

Deaths from Alzheimer's disease and other dementias, 2023

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This statistical report details information on the number of deaths that were registered in Scotland in 2023 from Alzheimer's disease and other dementias.

It also includes breakdowns by sex, age, cause of death and deprivation

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1. Key Findings

- There were 6,491 deaths caused by Alzheimer's disease and other dementias in Scotland in 2023, an increase of 3% (214 deaths) on 2022.
- The rate of mortality caused by Alzheimer's disease and other dementias was 125 deaths per 100,000 people in 2023. This makes these conditions one of the leading causes of death in Scotland.
- There was an increase from 120 deaths per 100,000 in 2022. The current rate of 125 deaths per 100,000 people is more than twice as high as it was in 2005 (60 deaths per 100,000).
- Of the 6,491 deaths caused by Alzheimer's disease and other dementias in 2023, 4,067 (63%) took place within care homes, 1,436 (22%) within hospitals, and 938 (14%) within a home/non-institution.
- Where Alzheimer's disease and other dementias are mentioned on the death certificate as a contributing factor there were 10,546 deaths in 2023 with a mortality rate of 201 per 100,000 people (an increase of 51% in the rate since 2000). In 2020, deaths in this category peaked at 243 deaths per 100,000. This is most likely due the effect on deaths caused by COVID-19 during this year.
- Around two thirds of deaths caused by Alzheimer's disease and other dementias were females - there were 4,253 (66%) female deaths and 2,238 (34%) male deaths.
- Over 4 in 5 (84%) of deaths caused by Alzheimer's disease and other dementias occur over the age of 80, with an average age of 87. For females, the average age is slightly higher at 88 and for males the average is 85.
- Among council areas, Inverclyde and Falkirk had the highest 5-year average mortality rates in 2023. The rates were lowest in the Scottish Borders, East Renfrewshire and North Ayrshire.
- Deaths caused by Alzheimer's disease and other dementias were 1.3 times as likely in the most deprived areas of Scotland compared to the least deprived areas. This is a statistically significant difference, but the gap is smaller than the equivalent figure for all causes of death.

What are Alzheimer's and other dementia deaths?

Dementia is a general term for cognitive decline and can result in death. Alzheimer's disease is a specific disease that accounts for many of the cases of dementia that occur.

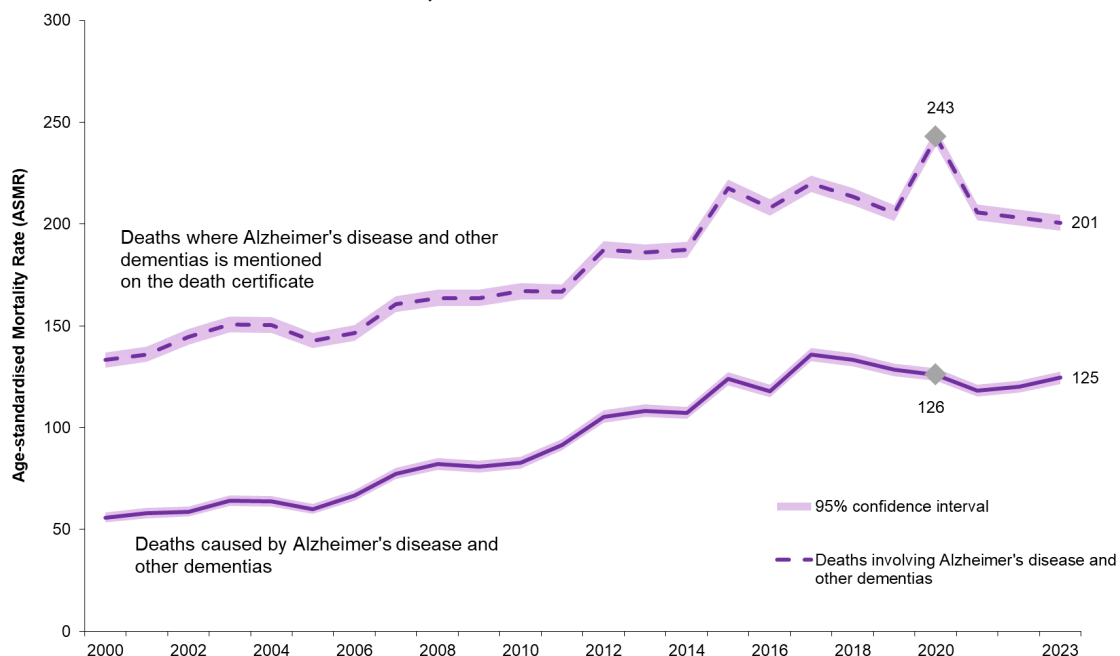
These are deaths which are defined by the International Classification of Diseases (ICD), which is maintained by the World Health Organisation (WHO), as the following:

- Vascular dementia (ICD code F01)
- Unspecified dementia (ICD code F03)
- Alzheimer's disease (ICD code G30)

2. Deaths caused by Alzheimer's disease and other dementias in Scotland

There were 6,491 deaths caused by Alzheimer's disease and other dementias in Scotland in 2023, an increase of 3% (214 deaths) on 2022. The highest number of deaths was seen in 2017, with 6,549 deaths. The rate of mortality from deaths caused by Alzheimer's disease and other dementias was 125 deaths per 100,000 people in 2023 (Figure 1). This is an increase from 120 deaths per 100,000 in 2022. The current rate of 125 deaths per 100,000 people is more than twice as high as it was in 2005 (60 deaths per 100,000).

