioned on the death certificate. For deaths with conditions or causes in addition to COVID-19, on average, there were 4.0 additional conditions or causes per death.

Source: Distributions CDC, Comorbidities CDC, TrendMacro calculations

Recommended reading

The T-Cell Covid Cavalry
Wall Street Journal
December 30, 2021

Waning of SARS-CoV-2 booster viral-load reduction effectiveness
Matan Levine-Tiefenbrun
medRvx
December 27, 2021

CBS Edits Out Own Reporter SLAMMING School Closures Causing Mental Health Crisis
Curtis Houck
MRC Newsbusters
December 27, 2021

Packers QB Aaron Rodgers says science that can't be questioned is propaganda
Victor Morton
Washington Examiner
December 28, 2021

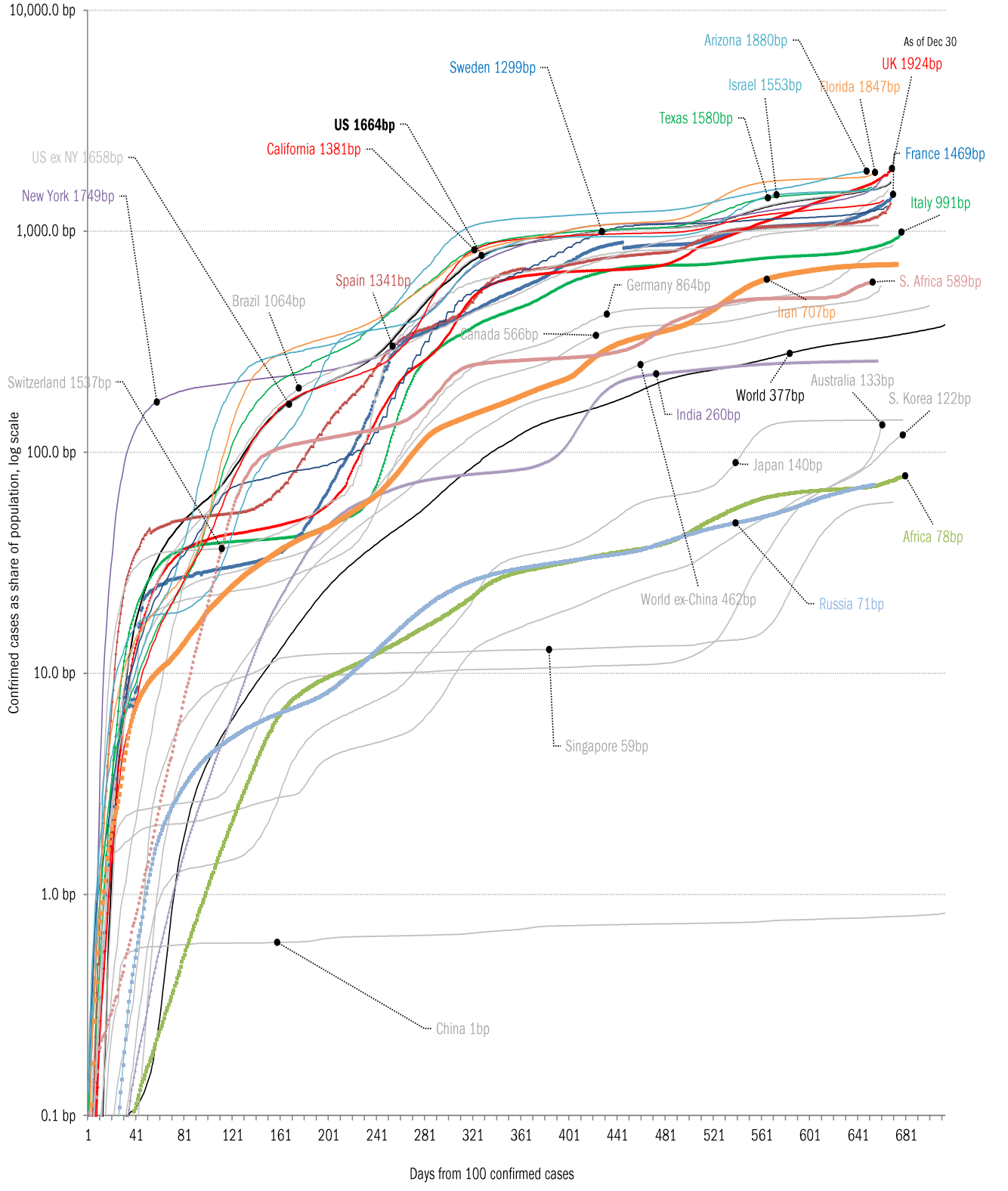
Biden says if medical team advises it, he'll issue domestic travel vaccine requirement
Alex Gangitano
The Hill
December 28, 2021

Meme of the day

Source: Our beloved clients, Power Line blog "The Week in Pictures" and CTUP

The coronavirus case accelerometer… tracking the world's infection curves

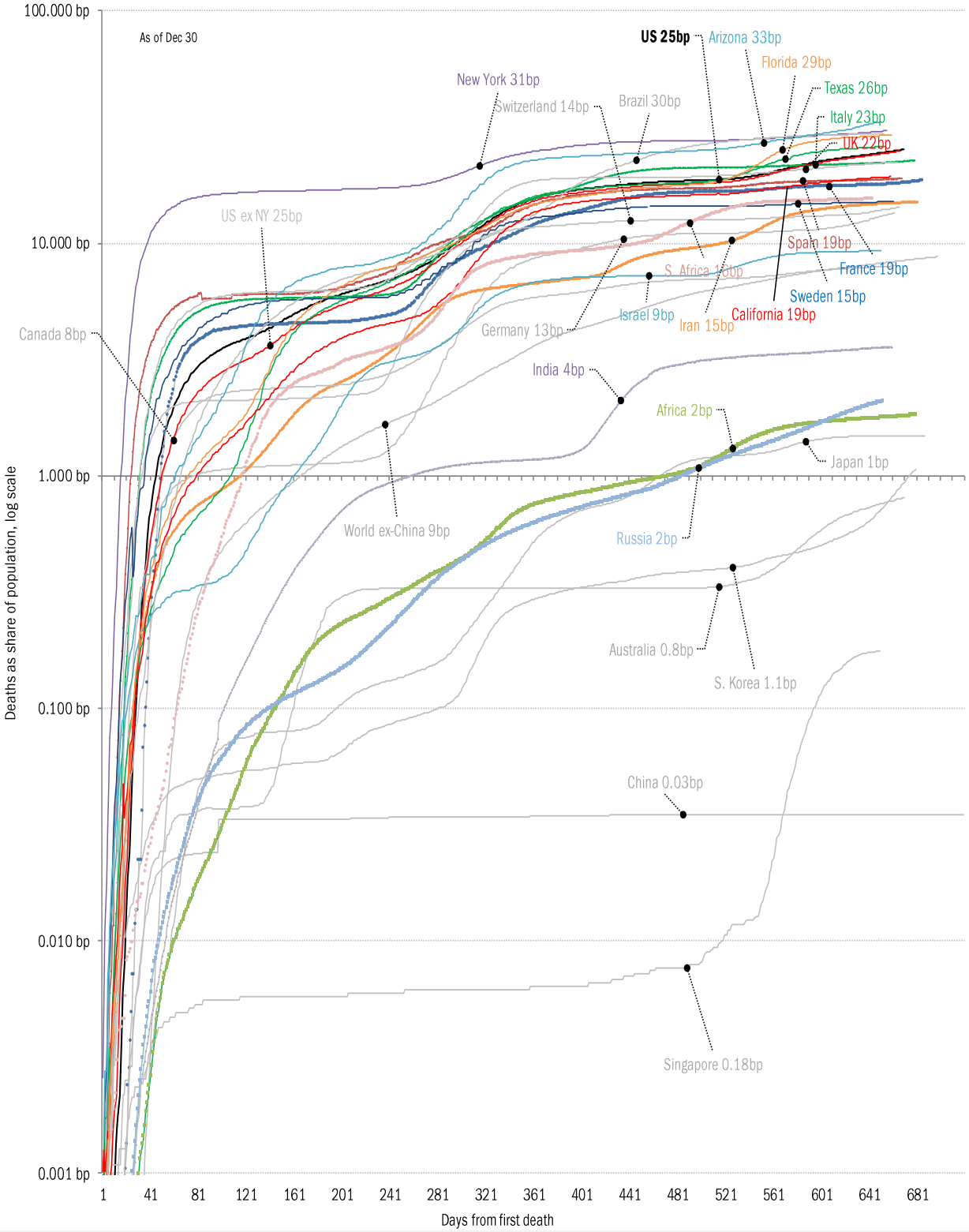
Share of infected population from first day with 100 confirmed cases, log scale



