

COVID-19 Weekly Newsletter

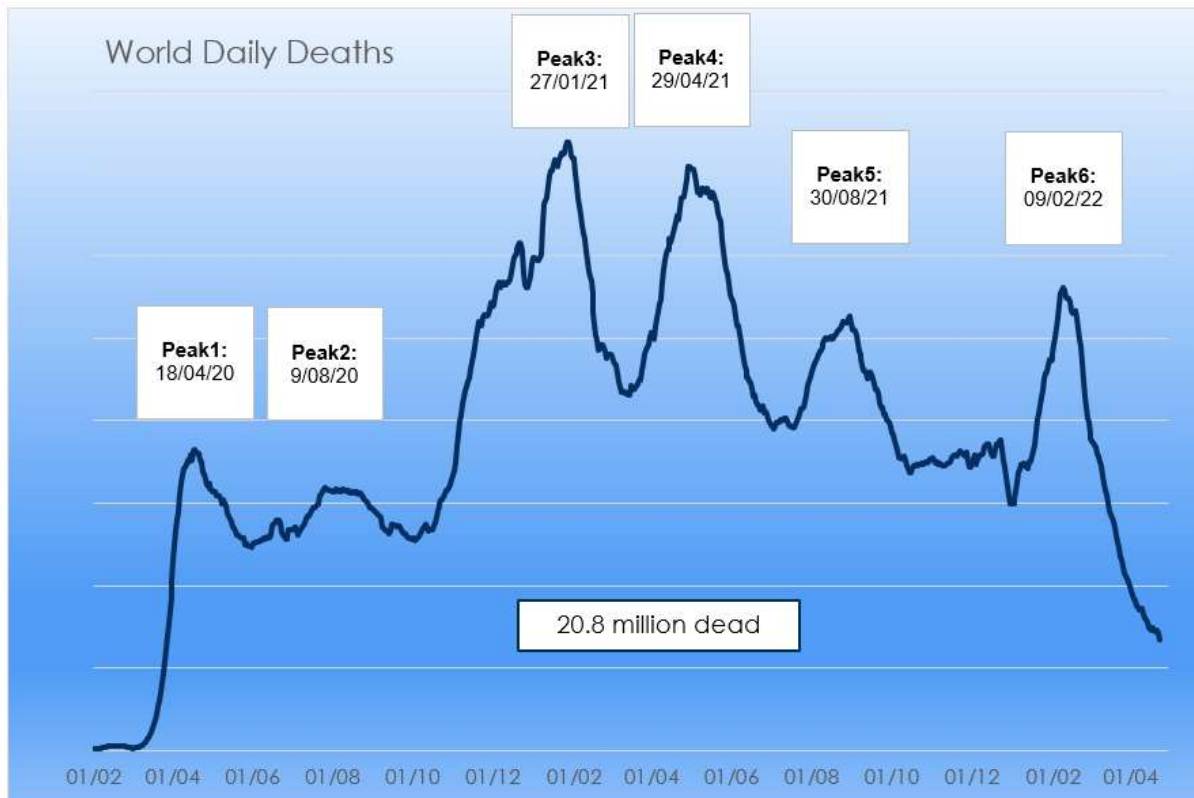
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Global trend: [2]

This will be my last Newsletter – and this is basically why:



The global death toll continues to fall, and is currently at less than a quarter of the peak value in February this year.

I think this is as good place to end my reporting as any!

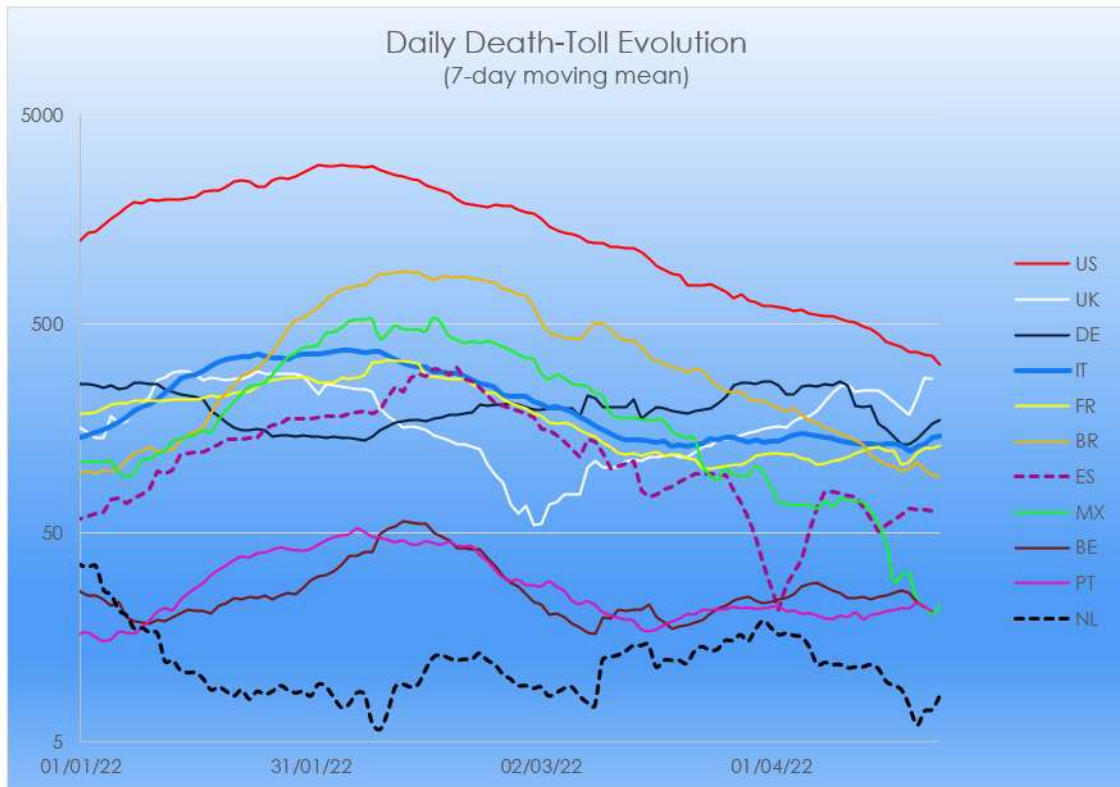
If I extrapolate the excess-death study figures published in *The Lancet* [1] to today's date, then over 20 million have died because of the COVID-19 pandemic

