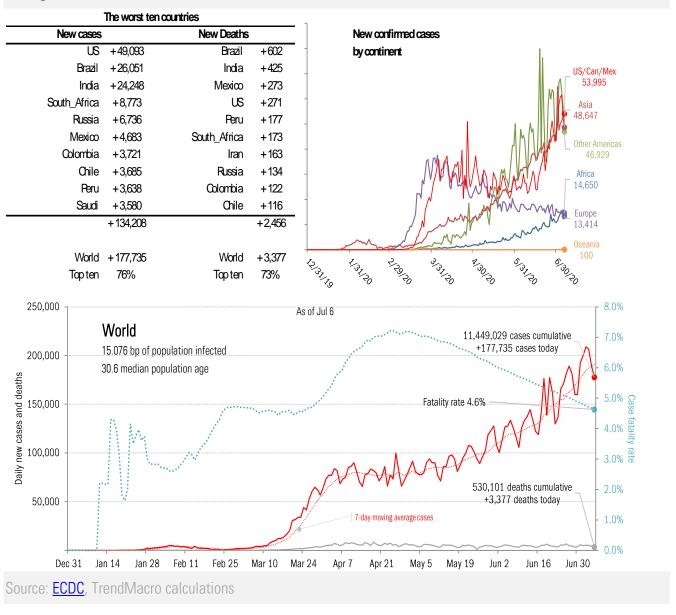


Trend Macrolytics, LLC Donald Luskin, Chief Investment Officer Thomas Demas, Managing Director Michael Warren, Energy Strategist

Data Insights: Covid-2019 Monitor

Monday, July 6, 2020

The global scorecard



For more information contact us: Donald Luskin: 312 273 6766 <u>don@trendmacro.com</u> Thomas Demas: 704 552 3625 <u>tdemas@trendmacro.com</u>

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

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

New cas	es	New Deaths	ew Deaths New in hospital Qurne cases Qurne deaths		eaths	Cume in hospital							
R.	+ 10,059	R.	+29		RL.	+ 161	NY	397,131	I	NY	24,904	NY	89,995
CA	+5,410	TX	+29		AZ	+93	CA	260,158	5	NJ	15,211	NJ	20,237
AZ	+3,536	NJ	+22		ан	+61	R.	200,111	I	MA	8,183	R.	16,201
ΤХ	+3,449	CA	+18		IN	+38	ТХ	195,239	9	IL	7,230	GA	11,775
GA	+2,197	MA	+11		MD	+37	NJ	173,402	2	PA	6,753	MA	11,463
LA	+ 1,937	LA	+10		GA	+32	IL	148,373	3	CA	6,331	MD	11,071
SC	+1,461	TN	+9		MN	+31	MA	109,974		MI	6,218	СТ	10,411
NC	+1,329	NY	+8		VA	+27	AZ	98,089		CT	4,335	VA	9,576
TN	+1,291	MD	+7		NM	+18	GA	95,516		FL.	3,832	СН	8,172
AL	+ 1,091	SC	+7		υT	+17	PA	89,854		LA	3,288	IN	7,254
	+31,760		+ 150	· <u> </u>	-	+515		1,767,84			86,285	·	196,155
All states	+42,551	All states	+209	All sta	ates	+590	All states	2 881 01	6	All states	122,673	All states	248,745
Topten	75%	Topten	72%	Тор		87%	Topten	61%	•	Topten	70%	Topten	79%
	10/0		12/0	iop							10/0		10/0
Fewer da	aily cases		Fewer	new death		most impr	oved US state Fewer r	es new hospi	talizatio	ns		Most recoverie	s
TX	-4,809			CA	-32			FL	-84			MN	+5,270
MS	-1,678			AZ	-13			MS	-60			TX	+3,413
FL	-1,399			SC	-13			GA	-58			СH	+557
CA	-1,100			MA	-12			MD	-24			AZ	+458
GA	-629			MS	-11			TN	-24			W	+408
04	-025			NO	-11			IIN	-24			VVI	+-100
60,000 ₋													г 9.0%
00,000	Unite	d Ctotoo											5.070
		d States		:		As	of Jul 6					٨	- 8.0%
50,000 -	88.685 bp of population infected				2.88			38,635 cases cumulative					
50,000	38.1 median population age							+49,093 cases today				- 7.0%	
										,	,	► N [/]	- 1.0%
10.000												$\sim M$	0.00/
40,000 -								م		••••••	·····	l ¥ l	- 6.0%
40,000 -	35,514,801 tests cume								F -1-				5.000
						Λ	A M		Fata	ality rate 4.3	31%	$-\frac{1}{2}$	- 5.0%
30,000 -							r tym	hА	A				•
30,000 - 20.000 -		654,291 tes	ts today	Å. A	my	~~~ /	$\langle V \rangle$	11/ 17	AΝ			17	- 4.0%
			_	m			/	IV V			$\Lambda \Lambda$	¥	
20,000 -			t			N//			V.	V V	w V i		- 3.0%
		6.5% positiv	ve today				7 day movin	g average casi	20				
			Mr	whenh	m	1 from	r -udy movin,	g average cas	50				- 2.0%
10,000 -					1	N/				126,1	90 deaths o	cumulative	
					J	7				+	271 deaths	today	- 1.0%
					-]/		~~~~~~		~ -	-			
					1			v~ 🗸	\sim	\sim			0.0%