Source: Johns Hopkins, TrendMacro calculations

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

Share of deceased population from day of first fatality, log scale

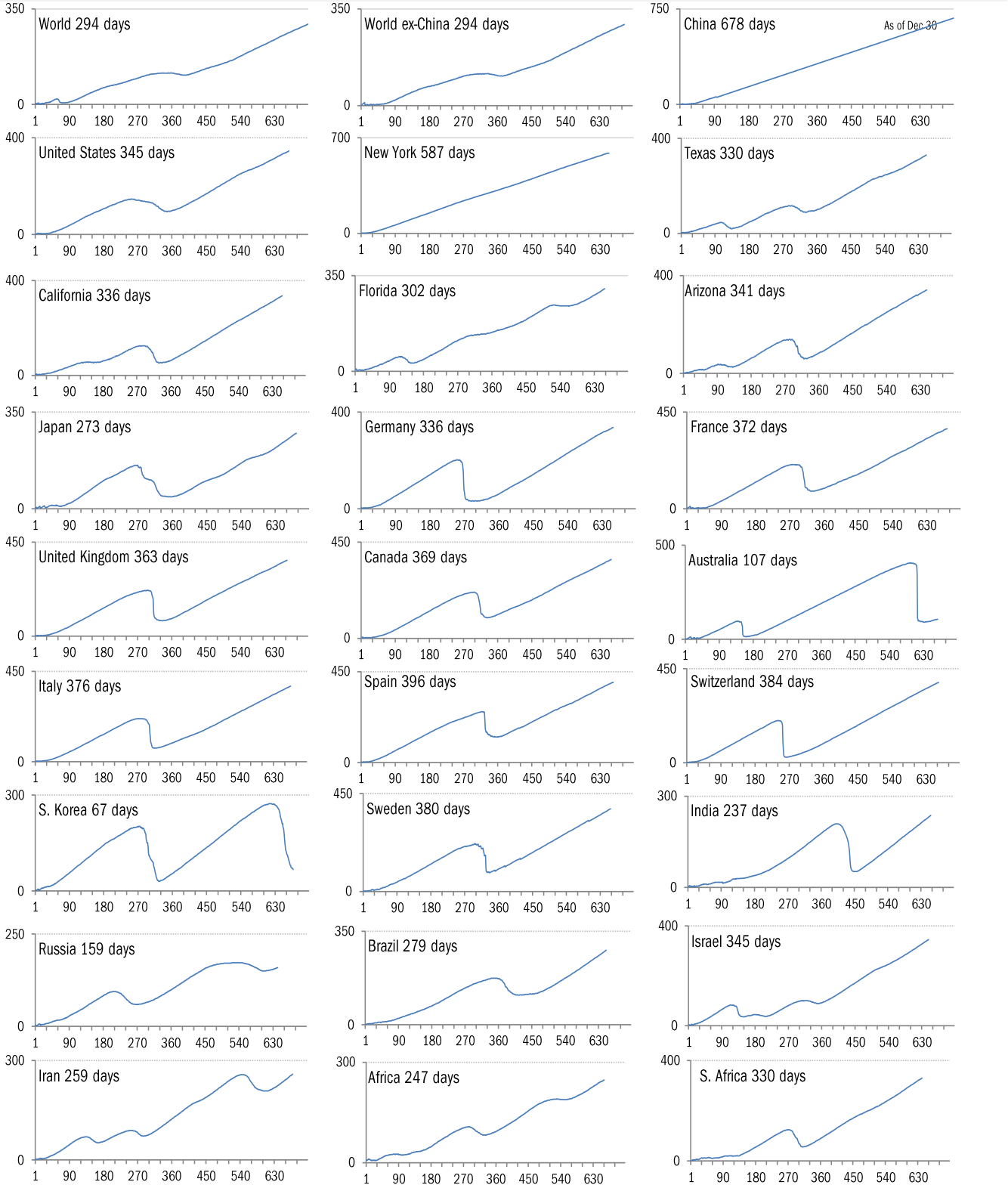


Source: Johns Hopkins, TrendMacro calculations

"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

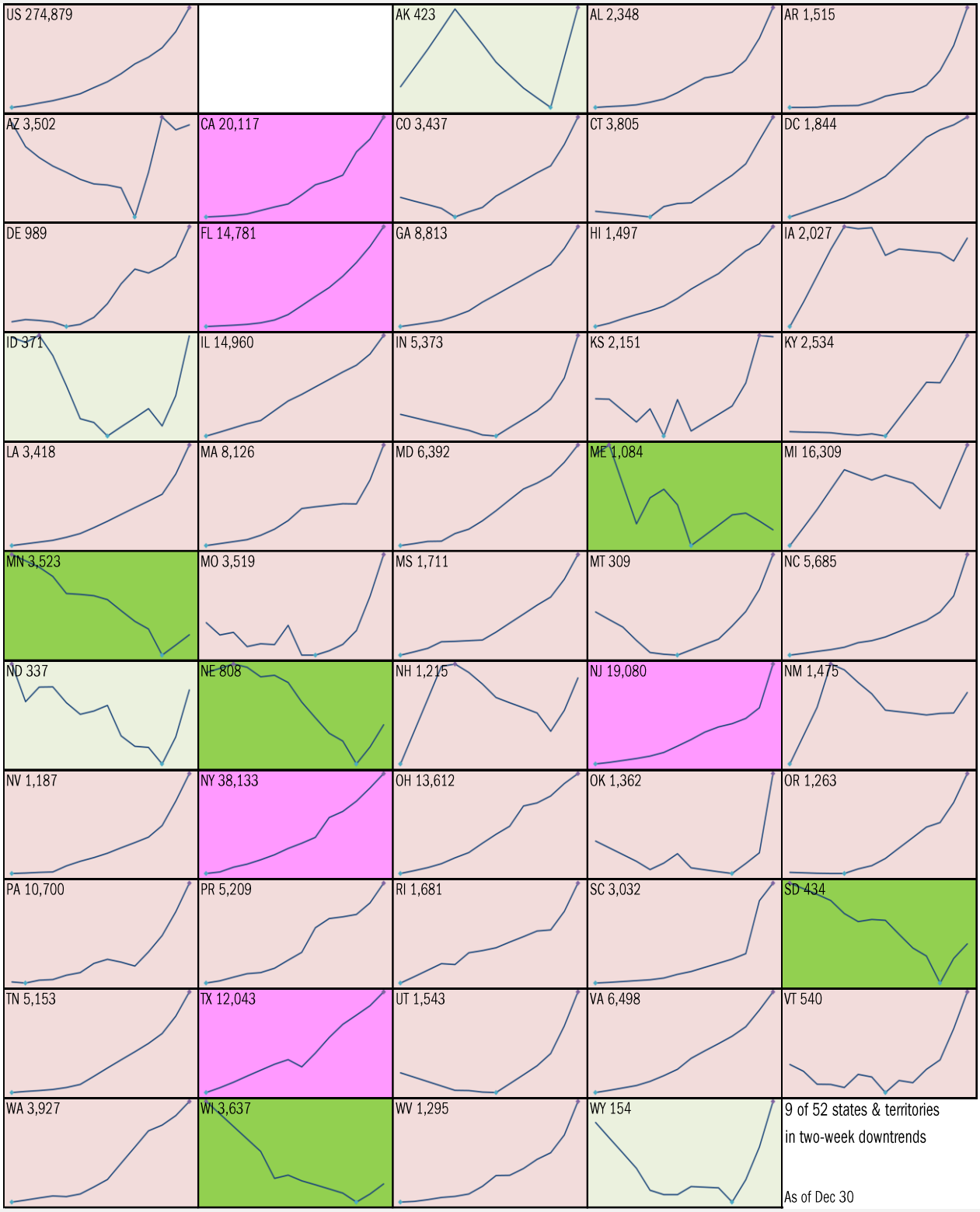