(cf. the **worldometer** figure of 6.25 million).

National trends (selected countries)

As we have seen from *The Lancet* report [1], the reporting of COVID-19 deaths in Europe & the Americas has been far more reliable than that in Asia & Africa – and with very little dispersion between them:

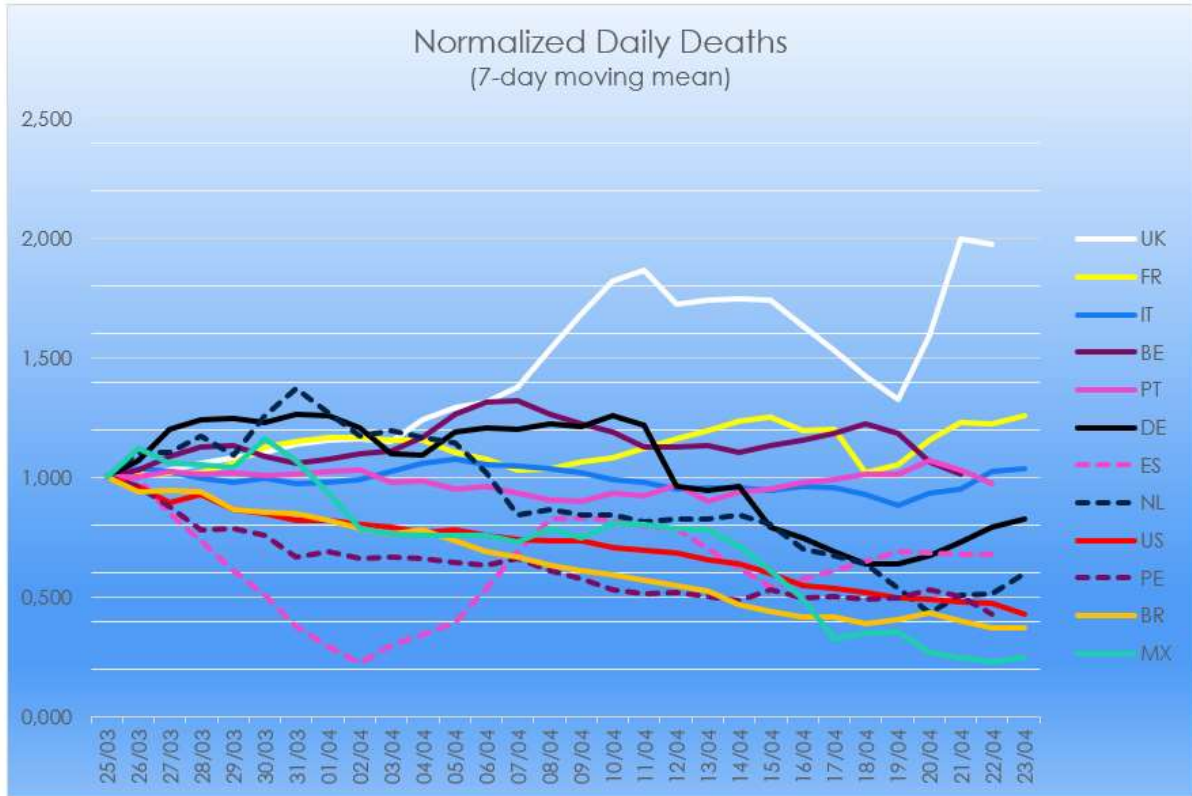
So, this comparison of national death rates since the beginning of the year can be trusted:



[3]

(This is a log plot so variations of the order the E/R ratios of the countries concerned would be lost.)
 Death rates are now falling everywhere, except in UK, Germany, Italy & France.