Source: States and test data Covid Tracking Project, US data ECDC, TrendMacro calculations

Recommended reading

Coronavirus pandemic may not have started in China, experts say

Sarah Knapton *Sydney Morning Herald* July 6, 2020

Immunity to COVID-19 is probably higher than tests have shown *Karolinska Institutet* June 29, 2020

SARS-CoV-2 T-cell epitopes define heterologous and COVID-19-induced T-cell recognition

Annika Nelde et al. *Research Square* June 17, 2020

<u>Robust T cell immunity in convalescent individuals with</u> <u>asymptomatic or mild COVID-19</u>

Takuya Sekine et al. *bioRvx* June 29, 2020

Covid-Like Virus Was Sent to Wuhan in 2013, Sunday

Times Says Thomas Seal *Bloomberg* July 5, 2020

<u>COVID-19 Herd Immunity Is Much Closer Than</u> Antibody Tests Suggest, Say 2 New Studies

Ronald Bailey *Reason* July 1, 2020

How You Get Your Berries: Migrant Workers Who Fear Virus, but Toil On

Tracey Tully *New York Times* July 5, 2020

Scalia Says Coronavirus Economic Recovery Better Than Projected

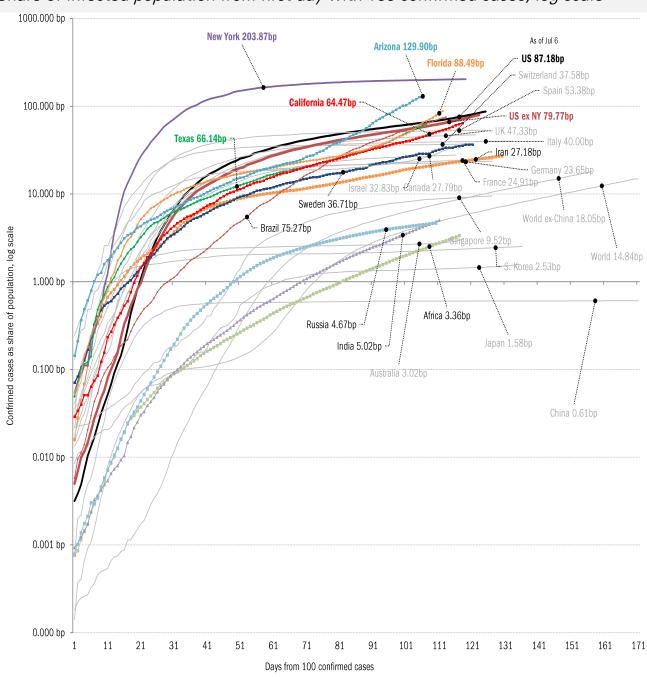
Elizabeth Dexheimer *Bloomberg* July 5, 2020

<u>Revealed: Seven year coronavirus trail from mine</u> <u>deaths to a Wuhan lab</u>

George Arbuthnott , Jonathan Calvert and Philip Sherwell *Sunday Times* July 4, 2020



