



CMI mortality monitor – week 50 of 2024

This update is for week 50 of 2024, ending on 13 December 2024 and published on 8 January 2025. The [CMI website](#) has details of the calculation methods and previous updates. Results are based on the date of registration of deaths. Using date of occurrence, if available, may give different results.

Note: Results for 2024 are affected by death certification reforms on 9 September 2024. Our [analysis](#) suggests that weekly figures were only materially affected in the weeks shortly after that date, but the cumulative standardised mortality rate may be around 0.25% lower and the mortality improvement may be around 0.25% higher than if the reforms had not been implemented.

Chart 1: Weekly standardised mortality rates in England & Wales for 2011-2019 and 2022-2024

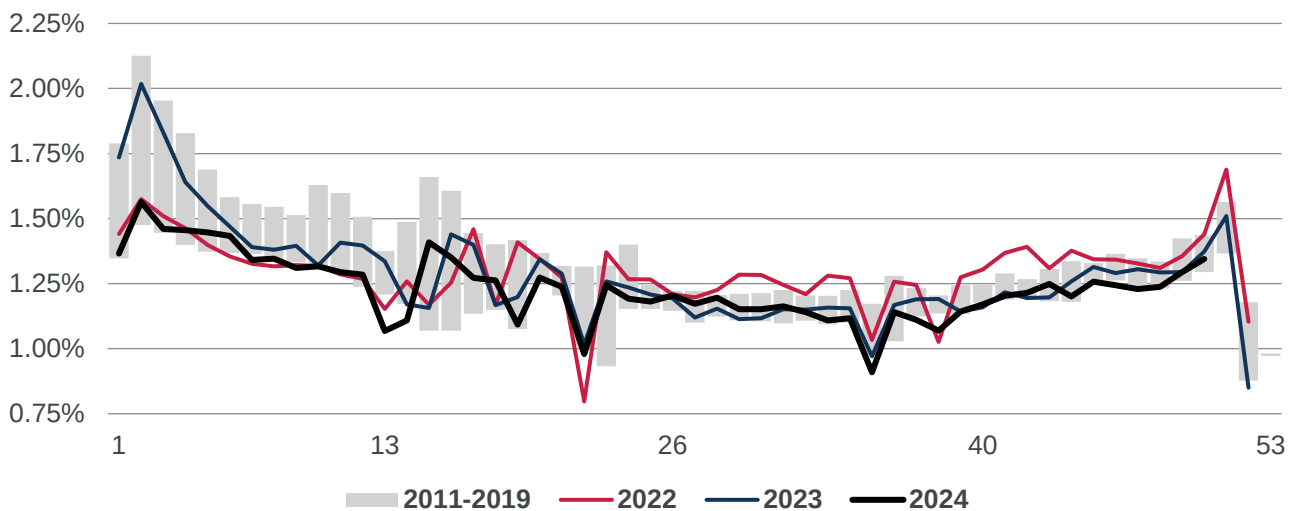


Chart 2 shows cumulative standardised mortality rates relative to the ten-year average for 2014-2023, as a proportion of the full year's mortality for the 2014-2023 average. While we compare to a ten-year average, this is not intended as a measure of likely or 'normal' deaths for 2024.

Under this measure, cumulative standardised mortality to week 50 of 2024 is 4.6% below the ten-year average.

Chart 2: Cumulative standardised mortality rate compared to the 2014-2023 average

