



CMI mortality monitor – revision to data for 2022 onwards

Background

The CMI mortality monitor relies on estimates of the England & Wales population by age and sex.

We use ONS population estimates where these are available but also need to make our own estimates for the latest period. We update the population estimates from time to time when the ONS publishes new data, to:

- replace CMI estimates with ONS estimates when these become available; and
- replace existing ONS estimates with revised ONS estimates.

Such updates to population estimates affect the results of the mortality monitor. This document analyses the impact of changes to population estimates with effect from 12 August 2026 and shows the impact on results for week 31 of 2026. This note is in the same format as our previous analysis for changes in data.

Changes to population estimates from week 31 of 2026

We have revised the population estimates to take account of the latest mid-year population estimates for 2022, 2023, 2024 and 2025 published by the ONS on 29 July 2026:

<https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates/bulletins/populationestimatesforenglandandwales/mid2025>

Impact on results – overall

This section shows the impact on the “headline” results for week 31 of 2026 – unisex figures for ages 20-100. We show results for the “previous” dataset (used up to week 26 of 2026), the “new” dataset (used from week 31 of 2026), and the differences between them. Tables 1 and 2 show:

- the cumulative SMR relative to the 2016-2025 average (as in Chart 2 of the summary monitor and Chart D of the quarterly monitor); and
- the cumulative mortality improvement (as in Chart 3 of the summary monitor and Chart E of the quarterly monitor).

In each case, figures for 2016 to 2025 are for the full year and those for 2026 are as at week 31.

Tables 1 and 2 show that the greatest changes in relative SMR are for 2025 and for mortality improvement are for 2025 as well.

Table 1: Cumulative standardised mortality rate (cSMR) compared to the 2016-2025 average

Year	Previous	New	Difference
2016	-0.21%	-0.27%	-0.06%
2017	-0.10%	-0.17%	-0.07%
2018	+0.34%	+0.26%	-0.08%
2019	-3.68%	-3.75%	-0.07%
2020	+9.74%	+9.69%	-0.05%
2021	+3.66%	+3.67%	+0.01%
2022	+0.49%	+0.48%	-0.01%
2023	-0.17%	-0.18%	-0.01%
2024	-4.13%	-4.09%	+0.04%
2025	-5.94%	-5.64%	+0.29%
2026 (week 31)	-5.60%	-5.38%	+0.23%



Table 2: Cumulative annual standardised mortality improvement (cSMRI)

Year	Previous	New	Difference
2016	+2.98%	+2.98%	+0.01%
2017	-0.11%	-0.10%	+0.01%
2018	-0.44%	-0.43%	+0.01%
2019	+4.00%	+4.00%	-0.01%
2020	-13.94%	-13.96%	-0.03%
2021	+5.55%	+5.49%	-0.05%
2022	+3.06%	+3.07%	+0.02%
2023	+0.66%	+0.66%	+0.01%
2024	+3.96%	+3.91%	-0.05%
2025	+1.89%	+1.62%	-0.27%
2026 (week 31)	+2.34%	+2.25%	-0.09%



Impact on results – by age and sex

Tables 3 and 4 show how the “difference” items from Tables 1 and 2 respectively vary by age and sex. Tables 3 and 4 show that the differences are greatest for males aged 85+. Note that a value of “-” indicates no difference, while a value of “+0.0%” or “-0.0%” indicates a difference that rounds to zero for the precision shown.

Tables 5 and 6 show the values of cumulative relative mortality and cumulative mortality improvements for the New dataset.