Normalized daily death rates (7-day moving mean) for the last 30 days.
 What I have done here is normalize the data to the initial data point at the beginning of the 30-day period.



- The UK death rate stands out having doubled during the past month (again).
- Death rates have been fairly constant for a middle group of countries: FR, IT, BE, PT & DE.
- While in the bottom group of countries – NL, US, PE, BR & MX – death rates have dropped below half the rate at the beginning of the period.

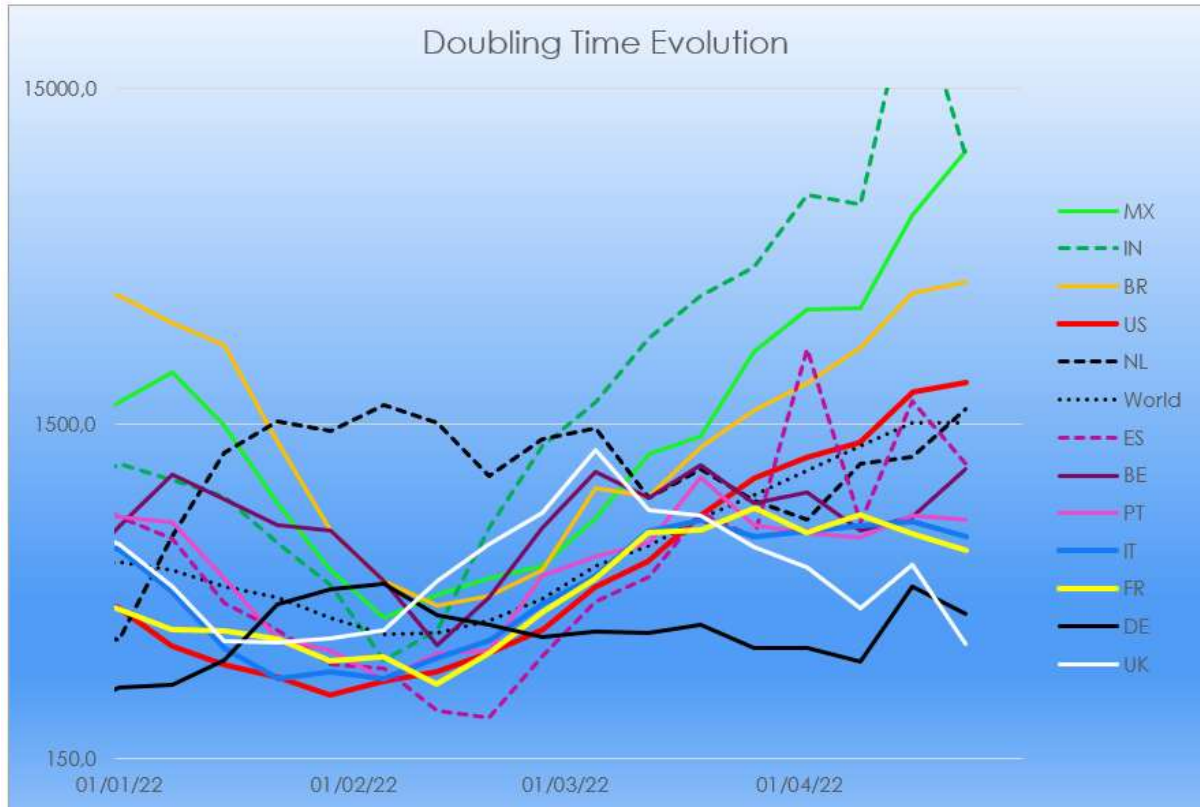
Tendencies: Comparison of doubling times [4]

Double digits, triple+shortening, triple, quadruple

Country	1st death	E/R Ratio	Doubling time (7-day fits)			
			23 Apr	16 Apr	09 Apr	02 Apr
IT	21 Feb 20	1,88	691 days	767 days	741 days	718 days
FR	15 Feb 20	1,25	626 days	701 days	805 days	713 days
ES	03 Mar 20	1,64	1136 days	1762 days	760 days	2498 days
US	29 Feb 20	1,33	1999 days	1861 days	1320 days	1185 days
UK	05 Mar 20	1,13	330 days	570 days	422 days	556 days
NL	06 Mar 20	2,13	1661 days	1198 days	1140 days	779 days
DE	09 Mar 20	1,80	405 days	492 days	292 days	322 days
BE	11 Mar 20	1,16	1101 days	790 days	720 days	935 days
BR	17 Mar 20	1,28	3971 days	3672 days	2537 days	1978 days
PT	16 Mar 20	2,13	773 days	797 days	687 days	709 days
IN	12 Mar 20	8,44	9479 days	32249 days	6807 days	7257 days
MX	19 Mar 20	2,67	9810 days	6272 days	3326 days	3307 days
World	11 Jan 20	3,33	1517 days	1505 days	1294 days	1092 days

- Deterioration for most European countries: UK, DE, FR, IT & PT.
- Worst case is now UK.

