



## All-cause mortality surveillance

### 6 January 2022 – Week 1 report (up to week 52 data)

In week 52 2021, no statistically significant excess all-cause mortality by week of death was observed overall in England through the EuroMOMO algorithm. In the devolved administrations, no statistically significant excess all-cause mortality for all ages was observed for Wales and none reported for Northern Ireland in week 52. Excess all-cause mortality was observed in Scotland for week 49.

#### All-cause death registrations (ONS), England and Wales

In week 51 2021, an estimated 13,010 all-cause deaths were registered in England and Wales (source: [Office for National Statistics \(ONS\)](#)). This is an increase compared to the 12,400 deaths registered in week 50 2021.

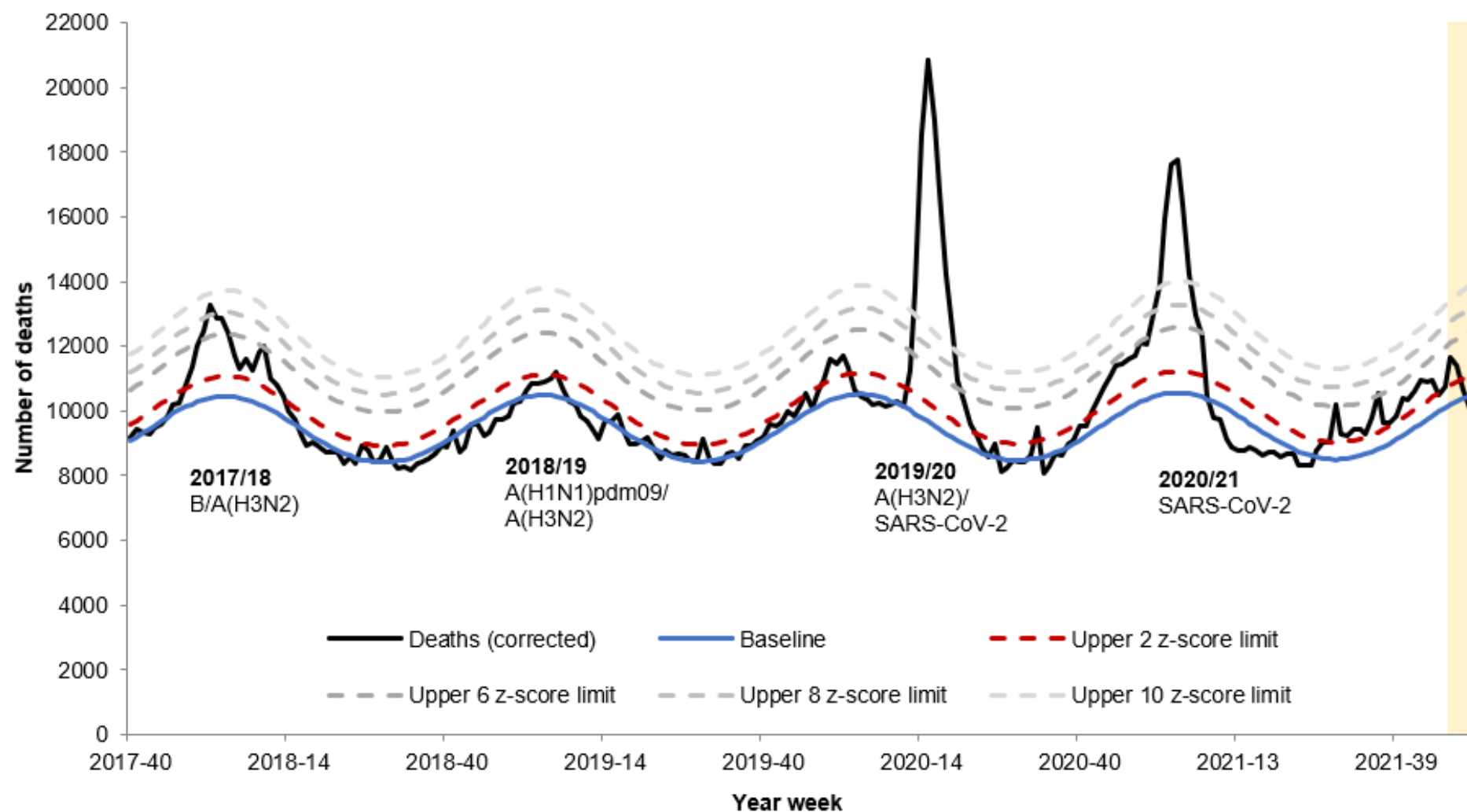
#### Excess all-cause (EuroMOMO) mortality in subpopulations, UK

