

EUROMOMO

EuroMOMO Bulletin, Week 43, 2022

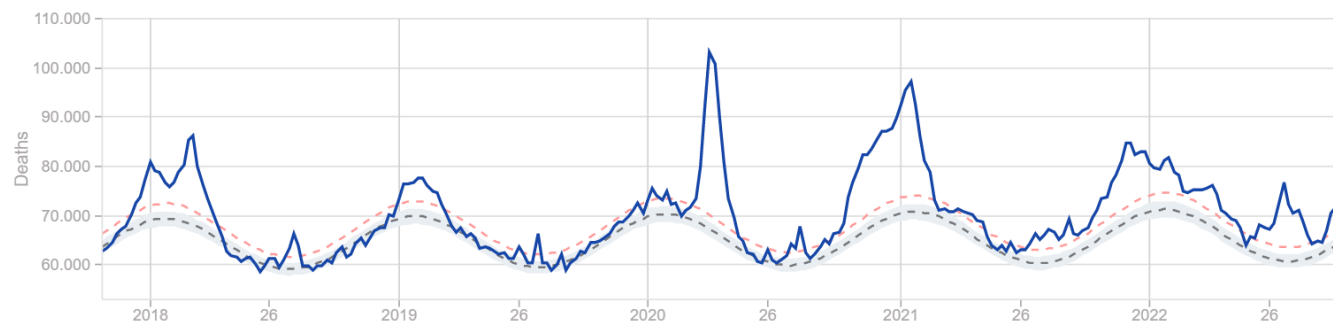
EuroMOMO pooled estimates show an elevated level of excess mortality

This week's overall pooled EuroMOMO estimates of all-cause mortality for the participating European countries show elevated excess mortality.

Data from 24 European countries or subnational regions were included in this week's pooled analysis of all-cause mortality.

— Pooled deaths ■ Normal range - - - Baseline - - - Substantial increase ■ Corrected for delay in registration

All ages



Note on interpretation of data: The number of deaths shown for the three most recent weeks should be interpreted with caution, as adjustments for delayed registrations may be imprecise. Furthermore, results of pooled analyses may vary depending on countries included in the weekly analyses. Pooled analyses are adjusted for variation between the included countries and for differences in the local delay in reporting

Cautionary note on cumulated excess mortality reported by EuroMOMO for the pandemic years

The excess mortality is calculated by EuroMOMO every week as the difference between the observed number of deaths and the estimated expected number of deaths (the baseline). The cumulated excess mortality is shown for each calendar year by week and is calculated by adding up the weekly excess number of deaths over the weeks of surveillance.

Because of the unexpected and varying mortality experienced during the

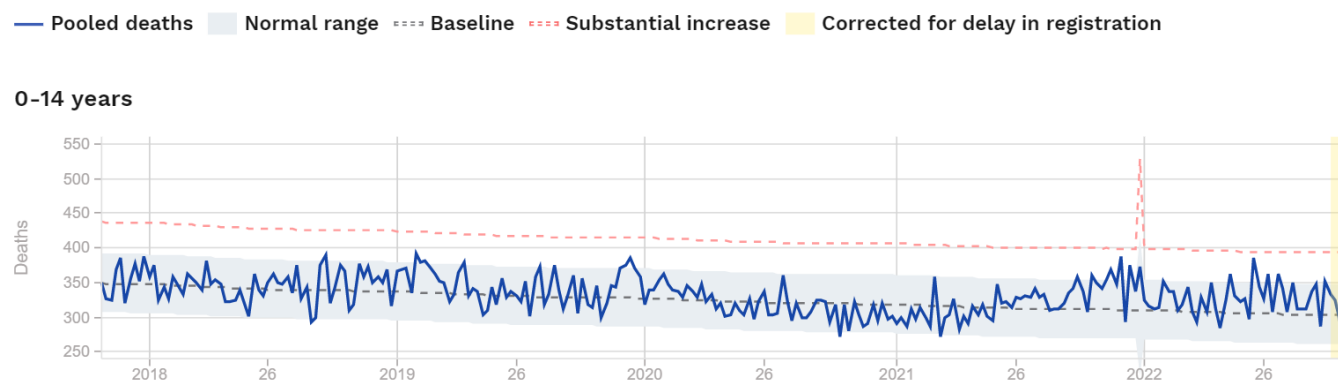
COVID-19 pandemic, the calculated baseline applied in the EuroMOMO estimation of excess number of deaths do not include data from 2020 and onwards, as these data will distort the estimated level of baseline number of deaths.

Due to the exclusion of data from the COVID-19 pandemic, the trend incorporated in the statistical estimation of the baseline are presently forecasted beyond the intended duration. This prolonged forecast has introduced an increasing bias over time, which can cause incorrect estimations of the excess mortality, particularly when the numbers are cumulated.

Because of this enhanced bias when cumulating data, the cumulated outputs should not be considered reliable at this point and must be interpreted very cautiously. An example is number of deaths in the age group 0-14 years, where the EuroMOMO countries in the years preceding the COVID-19 pandemic experienced a decrease in mortality. The model extends this declining baseline mortality in a linear fashion. Before the COVID-19 pandemic, there was a mean of 361 deaths per week in this age group. In week 40, 2022, there is approximately 8.5% bias due to this linear trend meaning that the expected number of deaths (the baseline) is predicted to be 29 deaths lower than in week 1, 2020. This means that even though the number of reported weekly deaths is equal in week 40, 2022 and week 1, 2020, the lower baseline in week 40, 2022 means that there will be 29 deaths higher excess mortality in this week. When cumulating the weekly number of excess deaths, this bias due to

the extension of the linear trend in the baseline gets high and may therefore lead to incorrect estimates. During the COVID-19 pandemic the lock-down period (week 1, 2020 to week 21, 2021) had a mean of 326 deaths per week and the following period (week 22, 2021 to week 40, 2022) had a mean of 345 deaths per week which both are lower than the average of 361 deaths per week observed in the period before the COVID-19 pandemic (week 1, 2018 to week 52, 2019). In other words, the EuroMOMO mortality surveillance system does actually not detect more deaths among the 0 to 14-years old during the ongoing COVID-19 pandemic than in the period before the COVID-19 pandemic, even if the cumulated outputs reported on the EuroMOMO website suggest so.

In summary, the bias in the weekly estimates of excess number of deaths are still relatively small and considered to be within reasonable and acceptable levels to be used in accordance with its initial purpose, i.e. evaluating weekly changes in mortality.



The EuroMOMO hub, together with the participating countries, are working on solutions to mitigate the bias; however, a revised model is not expected to be ready for use in 2022.

Note about data from Ukraine

The EuroMOMO hub regrets to inform that weekly data from Ukraine will not be provided in the coming period, due to the current war in Ukraine.

About EuroMOMO network data sharing and collaboration

During the current COVID-19 pandemic, information on its mortality impact is of major concern. The EuroMOMO network hub receives many questions about the weekly mortality data we present, as well as requests to share the underlying national data. While the network fully supports data sharing, the network hub is not mandated by the participating countries to release any national data. If you are interested in accessing national data, please approach countries individually.

The EuroMOMO network welcomes collaboration with external partners, e.g. about additional analyses and modelling to be performed. If you are interested in engaging with the network about any such collaboration, please forward your ideas to the hub, for wider sharing and dialogue with the network.

Kindly note that any use of data or information originating from the EuroMOMO

website must be appropriately quoted and acknowledged.