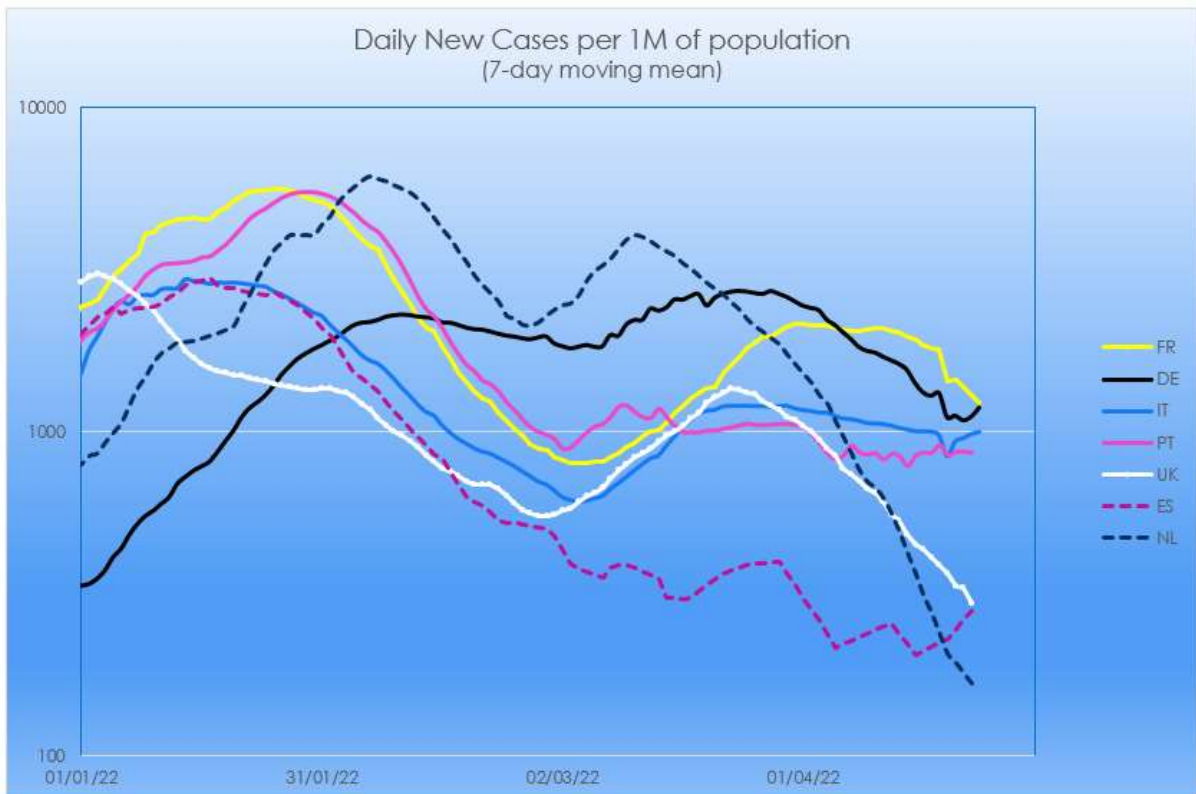
This is how doubling times have been evolving since the beginning of the year:



(Log y scale. Remember: Shorter doubling times equate to a faster evolution of the disease.)
UK & DE notably worst!

EU Case-rate Comparisons [5]

The dispersion in E/R ratios for the countries shown here is sufficiently small that this graph remains indicative of the comparative progress of COVID-19 in each country.
(Especially since this is a log plot.)



Per-capita rates now falling virtually everywhere.

Vaccinations against COVID-19 [6]