Source: Johns Hopkins, TrendMacro calculations

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

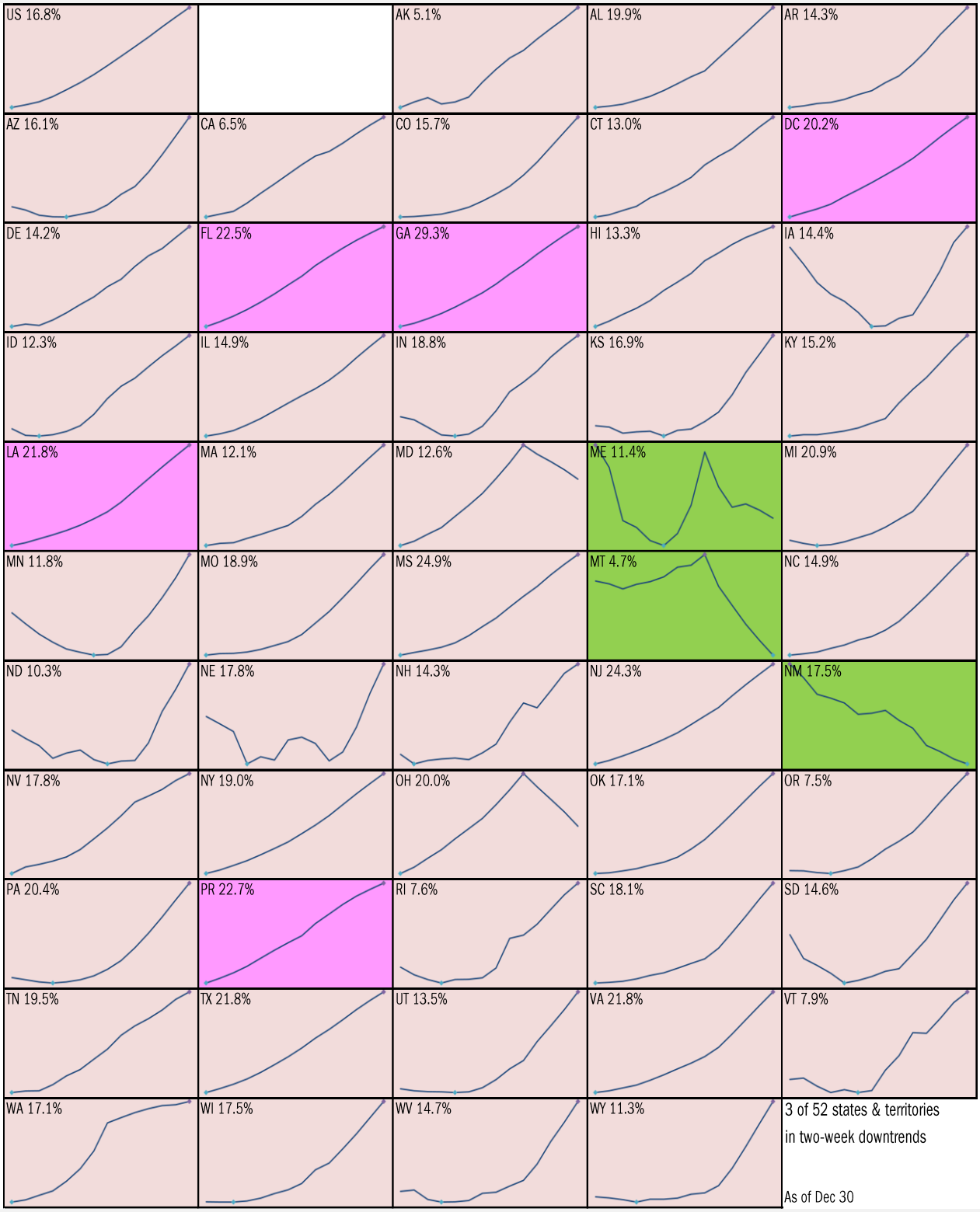


Source: Johns Hopkins, TrendMacro calculations

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

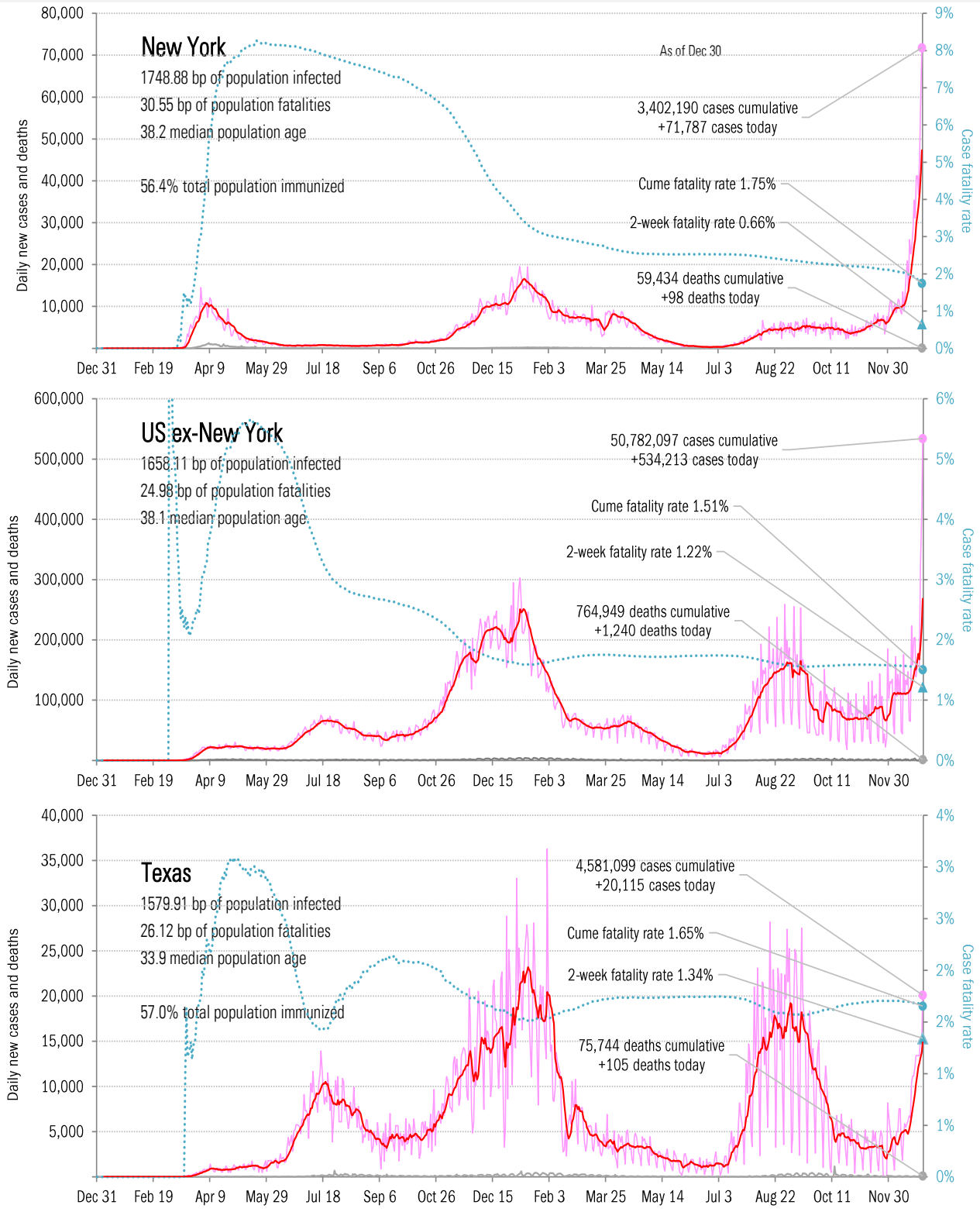
Downward trajectory Five best Upward trajectory Five worst