In week 52 2021 in England, no statistically significant excess mortality by week of death above the 2 z-score threshold was seen overall after correcting GRO disaggregate data for reporting delay with the standardised [EuroMOMO](#) algorithm (Figure 1).

In the devolved administrations, no statistically significant excess all-cause mortality for all ages was observed for Wales and none reported for Northern Ireland in week 52. Excess all-cause mortality was observed in Scotland for week 49.

This data is provisional due to the time delay in registration; numbers may vary from week to week. Data presented in this week's report supersedes data presented in reports from previous weeks.

**Figure 1: Weekly observed and expected number of all-cause deaths in all ages, with the dominant circulating respiratory virus, England, 2017 to week 52 2021**



Note: The recent weeks' data are estimates with large registration delay corrections and therefore should be interpreted with caution. These estimates may differ substantially from future reports as more deaths are registered.

**Table 1: Excess mortality by age group, England\***

Age group (years)	Excess detected in week 52 2021?	Weeks with excess in 2021/22
<5	×	43-44, 48
5-14	×	NA
15-64	×	40-50
65+	×	40-45, 48-49

**Table 2: Excess mortality by UK country, for all ages\***

Country	Excess detected in week 52 2021?	Weeks with excess in 2021/22
England	×	40-45, 47-49
Wales	×	40, 42-43, 45
Northern Ireland	×	48
Country	Excess detected in week 49 2021?	Weeks with excess in 2021/22
Scotland	✓	40-45, 47-49

\* Excess mortality is calculated as the observed minus the expected number of deaths in weeks above threshold

NB. Separate total and age-specific models are run for England which may lead to discrepancies between Tables 1 and 2

\* NA refers to no excess seen

Seasonal mortality is seen each year in England and Wales, with a higher number of deaths in winter months compared to the summer. Additionally, peaks of mortality above this expected higher level typically occur in winter, most commonly the result of factors such as cold snaps and increased circulation of respiratory viruses, in particular influenza and in summer occasionally as a result of heat-waves.

This weekly mortality surveillance aims to detect and report acute significant weekly excess mortality above normal seasonal levels in a timely fashion. Excess mortality is defined as a significant (above the upper 2 z-score threshold) number of deaths reported over that expected for a given point in the year, allowing for weekly variation in the number of deaths. A z-score is a statistical measure of how many standard deviations above the baseline threshold the number of deaths were. For example, a z-score of 2 means that the number of deaths were 2 standard deviations above the baseline threshold. The COVID-19 pandemic time period is excluded from the baseline thresholds calculation. Excess mortality triggers further investigation of spikes and informs any public health responses.

The aim is not to assess general mortality trends or precisely estimate the excess attributable to different factors, although some end-of-winter estimates and more in-depth analyses (by age, geography, and so on) are undertaken.

Separate to the calculations presented in this report, excess winter deaths (EWD), comparing the number of deaths in the winter period compared to the non-winter period, are calculated by [ONS](#).

Other measures of excess mortality published by UKHSA or OHID are the [Fingertip excess mortality in England](#) report, which uses ONS death registration data, and the UKHSA daily GRO mortality model which is published in the [weekly influenza and COVID-19 surveillance report](#).