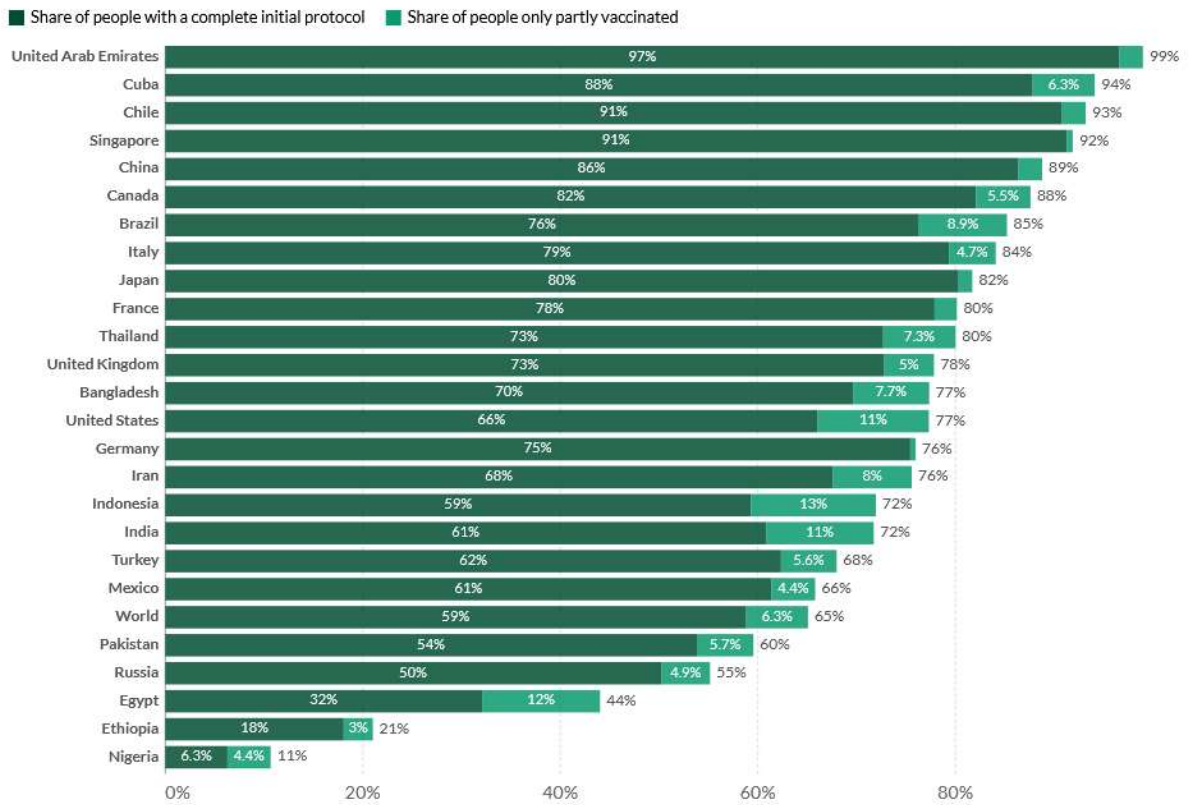
65.1% of the world population has received at least one dose of a vaccine. (**65%** last week)

11.52 billion doses have been administered globally. (**11.45 billion** last week)

11.52 million are now administered daily. (**11.45 billion** last week)

Only **15.2%** of people in low-income countries have received at least one dose. (same as last week)

Share of people vaccinated against COVID-19, Apr 23, 2022



Source: Official data collated by Our World in Data
 Note: Alternative definitions of a full vaccination, e.g. having been infected with SARS-CoV-2 and having 1 dose of a 2-dose protocol, are ignored to maximize comparability between countries.

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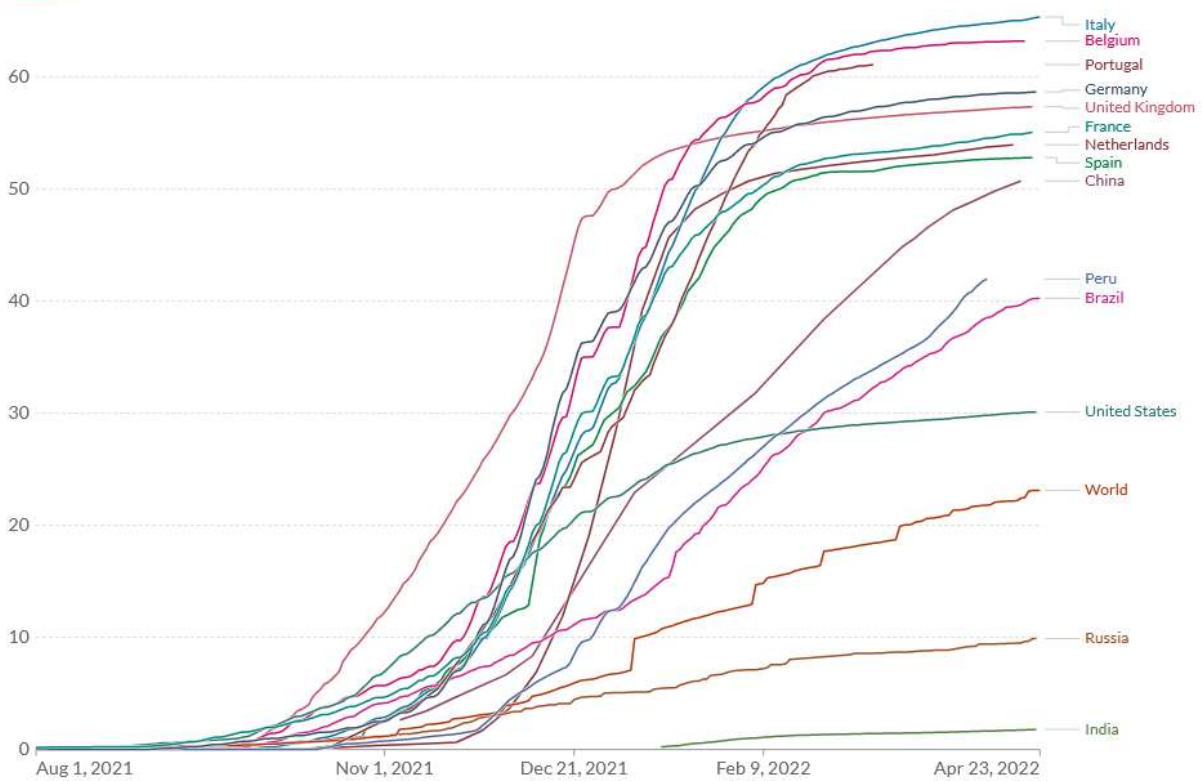
No changes in ranking.