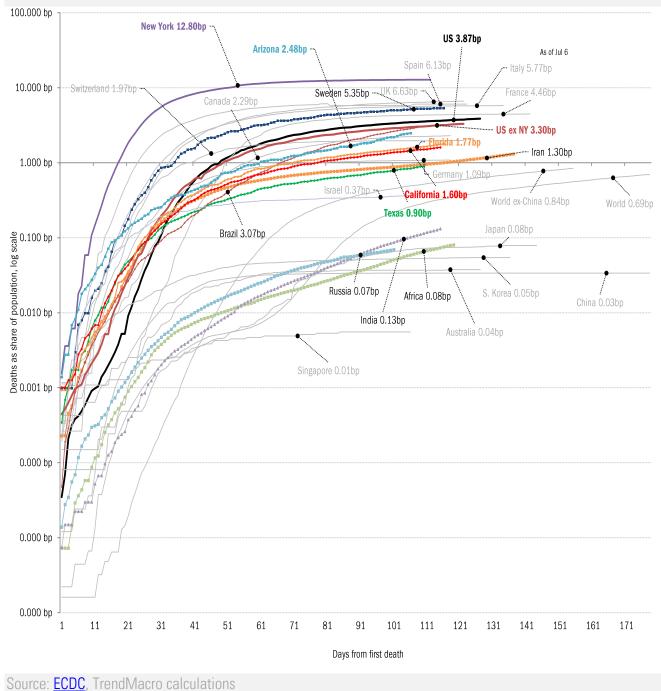
Source: Our beloved clients, and Power Line blog "The Week in Cartoons"



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

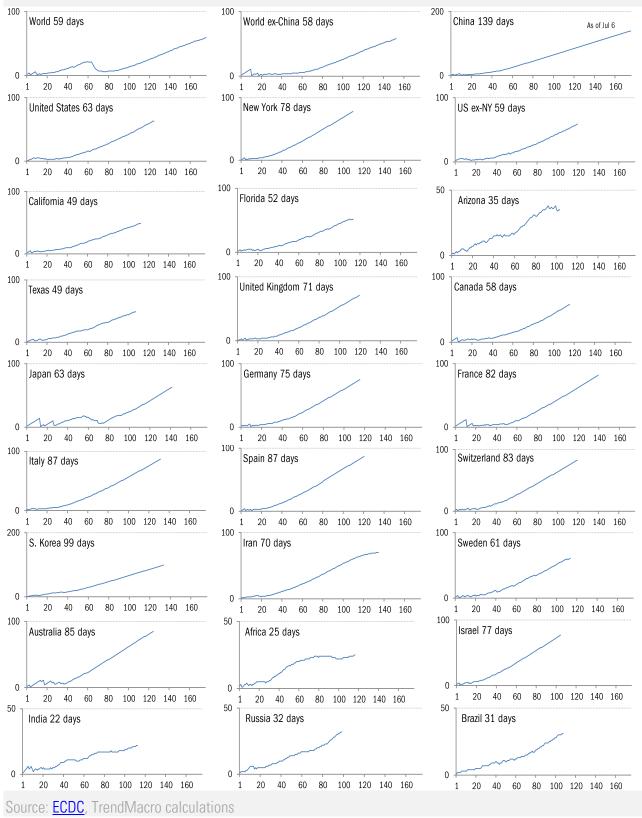
Source: ECDC, TrendMacro calculations

The coronavirus <u>mortality</u> accelerometer ... tracking the world's fatality curves *Share of deceased population from day of first fatality*