Source: Covid Act Now, TrendMacro calculations

From Ground Zero to the Rio Grande

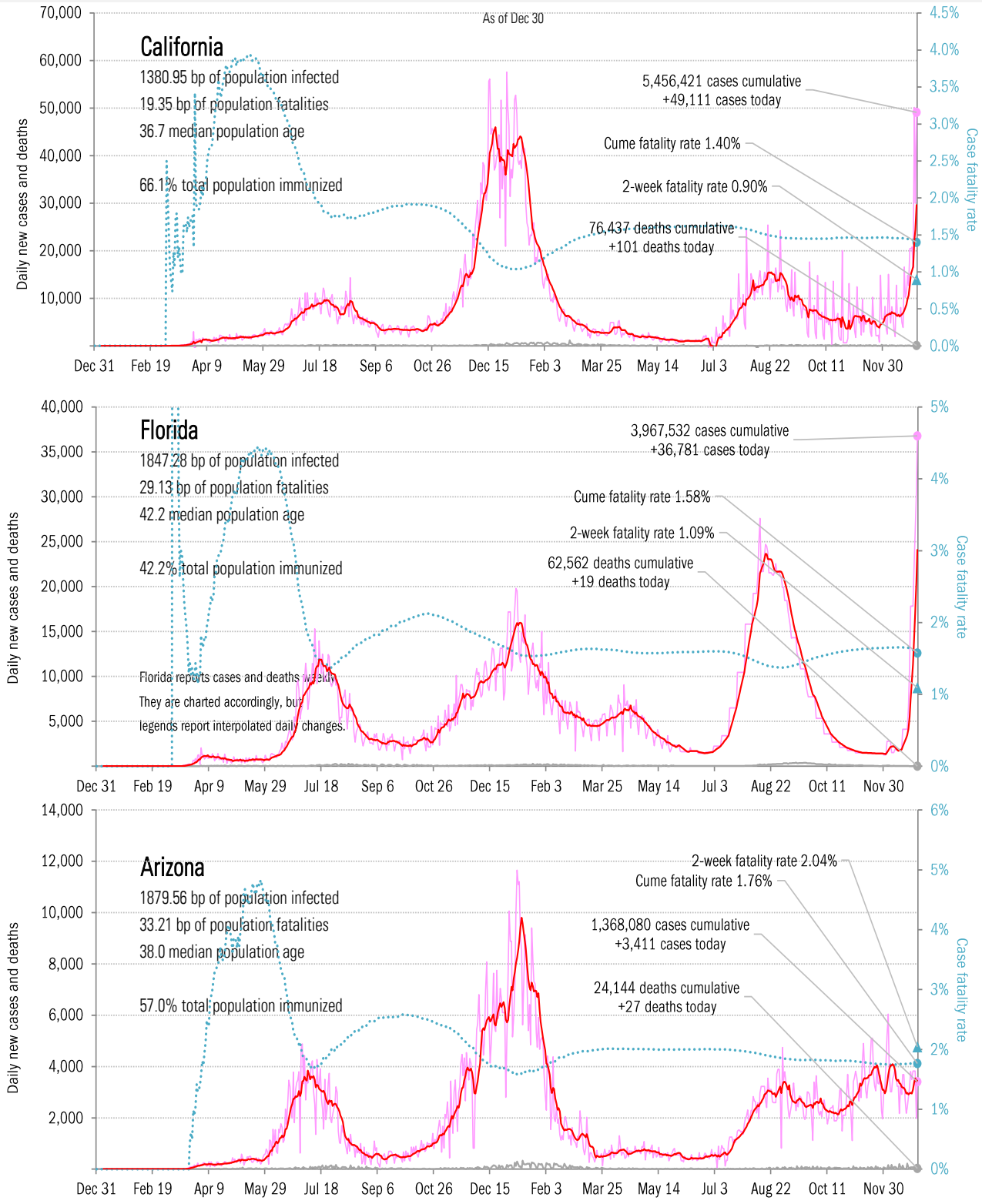
Cases: 7-day average and daily Deaths: Daily



Source: Johns Hopkins, TrendMacro calculations

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

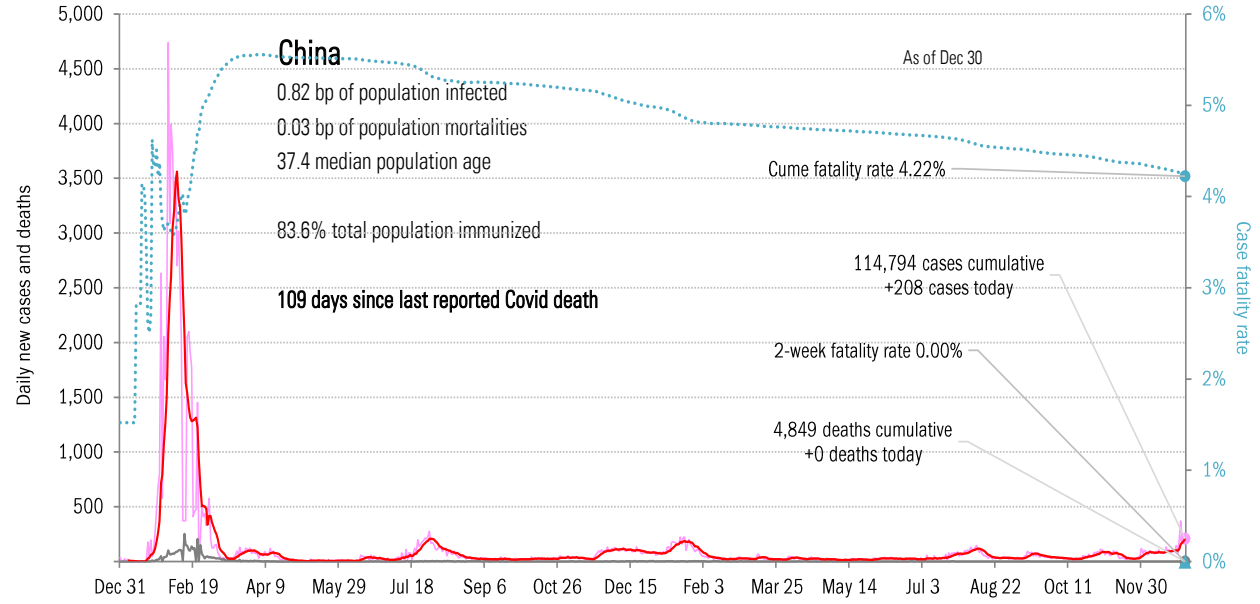
Cases: 7-day average and daily Deaths: Daily