COVID-19 vaccine boosters administered per 100 people

Total number of vaccine booster doses administered, divided by the total population of the country. Booster doses are doses administered beyond those prescribed by the original vaccination protocol.



LINEAR LOG



Source: Official data collated by Our World in Data

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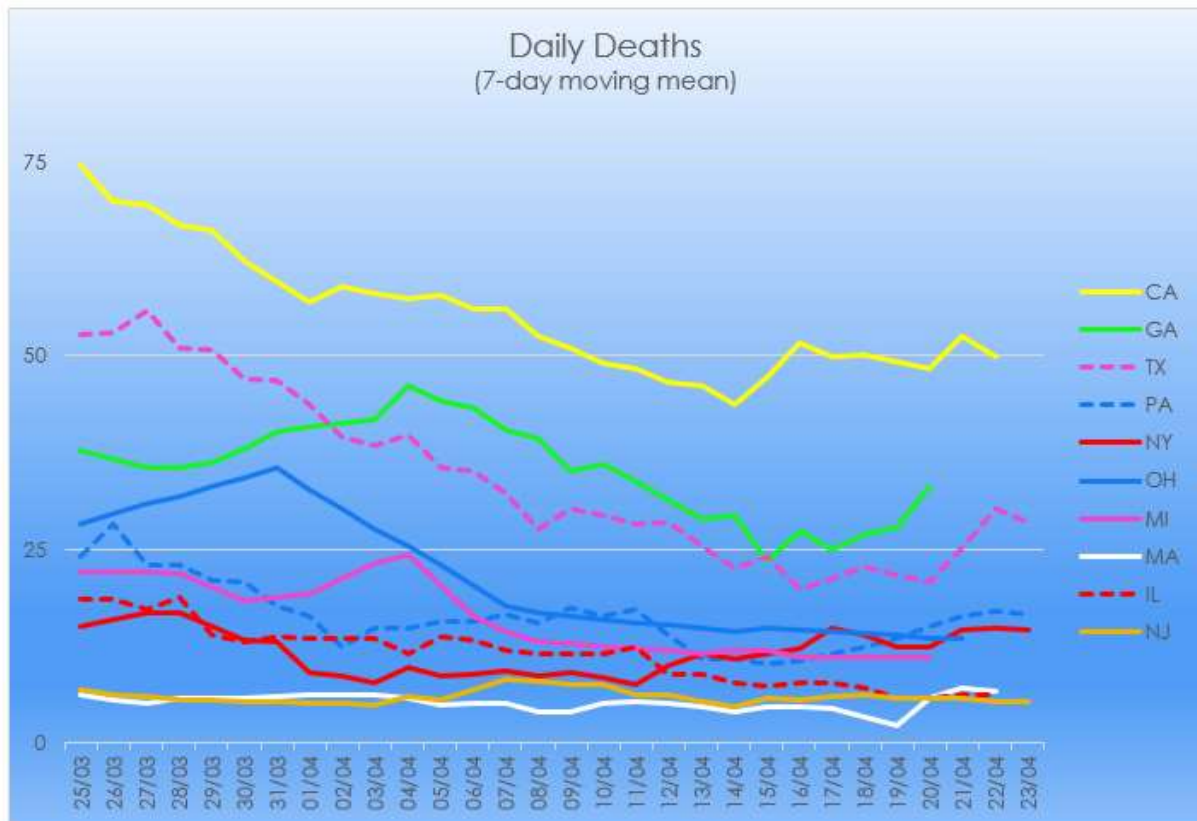
No changes in ranking.

US States' Trends [7]

Warning: Reporting by the different states has become increasingly erratic in the past month or so.

The states with the most reliable reports are NJ, NY & PA; the worst are FL, AZ & TN.

Daily death rates (7-day moving mean) for the last 30 days (FL, AZ & TN excluded):



(Linear y scale.)

