



CMI mortality monitor – week 45 of 2021

This update is for week 45 of 2021, ending on 12 November 2021 and published on 23 November 2021. The [CMI website](#) has details of the calculation methods and previous updates.

Table 1: Deaths registered in England & Wales in week 45 of 2021

	Male	Female	Total
“Expected” registered deaths (based on week 45 of 2019)	5,511	5,499	11,010
Actual registered deaths, from all causes	6,150	5,900	12,050
Excess deaths (and as a percentage of expected)	+639 (+12%)	+401 (+7%)	+1,040 (+9%)
Mentions of COVID-19 on the death certificate	617	403	1,020

Table 2: Cumulative excess deaths

	England & Wales	United Kingdom
From the start of the pandemic (29 Feb 2020 to 12 Nov 2021)	103,300	114,800
From week 1 of 2021 (2 Jan 2021 to 12 Nov 2021)	37,100	41,900

Chart 1: Weekly standardised mortality rates in England & Wales for 2011 to 2021

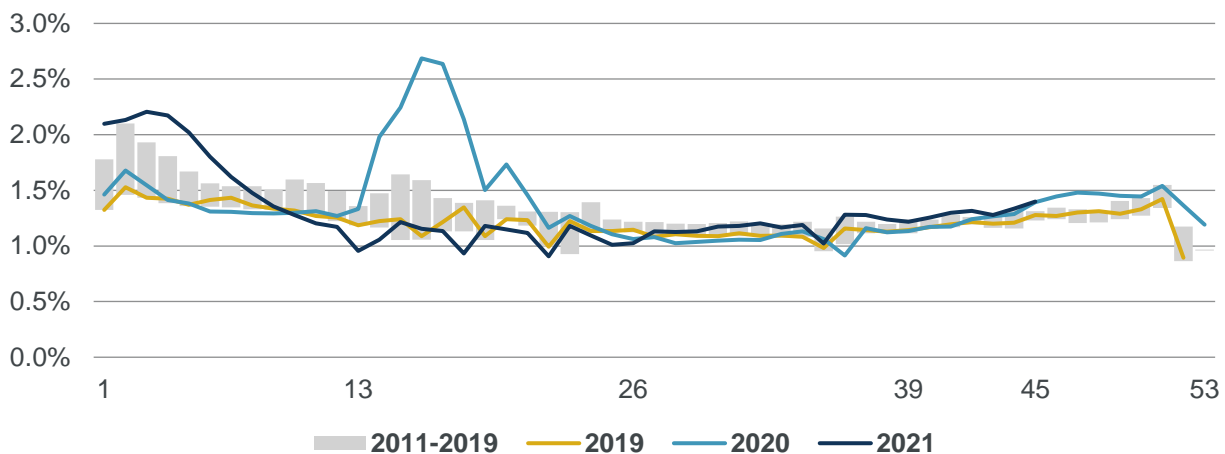


Chart 2: Comparison of weekly measures of COVID-19 deaths for England & Wales

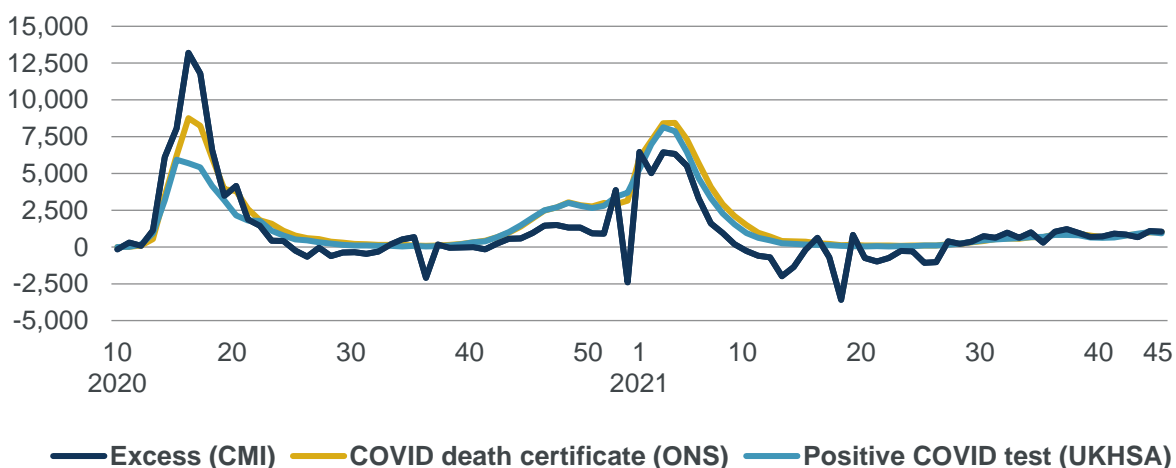




Chart 3 shows cumulative standardised mortality rates relative to cumulative mortality in 2019, as a proportion of mortality for 2019 as a whole. We use 2019 as the comparator as this is consistent with the excess deaths calculation above.

Under this measure, cumulative standardised mortality to week 45 of 2021 is 6.1% above 2019.

Chart 3: Cumulative standardised mortality rate compared to 2019

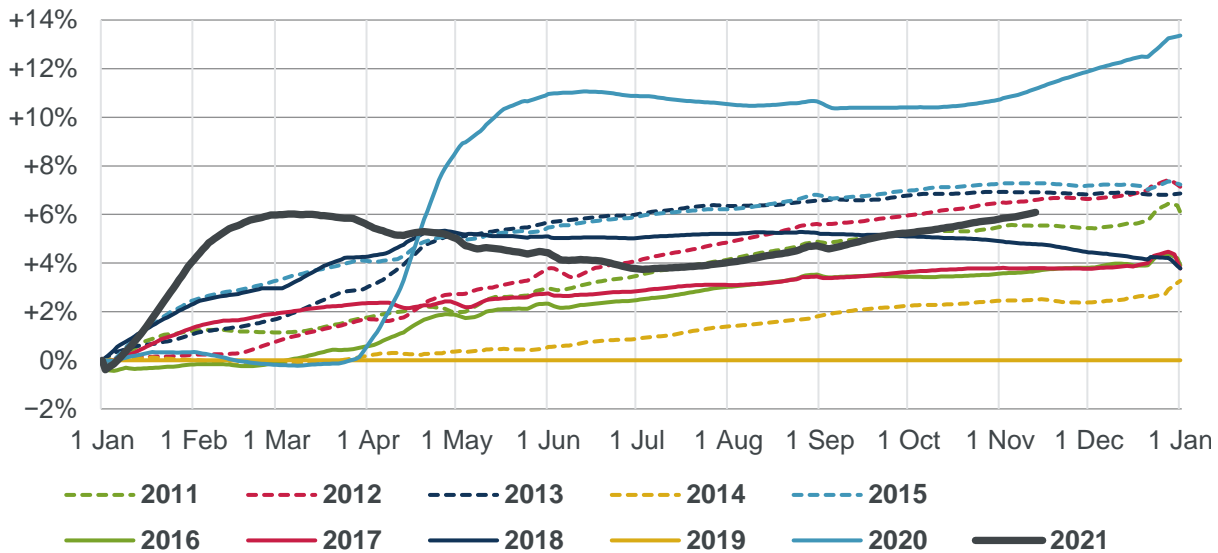
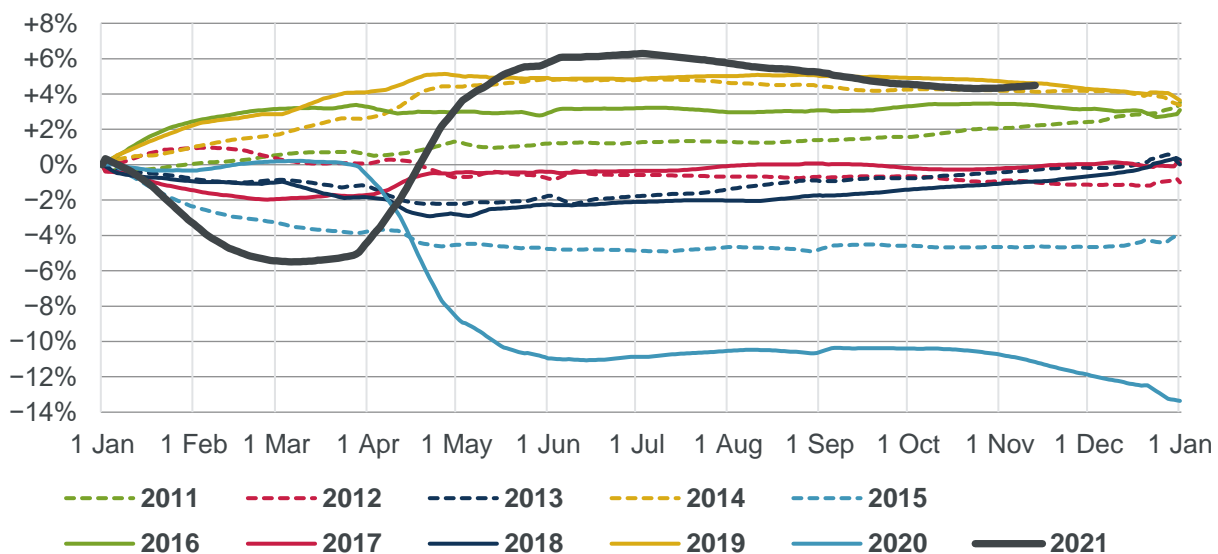