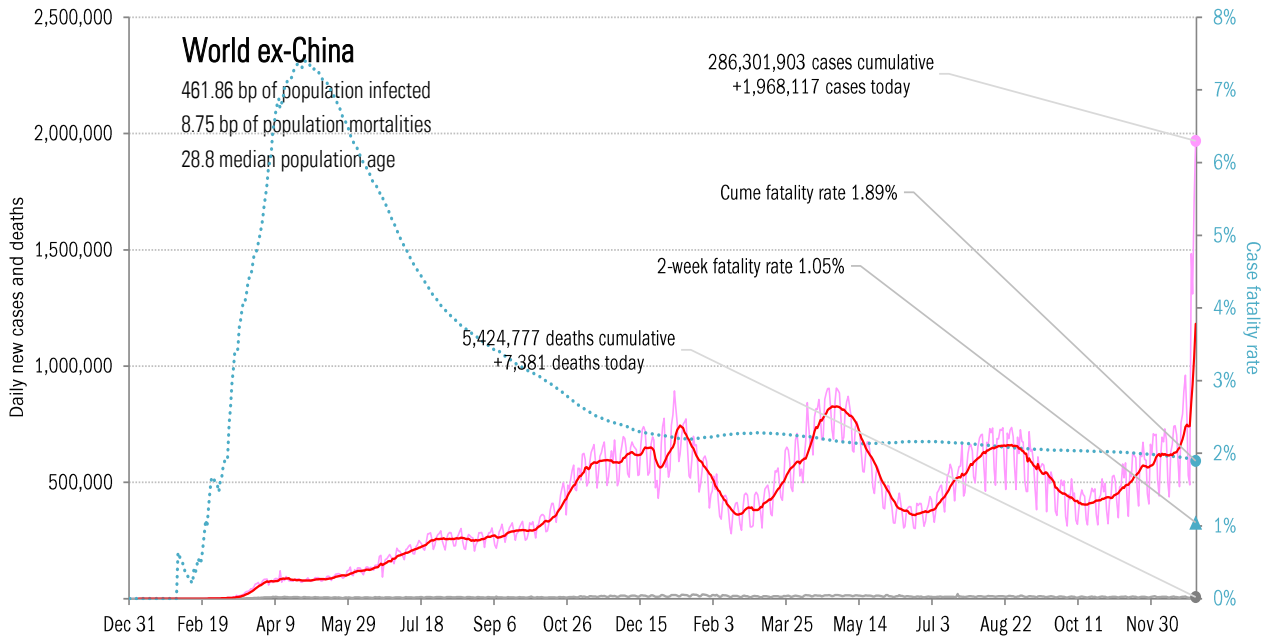


Source: Johns Hopkins, TrendMacro calculations

Patient zero… and then everyone else

Cases: 7-day average and daily Deaths: Daily

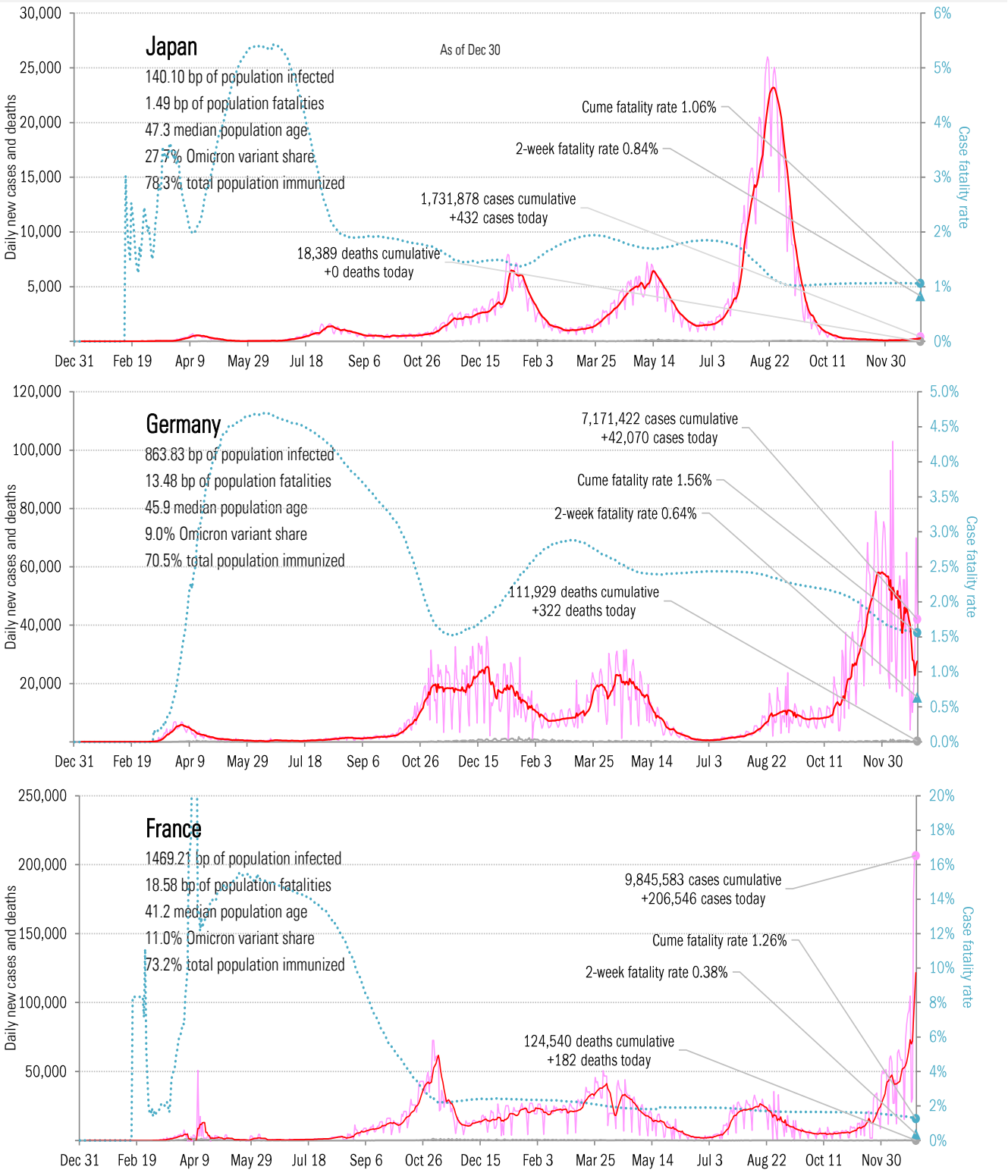




Source: Johns Hopkins, TrendMacro calculations

Impact in the largest economies

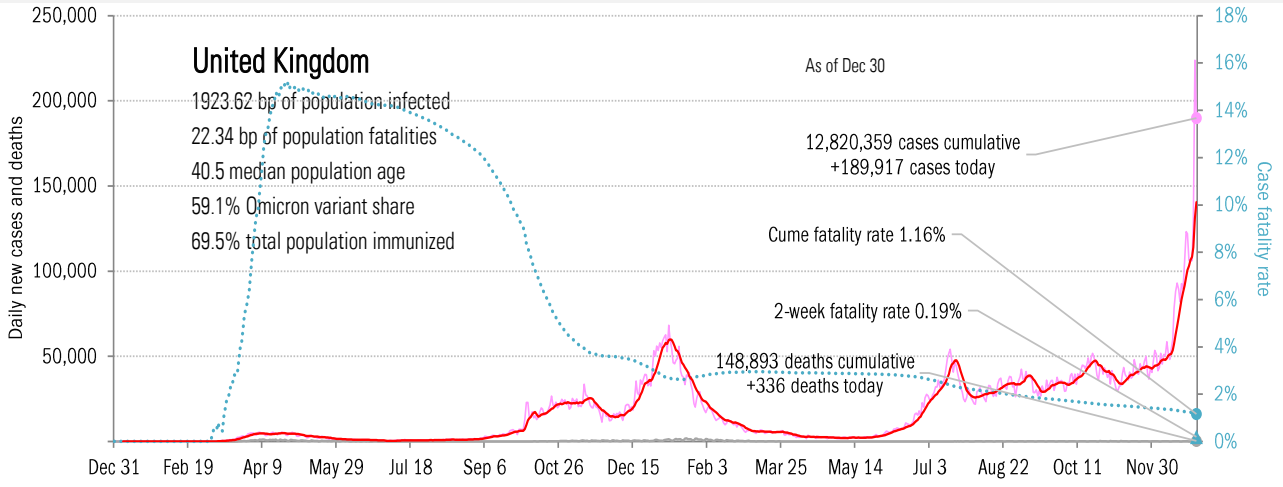
Cases: 7-day average and daily Deaths: Daily