Tendencies: Comparison doubling times [4]

Double digits, triple+shortening, triple, quadruple

State	1st death	E/R Ratio	Doubling time (7-day fits)			
			23 Apr	16 Apr	09 Apr	02 Apr
AZ	20 Mar 20	1,31		1013 days	348 days	368 days
CA	04 Mar 20	1,46	1299 days	1310 days	1266 days	915 days
GA	14 Mar 20	1,41	874 days	873 days	605 days	527 days
IL	17 Mar 20	1,40	3290 days	2821 days	1549 days	1390 days
MA	20 Mar 20	0,74	1416 days	2680 days	2406 days	1693 days
MI	18 Mar 20	1,16	2234 days	2069 days	1770 days	839 days
NJ	10 Mar 20	1,20	3900 days	3350 days	2542 days	4271 days
NY	14 Mar 20	1,30	3221 days	3387 days	5407 days	5828 days
OH	18 Mar 20	1,60	1987 days	1766 days	1468 days	743 days
PA	18 Mar 20	1,14	1743 days	2935 days	1621 days	1678 days
TN	22 Mar 20	1,28		1204 days	244 days	1169 days
TX	16 Mar 20	1,50	1893 days	2673 days	1846 days	1325 days

Improvement everywhere and all states now green except GA.

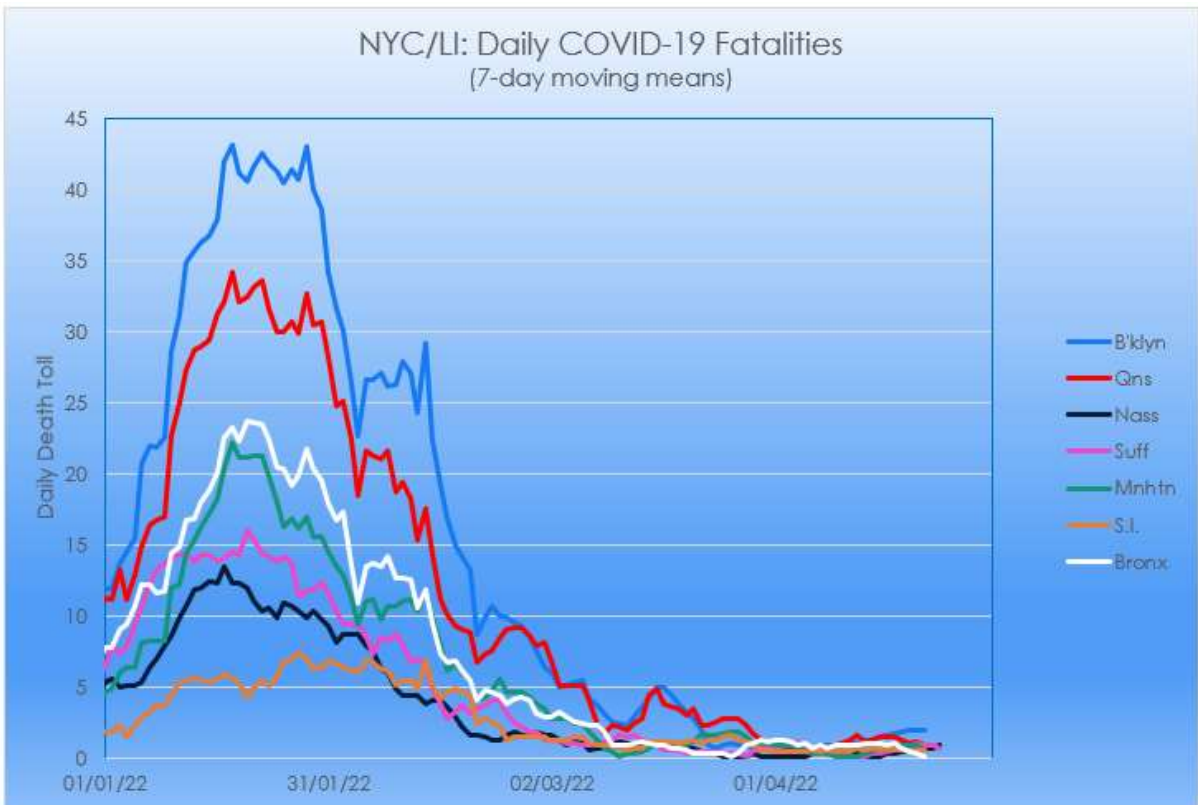
This is how doubling times have been evolving since the beginning of the year:



(Log plot! – Remember, longer doubling times are preferable.)
 General improvement is marked.

New York Area update [8]

Death rates since the beginning of the year are well down and staying down:



Today's images: Earlier this week, Jo & I spent a couple of days in General de Gaulle's home town: Colombey les Deux Églises



The house where he lived with his family is surprisingly, even touchingly, modest & simple.



Bought in 1934, it was the only home he ever owned.



He died there of an aneurysm on 3rd November 1970, while playing patience at his card table.

Despite the General's express wishes, the Pompidou government raised a huge Cross of Lorraine as a memorial to him on the hillside overlooking the village:



There's also an extensive museum beneath the cross dedicated to the General's life & works.

Charles de Gaulle is buried in a simple grave in the local cemetery, alongside his daughter, Anne (1928-1948), and his wife, Yvonne (1900-1979):



The inscription on his tomb reads (at his insistence) just this: **Charles de Gaulle 1890-1970**.
The funeral was a local & family affair, no one outside that circle was permitted to attend the ceremony, except a number of *compagnons de la libération*.