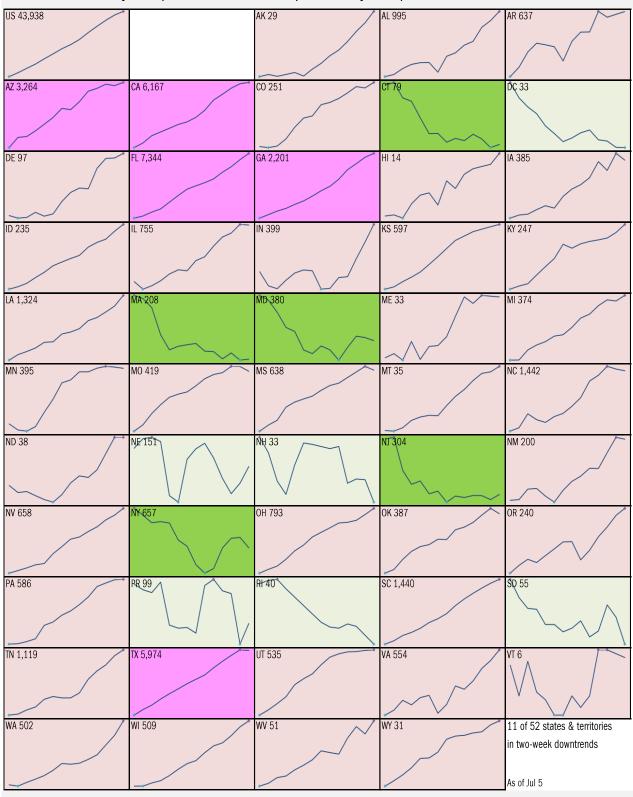


Our most reliable evidence of slowing exponential growth of Covid-2019

Vertical: number of days it takes to double deaths Horizontal: days from first death

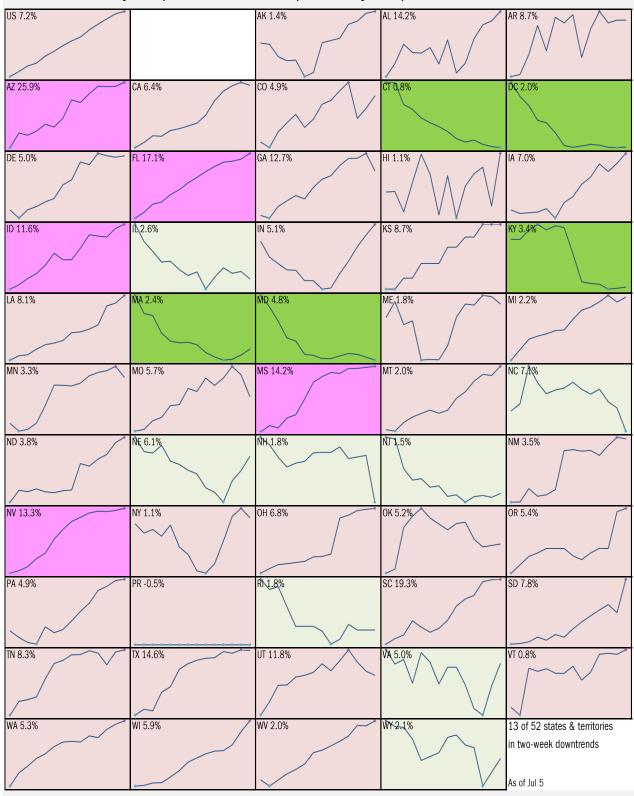


Requirement to <u>Open Up America Again</u>: 14-day "downward trajectory" in new cases *14-day moving average, last 14 days Most recent value displayed* • High • Low Downward trajectory Five best Upward trajectory Five worst



Source: Covid Tracking Project, TrendMacro calculations

Alt requirement to <u>Open Up America Again</u>: 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