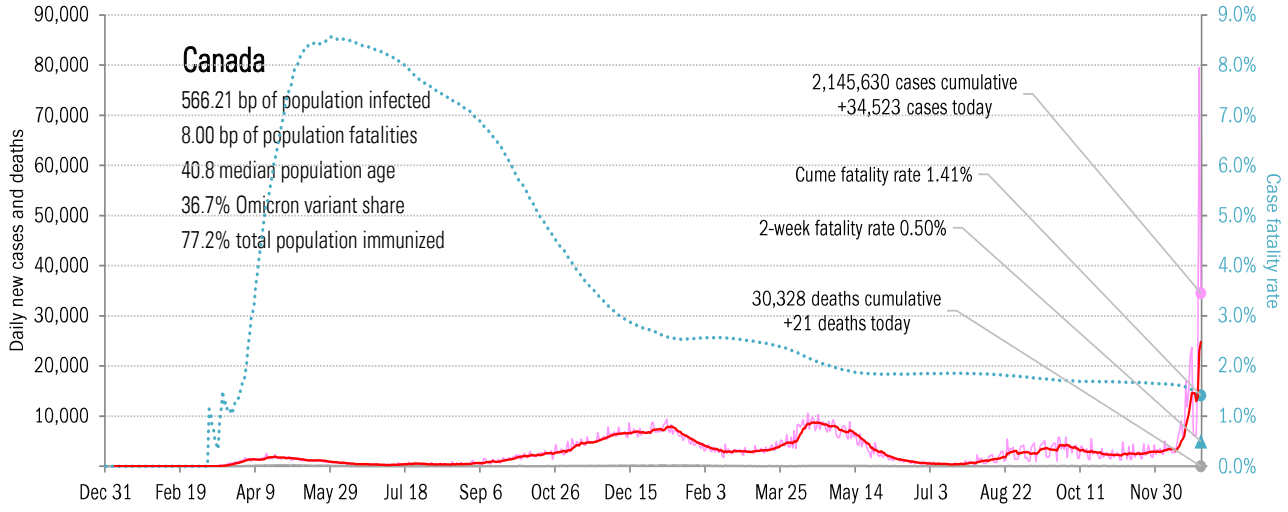


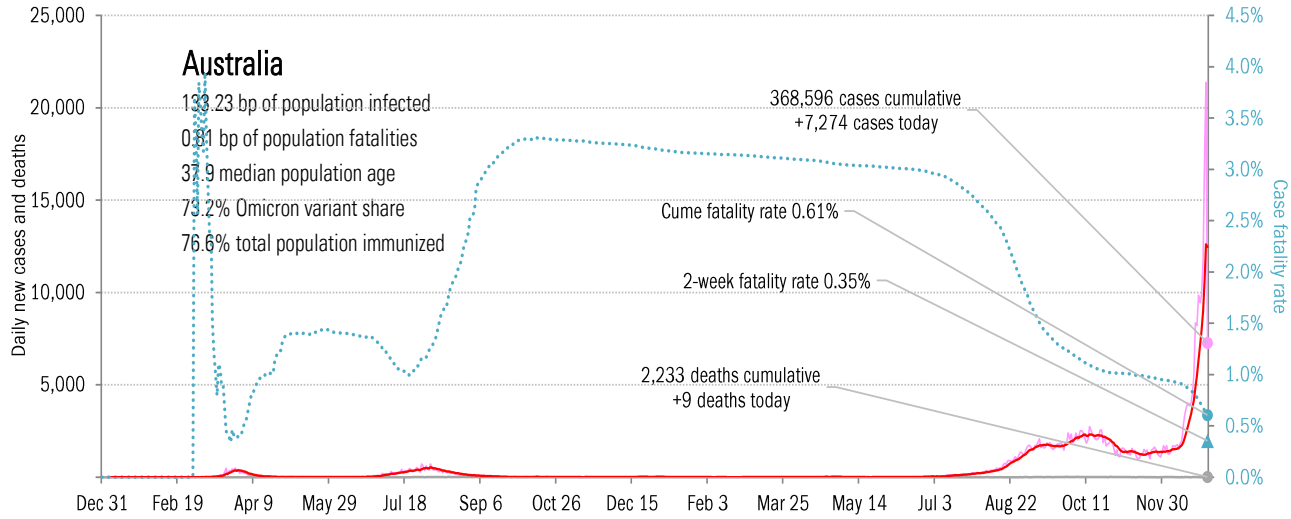
Source: Johns Hopkins, TrendMacro calculations