Thanks !

In closing, I'd like to thank all those who have written to me with feedback, input & encouragement during this two-year-long endeavour, especially: **Angela, Barbara, Bob, Desmond, Eleanor, Eddy, Giovanni, Hazel, Jane, Jeannie, Jerry, John H, Ladan, Laurence, Lynda, Marlowe, Paul, Russell, Shannon, Sue, Susan, Terry, Tony & Trevor**.

Keep well & keep safe!

David



Notes

[1] The statistics on COVID-19 mortality that I have been presenting in these newsletters are data that are based on **individual deaths** reported **as they occur** by various government agencies (reports that are analysed, validated and aggregated by **worldometer** [2]).

For a variety of reasons, mortality statistics collected in this way may not provide accurate figures of true COVID-19 mortality:

- Different countries use different definitions of what constitutes a COVID-19 death.
- The collection of mortality statistics may be incomplete in a country.
- Some countries may intentionally under report COVID-19 deaths for their own purposes.
- Simple errors such as oversights and typing errors may give misleading results.
- And so on... reliability of the statistics varies greatly between locations and over time.

An alternative way to estimate a potentially more accurate estimate of true COVID-19 mortality is to compare the total number of deaths during the pandemic (deaths from whatever cause) with the total number of deaths during a period prior to the pandemic: **excess mortality**.

On March 10th just such a study was published in The Lancet:

[Estimating excess mortality due to the COVID-19 pandemic: a systematic analysis of COVID-19-related mortality, 2020-21](#)

This extremely authoritative study was the work of 96 authors from 36 institutions scattered throughout the world.

Many thanks to **Bob** for bringing this to my attention!

The only other study on this scale was one performed under the aegis of *The Economist* magazine:

[Tracking COVID-19 excess deaths across countries](#)

Both studies agree remarkably well.

[2] The national COVID-19 data are taken from the **worldometer website** which reproduces the data collected from Official Websites of Ministries of Health of other Governmental Institutions and Government authorities' social media accounts.

- Different countries use different criteria in recording COVID-19 deaths, often distinguishing between *probable* and *confirmed* cause of death.

- Belgium appears to have the loosest criterion attributing any death to COVID-19 if there is any suspicion that COVID-19 could have been the cause.
- The UK definition: death occurring within 28 days of a positive test for COVID-19. (If the patient dies 29 days after the test, it wasn't officially caused by COVID-19.)
- China has only reported 3 COVID-19 deaths since 17th May 2020! One occurred on 14th January 2021. This week (19th March) there were 2 more.
- Some countries, notably the US, regularly update the entire set of historical data provided to the website.

[3] Note on line graphs: The key on the right of all line graphs in this newsletter lists the entries in decreasing order of the value of the latest data points presented. This hopefully may help colour-blind readers to interpret the graph contents.

[4] The **doubling time** is a characteristic of exponential growth. It is the period of time over which the number doubles in value, and is an inverse measure of the gradient of the curve. A doubling time makes most sense when the curve to which it applies is close to an exponential, i.e., a straight line on a semi-logarithmic graph. For this reason, in order to follow the evolution in the number of cumulative deaths per country, I fit an exponential to the data at the end of the curve (7 days' data) and extract from this a "doubling time".

The doubling time means what it says: If the exponential tendency persists unchanged, the numbers of deaths at the end of the doubling time will be double the current number.

Example based on US data: On 29/08/2020 no. deaths was 188 900 and doubling time was 116 days. This implies no. deaths on 23/12/2020 (116 days later) will have doubled – to 377 800.

The actual number on that date was 339 422, which reveals that there was a decline in the exponential tendency – but not by that much.

Clearly, long doubling times are good; short ones are bad. The interest in presenting these doubling times is that they are to some degree predictive of future behaviour.

[5] Warning: National data on testing are not really comparable between countries, but do reveal trends in individual countries.

[6] Vaccinations against COVID-19: These data are collected from official reports by the *Our World in Data* [team](#) and can be found [here](#).

Note: The denominator in the metrics displayed in this section is the **total** population of the country, and not the population **eligible** for vaccination (the latter is the denominator most frequently used in data published by national authorities themselves).

[7] The states I originally selected for this section were the top 12 states by cumulative deaths:

- AZ, CA, FL, GA, IL, MA, MI, NJ, NY, OH, PA & TX.

In 2022 TN entered the Top 12 displacing MA, but, since I have not recorded TN historical data, I'll continue to focus on the original Top 12.

[8] The sources of the NYC & Long Island data are not the same as the one used for national data: Source for the 5 boroughs:

<https://github.com/nychealth/coronavirus-data/blob/master/totals/group-death-by-boro.csv>

Source for Nassau & Suffolk counties:

<https://coronavirus.smartnews.com/us/new-york/>