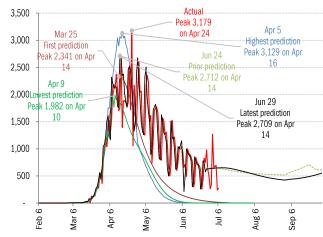


Source: Covid Tracking Project, TrendMacro calculations

Reality-checking the models: actuals versus IHME predictions

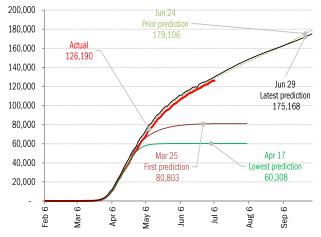
New daily fatalities

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

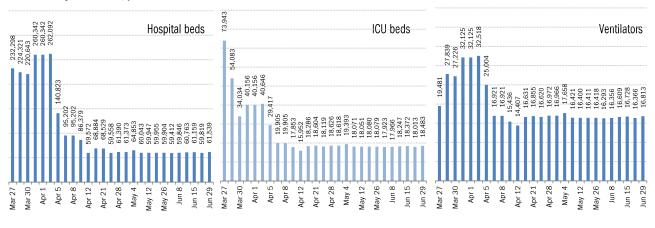


Cumulative fatalities

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

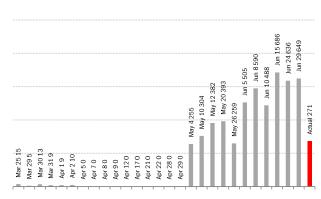


Healthcare system stress, peak estimated at each model revision



Source: ECDC, IHME, TrendMacro calculations

For this day, versus all model mean predictions

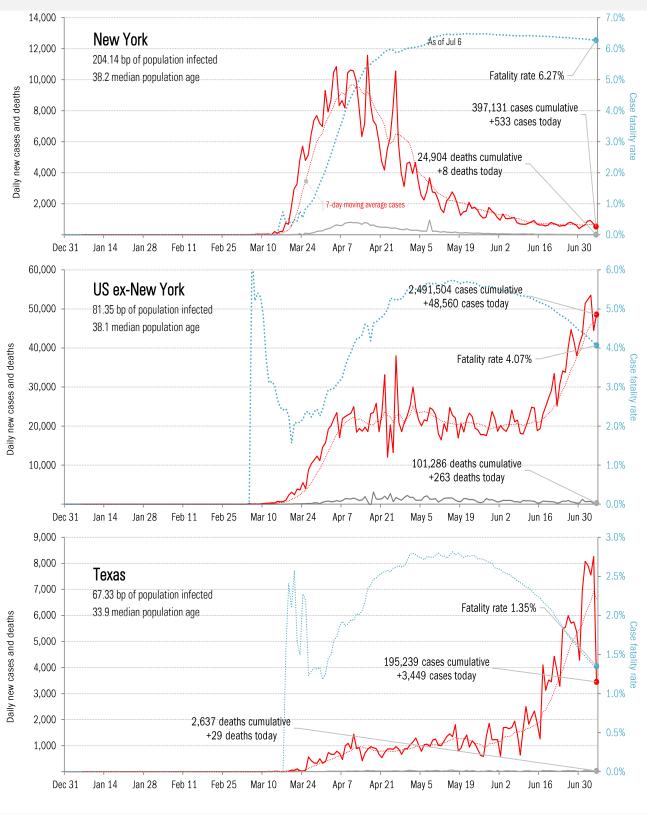


For this day, versus all model mean predictions

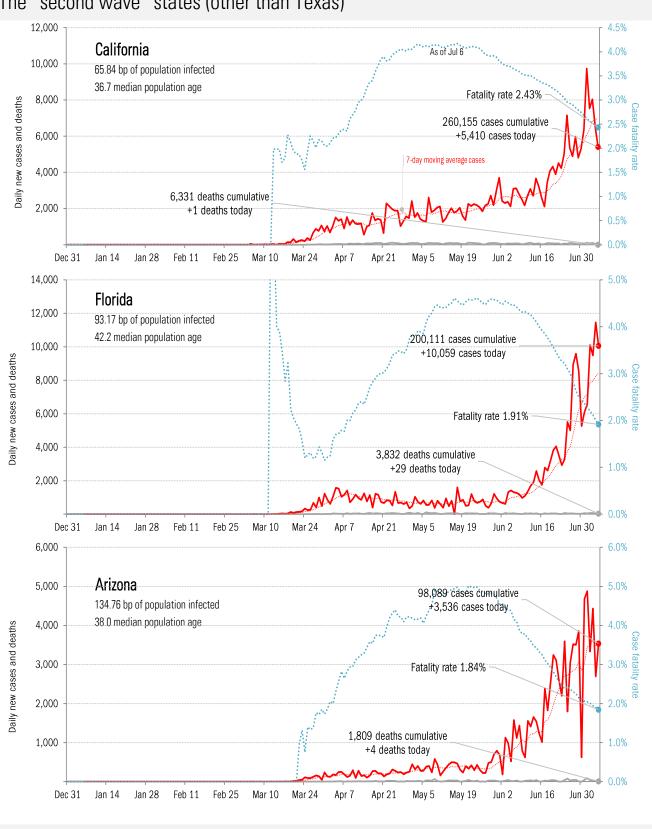
00 88 3,719 0,710			May 4 130,255 May 10132,263 May 10132,263	May 12 140,677 May 20 136,165 May 26 127,663	Jun 5 128,516 Jun 8 129,561 Jun 10 127,294	Jun 15 130,861 Jun 24 128,513 Jun 29 130,062 Actual 126,190
Mar 25 81.030 Mar 29 82.117 Mar 30 83,888 Mar 31 93.71 Apr 1 93.719	Apr 5 81,766 Apr 7 60,415 Apr 8 60,415	Apr 9 61,545 Apr 12 68,841 Apr 17 60,308 Apr 21 65,976 Apr 22 67,640	Apr 28 72,859 Apr 29 72,433			
,,,						┍┻┯┻┯┻