Impact in The Anglosphere

Cases: 7-day average and daily Deaths: Daily



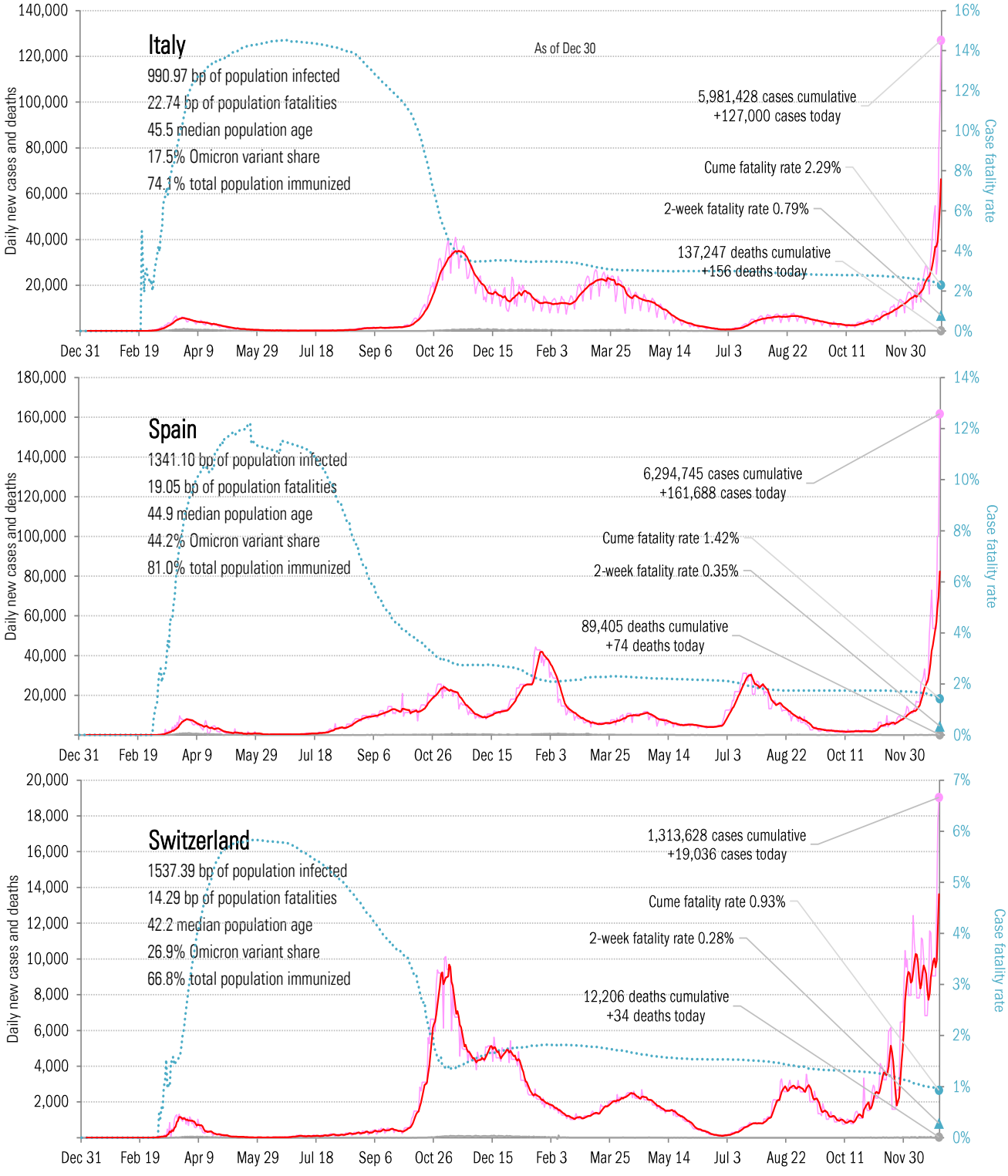




Source: Johns Hopkins, TrendMacro calculations

Impact in continental Europe

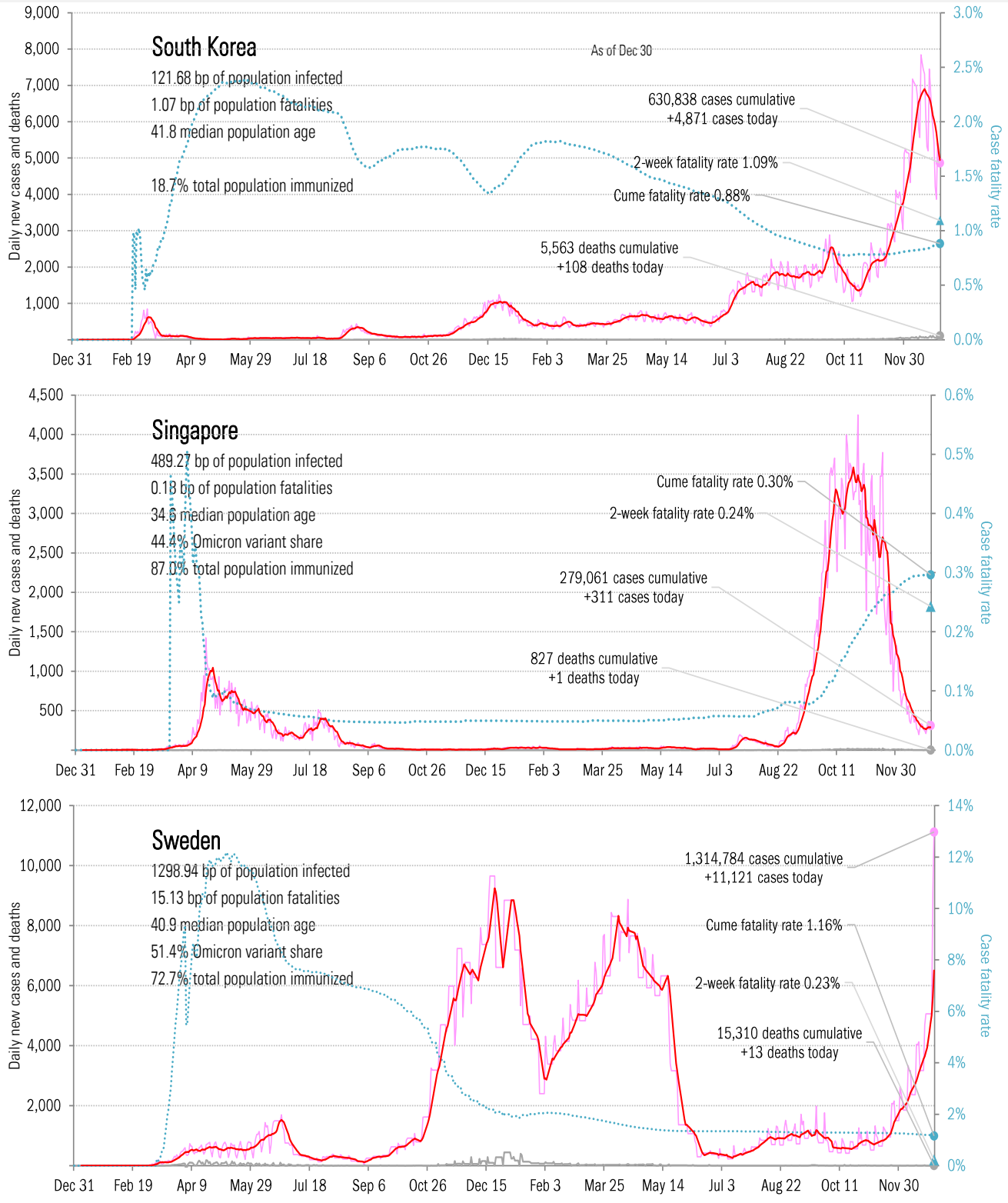
Cases: 7-day average and daily Deaths: Daily



Source: Johns Hopkins, TrendMacro calculations

Impact in other hot-spots

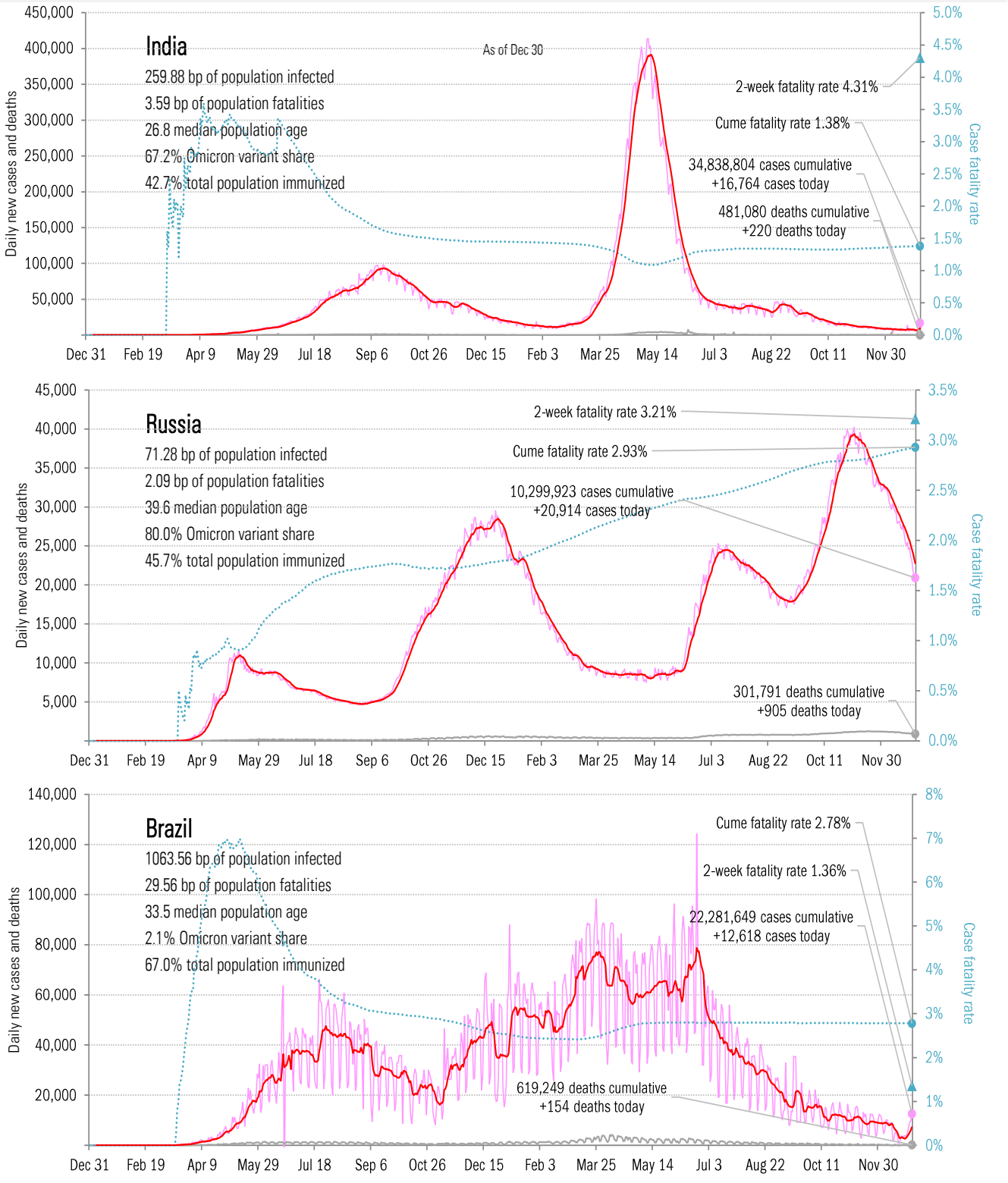
Cases: 7-day average and daily Deaths: Daily



