All-Cause Mortality Surveillance

9 September 2021 – Week 36 report (up to week 35 data)

In week 35 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 Northern Ireland in week 35 or for Scotland for week 32.

Please note that due to longer delay to registration over the bank holiday the corrected deaths are likely to be low for the most recent weeks shown. Estimates next week should be less affected by these longer delays.

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

In week 34 2021, an estimated 10,268 all-cause deaths were registered in England and Wales (source: Office for National Statistics). This is similar to the 10,013 deaths registered in week 33 2021.

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

In week 35 2021 in England, no statistically significant excess mortality by week of death above the 2 z-score threshold was seen overall, by age group or sub-nationally (all ages) after correcting GRO disaggregate data for reporting delay with the standardised EuroMOMO algorithm (Figure 1). Due to longer delay to registration over the bank holiday the corrected deaths are likely to be low for the most recent weeks shown and may be revised in next weeks report.

In the devolved administrations, no statistically significant excess all-cause mortality for all ages was observed for Wales and Northern Ireland in week 35 or for Scotland for week 32.

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, 2016 to week 35 2021
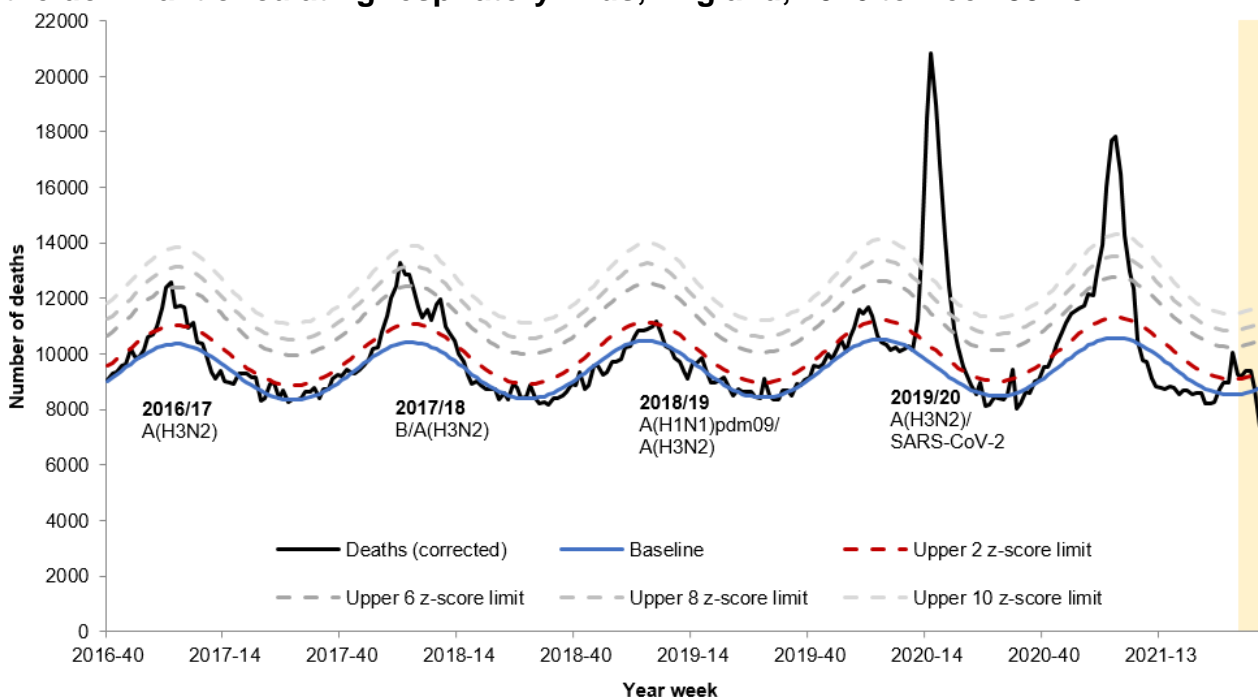
Note: The recent weeks' data are estimates with large registration delay corrections and therefore should be interpreted with caution. These estimates may differ substantially to future reports as more deaths are registered.

Table 1: Excess mortality by age group, England*

Age group (years)	Excess detected in week 35 2021?	Weeks with excess in 2020/21
<5	✕	NA
5-14	✕	NA
15-64	✕	40-10, 25, 27-34
65+	✕	43-07, 29, 32

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

Country	Excess detected in week 35 2021?	Weeks with excess in 2020/21
England	✕	43-07, 29-33
Wales	✕	43, 44
Northern Ireland	✕	45, 02
Country	**Excess detected in week 32 2021?**	**Weeks with excess in 2020/21**
Scotland	✕	43-7, 27, 29

* 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 + 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.
- Immunisation & Countermeasures Division's 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. 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 etc.) 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 PHE are the Fingertip excess mortality in England report, which uses ONS death registration data; and the PHE daily GRO mortality model which is published in the weekly influenza and COVID-19 surveillance report.
  Produced by the Immunisation & Countermeasures Division, National Infection Service, Public Health England.