As of Jul 6

From Ground Zero to the Rio Grande

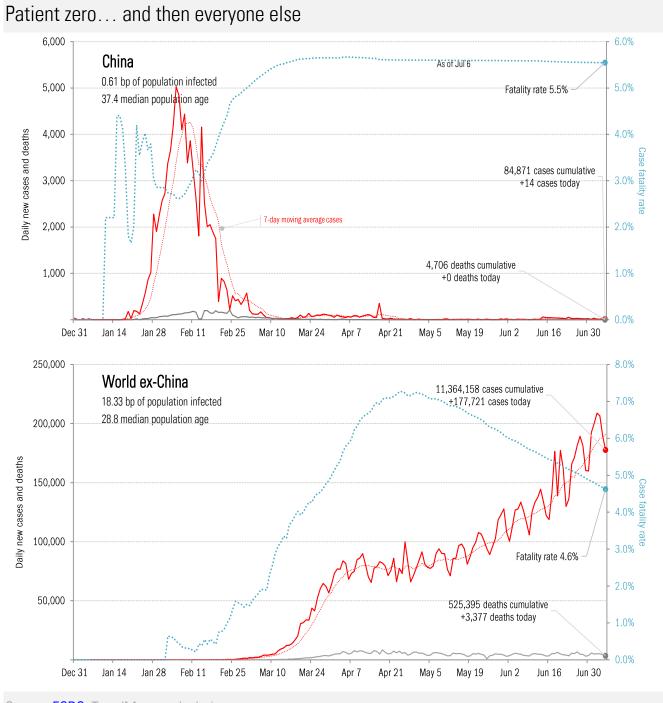


Source: ECDC, TrendMacro calculations

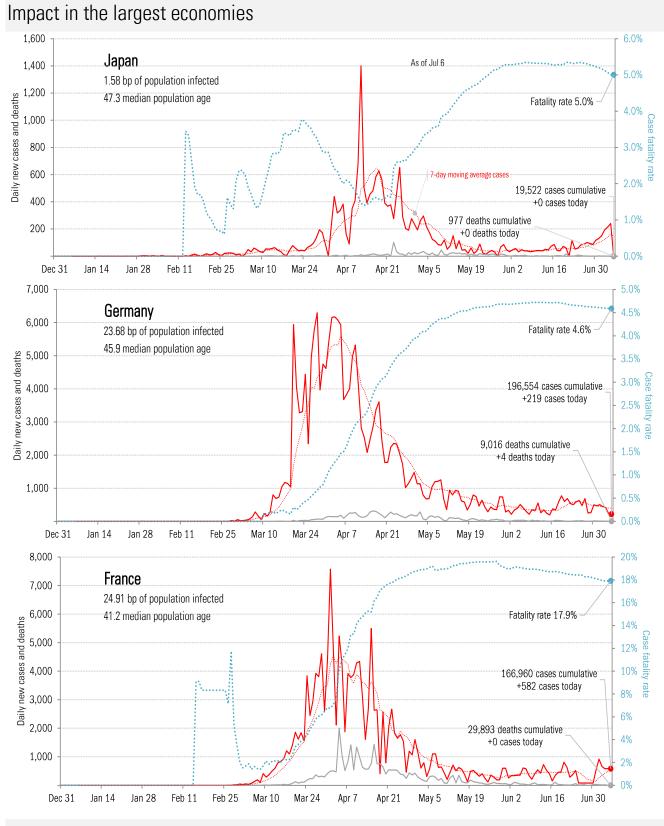


The "second wave" states (other than Texas)