Source: Johns Hopkins, TrendMacro calculations

Impact in the BRICs ex-China

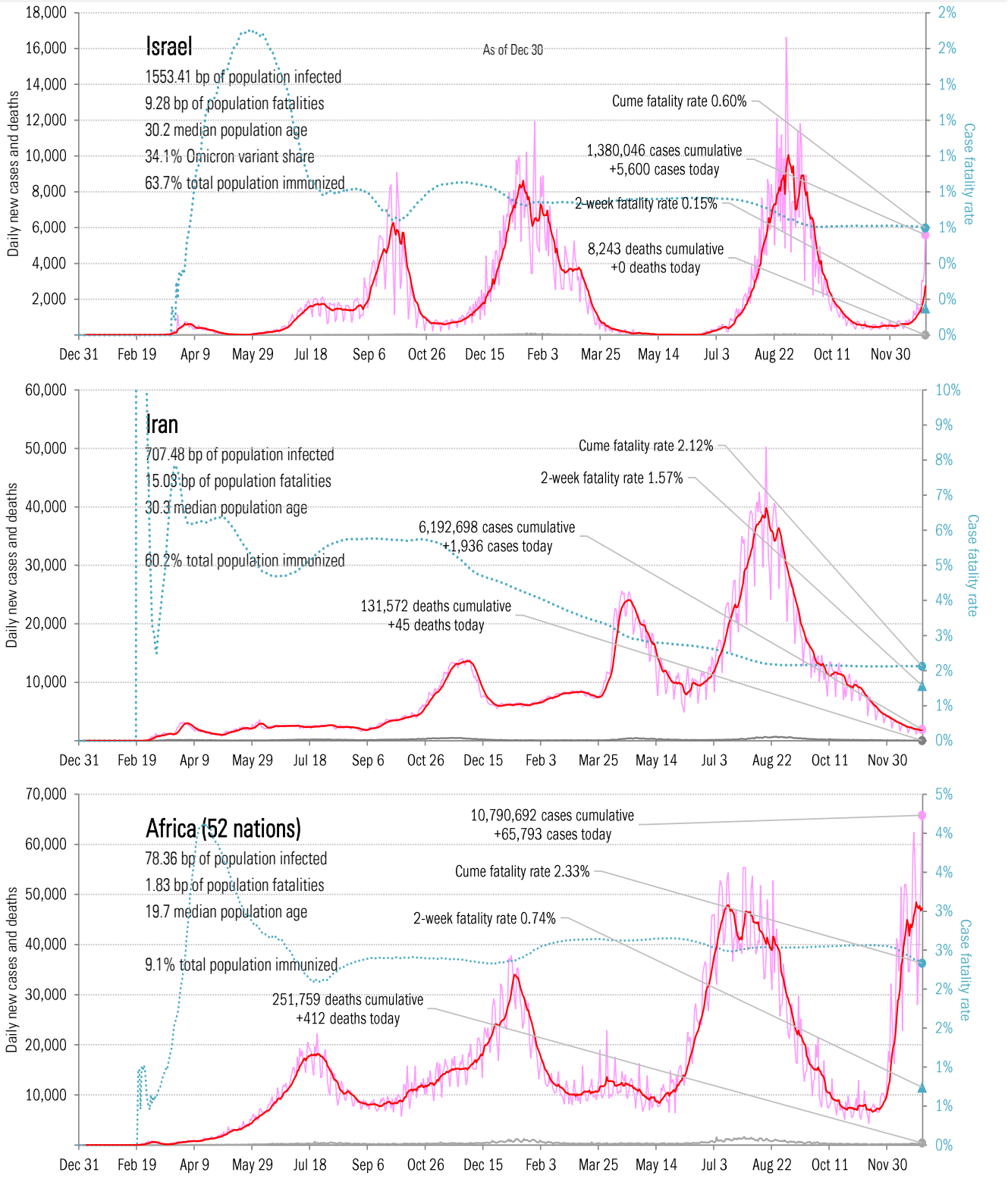
Cases: 7-day average and daily Deaths: Daily



Source: Johns Hopkins, TrendMacro calculations

Impact in the Middle East and Africa

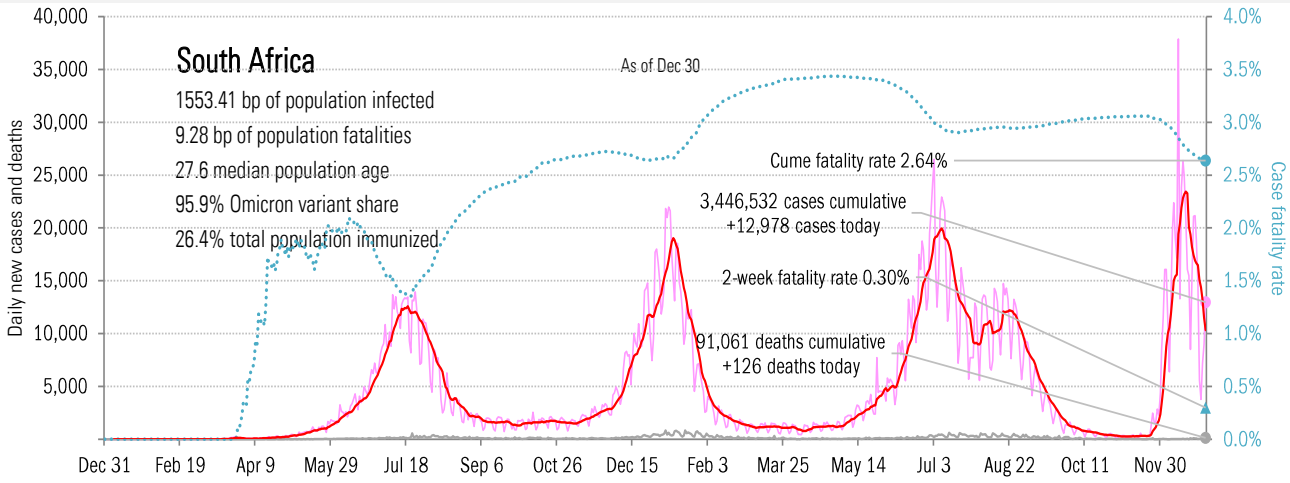
Cases: 7-day average and daily Deaths: Daily



Source: Johns Hopkins, TrendMacro calculations

Impact in Africa, continued

Cases: 7-day average and daily Deaths: Daily



Source: Johns Hopkins, TrendMacro calculations