Chart 4 shows the cumulative annual standardised mortality improvement for 2021 and the previous ten years. The cumulative improvement for year N is the reduction in cumulative mortality from year N-1 to year N, as a proportion of full-year mortality for year N-1.

The cumulative mortality improvement to week 45 of 2021 (relative to 2020) is +4.5%.

The cumulative mortality improvement between 2019 and 2021 (consistent with Chart F in the quarterly monitor) is -6.1% to week 45 of 2021.

Chart 4: Cumulative annual standardised mortality improvement





Data sources

The provisional weekly deaths are available from:

- ONS (England & Wales)
<https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/deaths/datasets/weeklyprovisionalfiguresondeathsregisteredinenglandandwales>
- NRS (Scotland)
<https://data.gov.scot/coronavirus-covid-19/data.html>
- NISRA (Northern Ireland)
<https://www.nisra.gov.uk/publications/weekly-deaths>

The daily UKHSA data for deaths of people within 28 days of a positive test result for COVID-19 are available from <https://coronavirus.data.gov.uk/details/deaths>

Notes on method

Full details of the methods used for results based on the ONS data are included in [Working Paper 111](#). Our analysis is based on Standardised Mortality Rates (SMRs). These adjust the provisional weekly deaths data published by the ONS to control for changes in the size, age and gender distribution of the population over time. We note that mortality rates and mortality improvements vary by age, and the results shown are sensitive to the age distribution of the chosen standard population (the 2013 European Standard Population).

Our calculations rely on data for registered deaths, and we are conscious that in recent months deaths may have been registered earlier or later than in previous years. Consequently, comparisons of mortality between 2020 and 2021 and earlier years may not be on a like-for-like basis. Also, results for individual weeks may not be consistent between years due to the timing of public holidays.

Use of this document

The CMI disclaims any liability from use of or reliance on these calculations, including in relation to financial transactions such as longevity swaps; and the CMI does not guarantee that it will continue to publish updates. Please also see the reliances and limitations, disclaimer, and copyright notice on the final page of this document.

TAS compliance

This paper is intended to analyse recent mortality in England & Wales. It complies with the principles in the Financial Reporting Council's Technical Actuarial Standard "TAS 100: Principles for Technical Actuarial Work". Any person using this paper should exercise judgement over its suitability and relevance for their purpose.

Reliances and limitations

The purpose of the weekly mortality monitor is to provide regular updates on standardised mortality in England & Wales during the coronavirus pandemic, adjusting ONS data to allowing for changes in the size and age of the population.

The CMI aims to produce high-quality outputs and takes considerable care to ensure that the mortality monitor and the accompanying spreadsheet of results are accurate. However:

- We cannot guarantee their accuracy (see the Disclaimer).
- There is a reliance on the data published by third parties, particularly the ONS data which is described as "provisional".
- We have also applied judgement and assumptions in deciding on the calculation methods and the presentation of results.
- Anyone using the results of the mortality monitor should ensure that it is appropriate for their particular use, and note that care is needed when estimating full year experience from partial year experience. This is particularly true during the coronavirus pandemic.



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