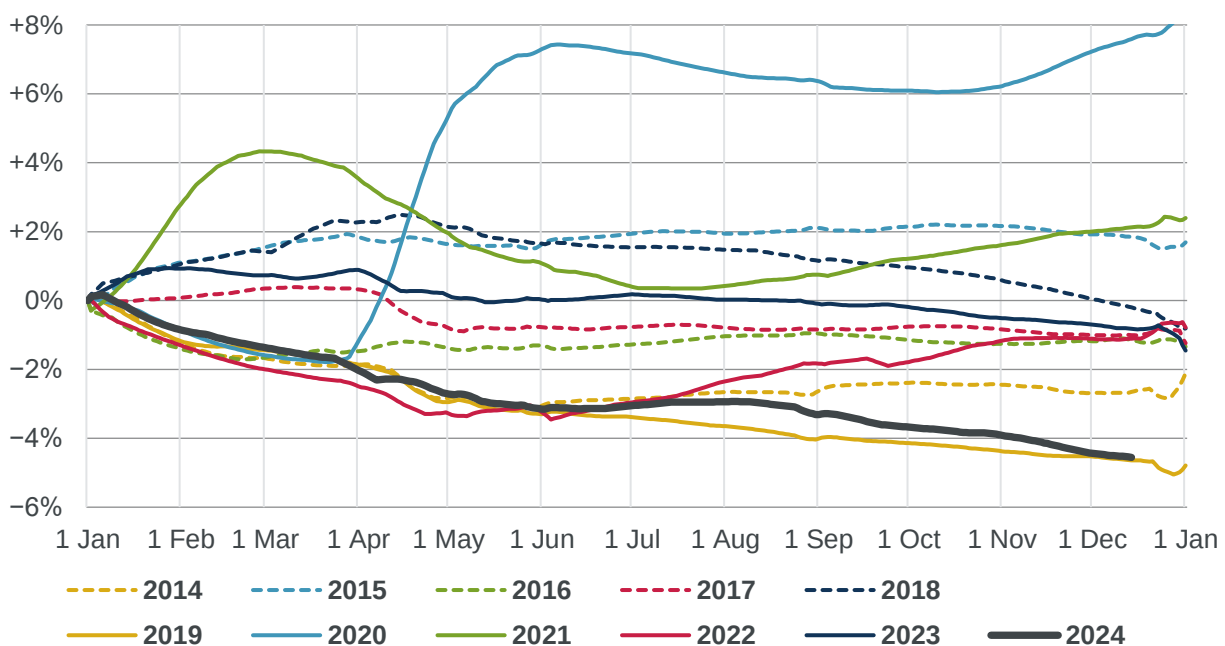




Chart 3 shows the cumulative annual standardised mortality improvement for 2024 and the previous ten years. The cumulative improvement for year N is the reduction in cumulative mortality from year N–1 to year N, as a proportion of full-year mortality for year N–1.

The cumulative mortality improvement to week 50 of 2024 (relative to 2023) is +3.8%.