Table 3: Difference in cumulative standardised mortality rate (cSMR) compared to the 2016-2025 average between Previous and New datasets, by age and sex

Year	M 20-44	M 45-64	M 65-74	M 75-84	M 85+	F 20-44	F 45-64	F 65-74	F 75-84	F 85+
2016	+0.1%	+0.2%	+0.1%	+0.1%	-0.4%	+0.1%	+0.1%	+0.1%	+0.1%	-0.1%
2017	+0.1%	+0.2%	+0.1%	+0.1%	-0.5%	+0.1%	+0.1%	+0.1%	+0.1%	-0.2%
2018	+0.2%	+0.2%	+0.1%	+0.1%	-0.5%	+0.1%	+0.1%	+0.1%	+0.1%	-0.2%
2019	+0.1%	+0.2%	+0.1%	+0.1%	-0.4%	+0.1%	+0.1%	+0.1%	+0.1%	-0.2%
2020	+0.2%	+0.3%	+0.2%	+0.1%	-0.4%	+0.1%	+0.1%	+0.1%	+0.1%	-0.1%
2021	+0.2%	+0.3%	+0.2%	+0.1%	-0.2%	+0.1%	+0.1%	+0.1%	+0.1%	-0.1%
2022	-0.3%	-0.1%	-0.0%	+0.0%	+0.0%	-0.2%	-0.1%	-0.0%	+0.0%	+0.0%
2023	-0.5%	-0.3%	-0.2%	-0.1%	+0.3%	-0.4%	-0.2%	-0.1%	-0.1%	+0.1%
2024	-0.3%	-0.5%	-0.3%	-0.2%	+0.7%	-0.4%	-0.3%	-0.3%	-0.1%	+0.1%
2025	+0.2%	-0.5%	-0.4%	-0.2%	+1.5%	+0.4%	-0.2%	-0.3%	-0.2%	+0.6%
2026 (week 31)	+0.1%	-0.3%	-0.3%	-0.1%	+1.1%	+0.2%	-0.1%	-0.2%	-0.1%	+0.5%

Table 4: Difference in cumulative annual standardised mortality improvement (cSMRI) between Previous and New datasets, by age and sex

Year	M 20-44	M 45-64	M 65-74	M 75-84	M 85+	F 20-44	F 45-64	F 65-74	F 75-84	F 85+
2016	-	-	-	-	+0.0%	-	-	-	-	+0.0%
2017	-	-	-	-	+0.0%	-	-	-	-	+0.0%
2018	-	-	-	-	+0.0%	-	-	-	-	+0.0%
2019	-	-	-	-	-0.0%	-	-	-	-	-0.0%
2020	-	-	-	-	-0.1%	-	-	-	-	-0.1%
2021	-	-	-	-	-0.2%	-	-	-	-	-0.1%
2022	+0.4%	+0.3%	+0.1%	+0.1%	-0.2%	+0.3%	+0.2%	+0.1%	+0.1%	-0.1%
2023	+0.2%	+0.2%	+0.2%	+0.1%	-0.3%	+0.2%	+0.1%	+0.1%	+0.1%	-0.0%
2024	-0.1%	+0.2%	+0.2%	+0.1%	-0.4%	-0.0%	+0.1%	+0.1%	+0.1%	-0.1%
2025	-0.5%	-0.0%	+0.1%	+0.1%	-0.8%	-0.7%	-0.1%	+0.1%	+0.0%	-0.5%
2026 (week 31)	-0.1%	+0.1%	+0.1%	+0.0%	-0.3%	-0.1%	+0.0%	+0.0%	+0.0%	-0.2%



Table 5: Cumulative standardised mortality rate (cSMR) compared to the 2016-2025 average for the New dataset, by age and sex