Source: ECDC, TrendMacro calculations



Source: <u>ECDC</u>, TrendMacro calculations

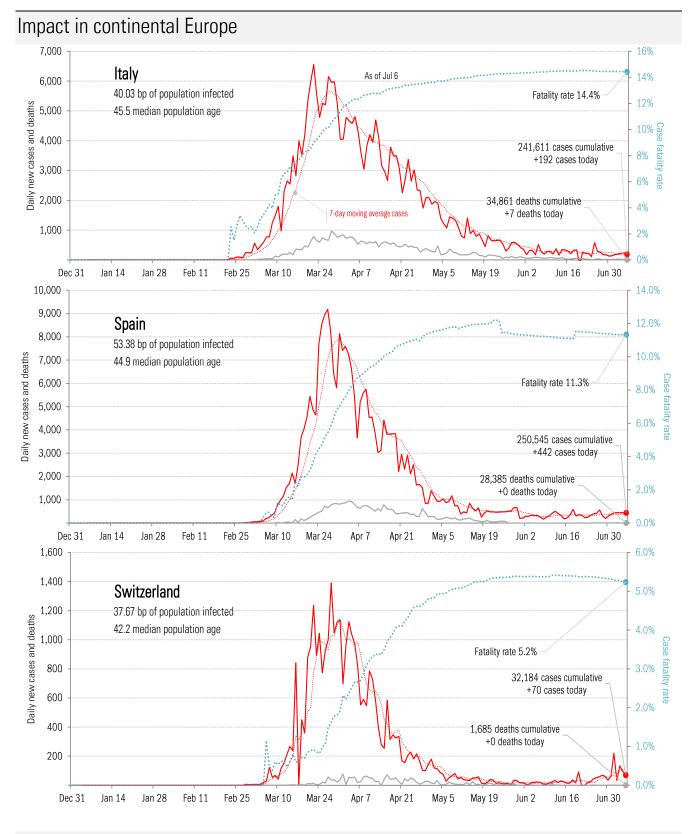


Source: ECDC, TrendMacro calculations

10,000 18% United Kingdom 9,000 16% As of Jul 6 8,000 47.41 bp of population infected 14% 40.5 median population age 7,000 Fatality rate 14.0% 12% Case fatality 6,000 10% 5,000 315,971 cases cumulative 8% 4,000 rate +516 cases today 6% 3,000 44,220 deaths cumulative +22 deaths today 4% 2,000 7-day moving average cas Ŵ 2% 1,000 0% Jan 14 Jan 28 Feb 11 Feb 25 Mar 10 Mar 24 May 19 Jun 30 Dec 31 Apr 7 Apr 21 May 5 Jun 2 Jun 16 3,000 9.0% Canada 8.0% 2,500 27.85 bp of population infected 7.0% Fatality rate 8.2% 40.8 median population age 2,000 6.0% 5.0% 105,524 cases cumulative 1,500 +219 cases today 4.0% 3.0% 1,000 8,684 deaths cumulative 2.0% 500 +10 deaths today 1.0% 0.0% Dec 31 Feb 25 Mar 10 Apr 21 May 19 Jun 2 Jun 30 Jan 14 Jan 28 Feb 11 Mar 24 Apr 7 May 5 Jun 16 700 4.5% Australia 4.0% 600 3.05 bp of population infected 3.5% 37.9 median population age 500 3.0% 400 2.5% Fatality rate 1.2% 2.0% 300 1.5% 8,449 cases cumulative 200 +87 cases today 1.0% 104 deaths cumulative 100 +0 deaths today 0.5% 0.0% Dec 31 Jan 28 Feb 11 Feb 25 Mar 10 Mar 24 Apr 21 May 5 May 19 Jun 2 Jun 16 Jun 30 Jan 14 Apr 7