Chart 3: Cumulative annual standardised mortality improvement

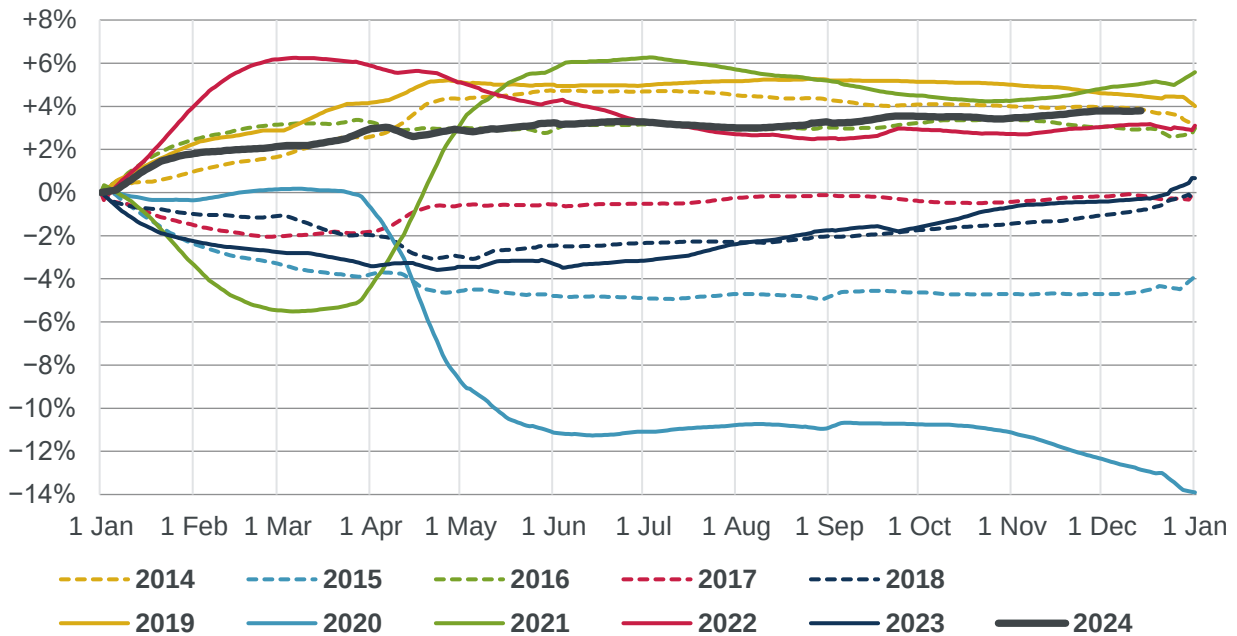


Chart 4: Weekly deaths involving COVID-19 in 2022-2024

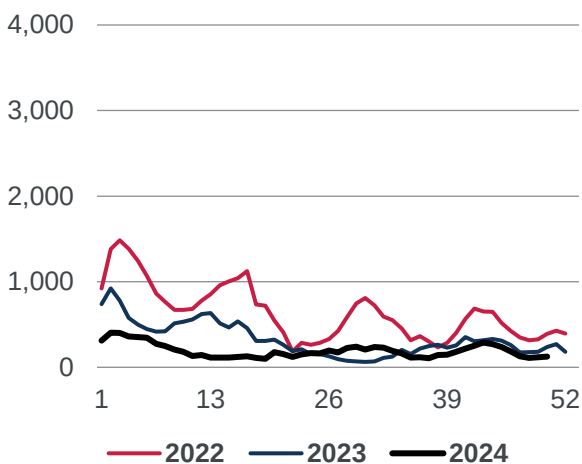
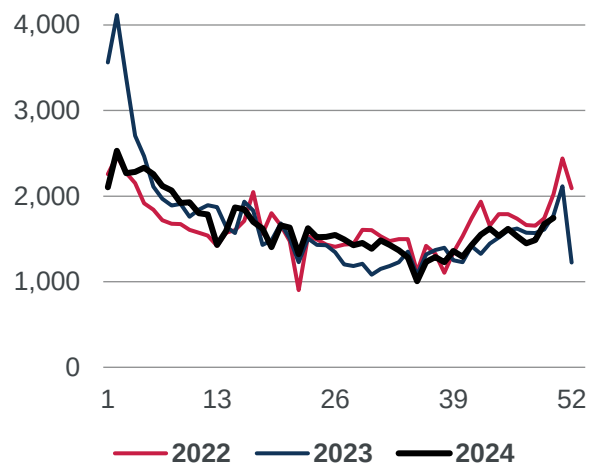


Chart 5: Weekly deaths involving influenza or pneumonia in 2022-2024





Data source

The provisional weekly deaths are available from the ONS:

- <https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/deaths/datasets/weeklyprovisionalfiguresondeathsregisteredinenglandandwales>

Notes on methods and data

Full details of the methods used 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).

We have revised the population data used to produce the mortality monitor from time to time, primarily to reflect results of the 2021 census. The mortality monitor webpage includes a note setting out the most recent changes, which were implemented in the week 29 of 2024 monitor.

Our calculations rely on data for registered deaths, and we are conscious that during the pandemic deaths may have been registered earlier or later than in previous years. Consequently, comparisons of mortality between years during the pandemic 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.

In addition, we have noted that the difference between occurrences and registrations of deaths was particularly noticeable around the end of 2022. We discuss this, and further evidence that the pattern of registrations in the first half of 2023 differed from earlier years, in Appendix 2 to the mortality monitor for week 1 of 2024. Please note that the ONS has not published updated monthly occurrences data since July 2023.

Since 9 September 2024 death certification reforms means that the five-day period for registering a death starts on the date that the registrar receives a signed medical certificate of cause of death from the medical examiner, or relevant notification from the coroner. Previously, deaths should legally have been registered within five days of the death occurring or the date on which a body was found (including weekends and bank holidays), unless a coroner was involved. Our [analysis](#) suggests that weekly figures were only materially affected in the weeks shortly after that date, but the cumulative standardised mortality rate may be around 0.25% lower and the mortality improvement may be around 0.25% higher than if the reforms had not been implemented.

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 translate publicly available demographic information published by the Office for National Statistics and similar bodies into indicative mortality measures to illustrate recent mortality experience primarily in England & Wales. The paper is intended for use by actuaries and other parties interested in detailed mortality statistics and is for information only.

The paper complies with the principles in the Financial Reporting Council's Technical Actuarial Standard "TAS 100: General Actuarial Standards". 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 mortality monitor reports on all-cause, COVID-19, and influenza and pneumonia mortality. It does not offer any view on other causes of death or reasons for changes in mortality rates.



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 the ONS which is described as “provisional”. We are unable to quantify the impact on the results of the monitor of any future revisions to provisional data.
- 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.
- Population estimates for the latest years reflect our own estimates and are less certain than published ONS figures for earlier years.

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