Weekly All-Cause Mortality Surveillance
24 March 2016 – Week 12 report (up to week 11 data)

Up to week 11 2016 in England, excess mortality by date of death has been seen in 15-64 year olds from week 52 to 03, 04 to 07 and 09 to 11; in <5 year olds in week 51 and 05, and in 5-14 year olds in week 51 with the EuroMoMo algorithm. In the devolved administrations, significant excess mortality was noted in Northern Ireland (15-64 year olds) for week 11 2016.

Excess overall all-cause mortality, England and Wales

-In week 10 2016, an estimated 11,010 all-cause deaths were registered in England and Wales (source: Office for National Statistics). This is a decrease compared to the 11,285 estimated death registrations in week 09 2016, and is below the 95% upper limit of expected death registrations for the time of year as calculated by PHE (Figure 1). The sharp drop in the number of deaths in week 53 corresponds to a week where there were bank holidays and fewer days when deaths were registered. Therefore this drop is likely to be artificial.

Excess all-cause mortality in subpopulations, UK

- Up to week 11 2016 in England, excess mortality by date of death above the upper 2 z-score threshold has been seen in the 15-64 year olds from week 52 to 03, 04 to 07 and 09 to 11; in <5 years olds in week 51 and 05 and in 5-14 year olds in week 51 after correcting ONS disaggregate data for reporting delay with the standardised EuroMoMo algorithm (Table 1). No significant excess was seen in other age groups. This data is provisional due to the time delay in registration; numbers may vary from week to week.

- In the devolved administrations, significant excess mortality above the threshold was seen in Northern Ireland (15-64 year olds) in week 11 2016. No excess was noted for Wales or Scotland in week 11 2016 (Table 2).
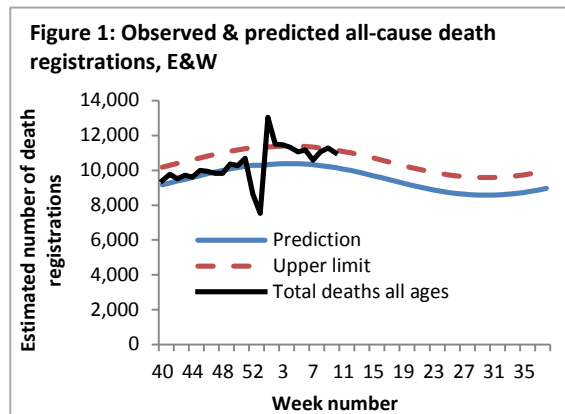

Figure 1: Observed & predicted all-cause death registrations, E&W

Table 1: Excess mortality by age group, England*

| Age group (years)	Excess detected in week 11 2016?	Weeks with excess in 2015/16
<5	×	51
5-14	×	51
15-64	✓	52-03, 04-07, 09-11
65+	×	NA

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

Table 2: Excess mortality by UK country*

Country	Excess detected in week 11 2016?	Weeks with excess in 2015/16
England	✓	52-03, 04-07, 09-11
Wales	×	51,53,01,05,08
Scotland	×	48,02,04,05,07,09
Northern Ireland	✓	45,49-50,52-02,07,09-11

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

Figure 2: Excess mortality in all ages by week of death, EuroMOMO, England
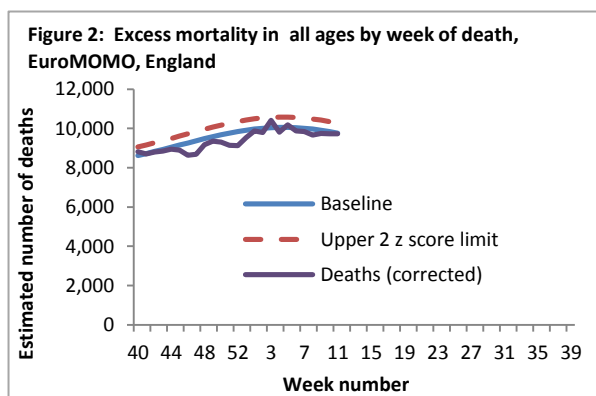
Produced by the Respiratory Diseases Department, Public Health England.

- 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.
- RDD'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 number of deaths reported over that expected for a given point in the year, allowing for weekly variation in the number of deaths. This 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 and presented in an atlas down to local authority level.