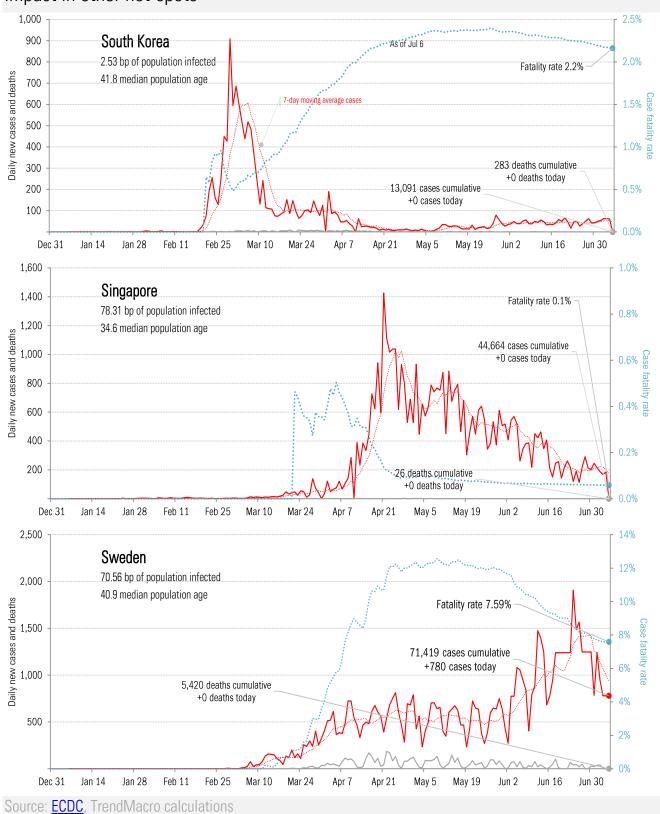
Impact in The Anglosphere

Source: ECDC, TrendMacro calculations

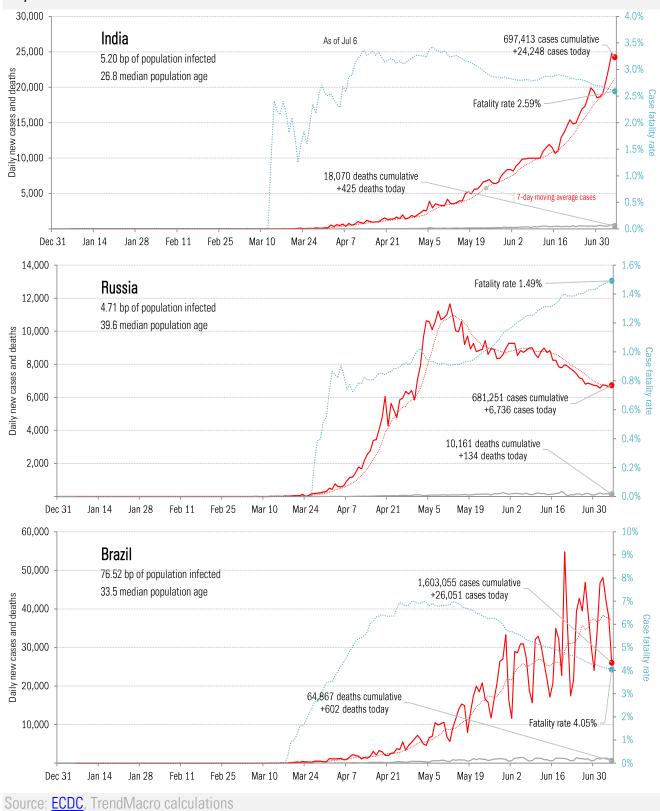


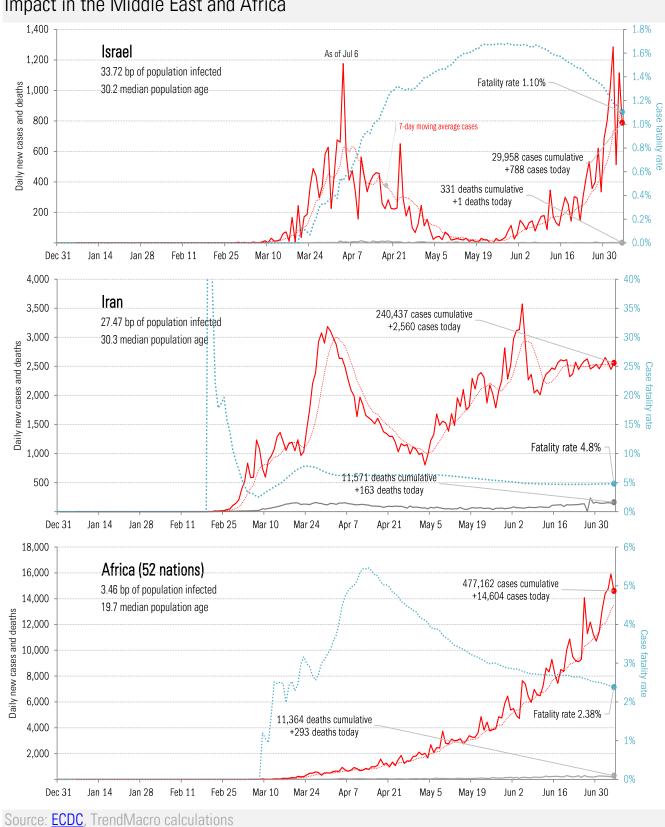
Source: ECDC, TrendMacro calculations

Impact in other hot-spots



Impact in the BRICs ex-China





Impact in the Middle East and Africa