Weekly All-cause Mortality Surveillance

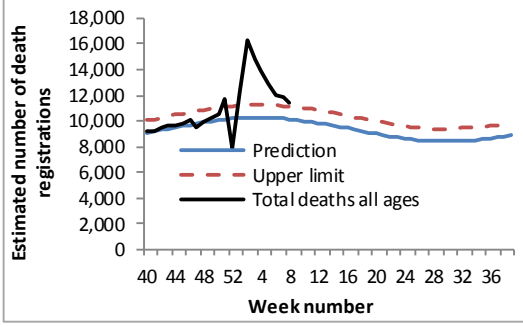
5 March 2015 – Week 10 report (up to week 9 data)

In week 9 2015, significant excess all-cause mortality by week of death was seen through the EuroMOMO algorithm in England in 65+ year olds, though this is now just above the significance threshold. No significant excess was seen for all ages in England and across the devolved administrations in week 9. Since week 40 2014, significant excess mortality has been observed in England between week 50 2014 and week 9 2015 predominantly in 65+ year olds, peaking in week 2 2015. This period coincides with circulating influenza and cold snaps.

Excess overall all-cause mortality, England and Wales

-In week 8 2015, an estimated 11,434 all-cause deaths were registered in England and Wales (source: Office for National Statistics). This is less than the 18,822 estimated death registrations in week 7, but remains above the 95% upper limit of expected death registrations for the time of year as calculated by PHE (Figure 1). The sharp drop in number of deaths in week 52 corresponds to a week when there were bank holidays and fewer days when deaths were registered and so is likely to be artificial and result in subsequent increases in following weeks.

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



Excess all-cause mortality in subpopulations, UK

-Since week 40 2014 up to week 9 2015 in England, excess mortality by date of death above the upper 2 z-score threshold was seen in England after correcting ONS disaggregate data for reporting delay with the standardised EuroMOMO algorithm 65+ year olds in weeks 50 to 5 and 7-9 2015, 15-64 year olds in weeks 51-2 and weeks 1-2 in under five year olds (Figure 2, Table 1). This coincides with circulating influenza and cold snaps. This data is provisional due to the time delay in registration and so numbers may vary from week to week.

-In the devolved administrations, up to week 9 2015, excess mortality above the threshold was seen in weeks 51-8 in Scotland, weeks 42 and 1-3 in Wales and weeks 3-4 in Northern Ireland (Table 2).

Table 1: Excess mortality by age group,England*

Age group (years)	Excess detected in week 9 2015?	Weeks with excess in 2014/15
<5	×	1-2
5-14	×	NA
15-64	×	51-2
65+	✓	50-5, 7-9

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

Figure 2: Excess mortality in 65+ year olds by week of death, EuroMOMO, England

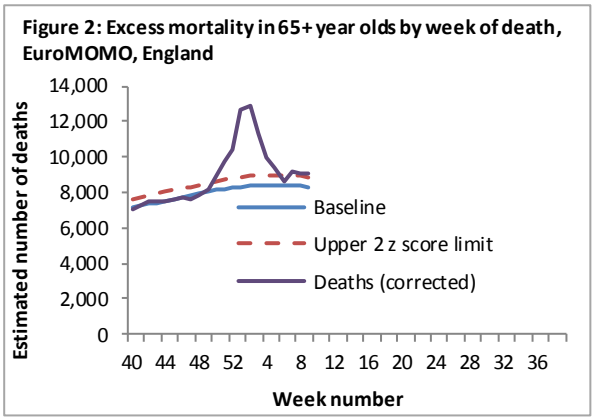


Table 2: Excess mortality by UK country*

Country	Excess detected in week 9 2015?	Weeks with excess in 2014/15
England	×	50-5
Wales	×	42,1-3
Scotland	×	51-8
Northern Ireland	×	3-4

** 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

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.