Year	M 20-44	M 45-64	M 65-74	M 75-84	M 85+	F 20-44	F 45-64	F 65-74	F 75-84	F 85+
2016	-1.1%	-3.7%	-0.4%	+2.0%	-1.9%	-2.3%	+0.8%	+1.4%	+1.8%	-0.9%
2017	-5.3%	-4.3%	-1.2%	+1.6%	-0.9%	-4.9%	-2.8%	-0.7%	+2.1%	+1.3%
2018	+0.7%	-3.5%	-0.7%	+0.5%	+0.1%	-2.6%	-0.9%	-0.0%	+1.6%	+1.9%
2019	-4.2%	-5.5%	-4.0%	-2.9%	-4.2%	-3.7%	-3.6%	-3.3%	-2.7%	-3.9%
2020	+1.2%	+8.1%	+8.7%	+12.5%	+11.2%	+2.6%	+6.0%	+5.8%	+9.5%	+9.9%
2021	+9.4%	+10.7%	+5.5%	+4.3%	+0.8%	+8.1%	+7.8%	+4.9%	+3.0%	+1.2%
2022	+1.3%	+0.6%	+1.0%	-0.8%	+1.2%	+3.5%	+0.9%	+0.9%	+0.2%	+0.0%
2023	+3.7%	+1.6%	+0.3%	-2.0%	+0.5%	+2.9%	+0.0%	-0.0%	-1.4%	-0.2%
2024	-1.0%	-1.9%	-2.8%	-6.6%	-3.3%	+0.7%	-2.7%	-3.6%	-5.8%	-4.2%
2025	-4.7%	-2.3%	-6.4%	-8.6%	-3.5%	-4.3%	-5.6%	-5.5%	-8.3%	-5.0%
2026 (week 31)	-4.2%	-3.8%	-6.4%	-7.5%	-4.0%	-5.7%	-5.8%	-5.1%	-6.8%	-4.5%

Table 6: Cumulative annual standardised mortality improvement (cSMRI) for the New dataset, by age and sex

Year	M 20-44	M 45-64	M 65-74	M 75-84	M 85+	F 20-44	F 45-64	F 65-74	F 75-84	F 85+
2016	-3.6%	+0.7%	+1.3%	+2.4%	+4.5%	-0.8%	-1.8%	+1.3%	+3.7%	+5.3%
2017	+4.3%	+0.6%	+0.7%	+0.4%	-1.0%	+2.6%	+3.6%	+2.1%	-0.4%	-2.2%
2018	-6.4%	-0.8%	-0.4%	+1.1%	-1.0%	-2.5%	-2.0%	-0.7%	+0.5%	-0.6%
2019	+4.9%	+2.1%	+3.3%	+3.4%	+4.3%	+1.2%	+2.7%	+3.2%	+4.3%	+5.7%
2020	-5.7%	-14.4%	-13.2%	-15.9%	-16.1%	-6.5%	-10.0%	-9.4%	-12.6%	-14.4%
2021	-8.1%	-2.3%	+2.9%	+7.2%	+9.4%	-5.4%	-1.7%	+0.9%	+5.9%	+7.9%
2022	+7.4%	+9.1%	+4.3%	+4.9%	-0.5%	+4.3%	+6.4%	+3.8%	+2.8%	+1.2%
2023	-2.4%	-1.0%	+0.7%	+1.2%	+0.7%	+0.6%	+0.9%	+0.9%	+1.6%	+0.3%
2024	+4.6%	+3.5%	+3.0%	+4.7%	+3.9%	+2.1%	+2.7%	+3.5%	+4.5%	+4.0%
2025	+3.8%	+0.4%	+3.8%	+2.1%	+0.2%	+5.0%	+3.0%	+2.0%	+2.7%	+0.8%
2026 (week 31)	+1.9%	+3.2%	+3.3%	+2.7%	+1.9%	+4.1%	+2.9%	+1.8%	+2.3%	+1.3%



Data sources

The provisional weekly deaths are available from:

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

The population estimates are available from:

- <https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates/datasets/estimatesofthepopulationforenglandandwales>

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 sex 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. The mortality monitor webpage includes notes setting out these changes.

Our calculations are based on the dates when deaths are registered rather than when they occurred. Therefore, results for individual weeks may not be consistent between years due to the timing of public holidays and changes in registration patterns.

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.

We published analysis of the impact of changing registration delays alongside the mortality monitor for Q1 of 2026 in April 2026 and a summary update alongside the monitor for Q2 of 2026 in July 2026.

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 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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