Figure 1: Age standardised mortality rate for deaths caused by Alzheimer's disease and other dementias, 2000-2023



In this report “Deaths caused by Alzheimer’s disease and other dementias” refers to deaths where these conditions are listed as the underlying cause of death on the death certificate. “Deaths where Alzheimer’s disease and other dementias is mentioned” refers to deaths where Alzheimer’s disease or other dementias were the underlying cause of death, or were mentioned as a contributory factor.

The rate of mortality for deaths caused by Alzheimer’s disease and other dementias increased between 2000 and 2017, from 56 to 136 deaths per 100,000 people. It then fell each year, to 118 in 2021, before rising to 120 in 2022 and 125 deaths per 100,000 people in 2023.

Where Alzheimer’s disease and other dementias are mentioned on the death certificate as a contributing factor there were 10,546 deaths in 2023, with a rate of mortality of 201 per 100,000 people. In 2020, there was increased mortality in deaths where Alzheimer’s disease and other dementias is mentioned, but not in deaths directly as a result of these conditions. This is most likely due the effect of deaths caused by COVID-19 during this year.

What are age-standardised rates?

Age-standardised mortality rates (ASMR) are a better measure of mortality than numbers of deaths, as they account for the population size and age structure and provide more reliable comparisons between groups or over time.

More information on the [calculation of age-standardised mortality rates](#) is available on our website.

Figure 2: Age-standardised mortality rate for deaths caused by Alzheimer’s disease and other dementias, by sex, 2000-2023



In 2023 there were 4,253 (66%) female deaths and 2,238 (34%) male deaths caused by Alzheimer’s disease and other dementias. Females have tended to make up around two thirds of these deaths in Scotland in recent years. The female mortality rate for Alzheimer’s disease and other dementias is 1.2 times the male rate.

In 2023, there were 2,323 deaths caused by Alzheimer’s disease and other dementias in those aged 90 and above. This age group accounted for 36% of deaths from these causes. There were higher numbers of deaths in females than males in all age groups, particularly above 80 years of age. However, this difference is reduced when looking at age-specific rates of deaths. These rates better reflect the difference between males and females at each age range as they take into account the size of the population of males and females in each age group.

Figure 3a: Deaths caused by Alzheimer’s disease and other dementias, by age and sex, 2023

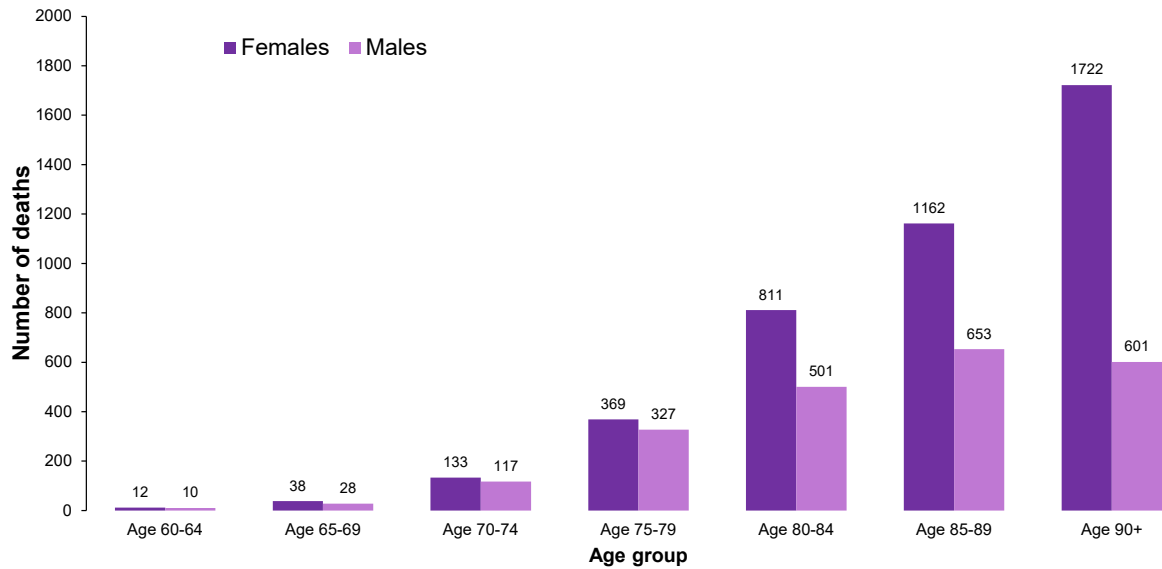
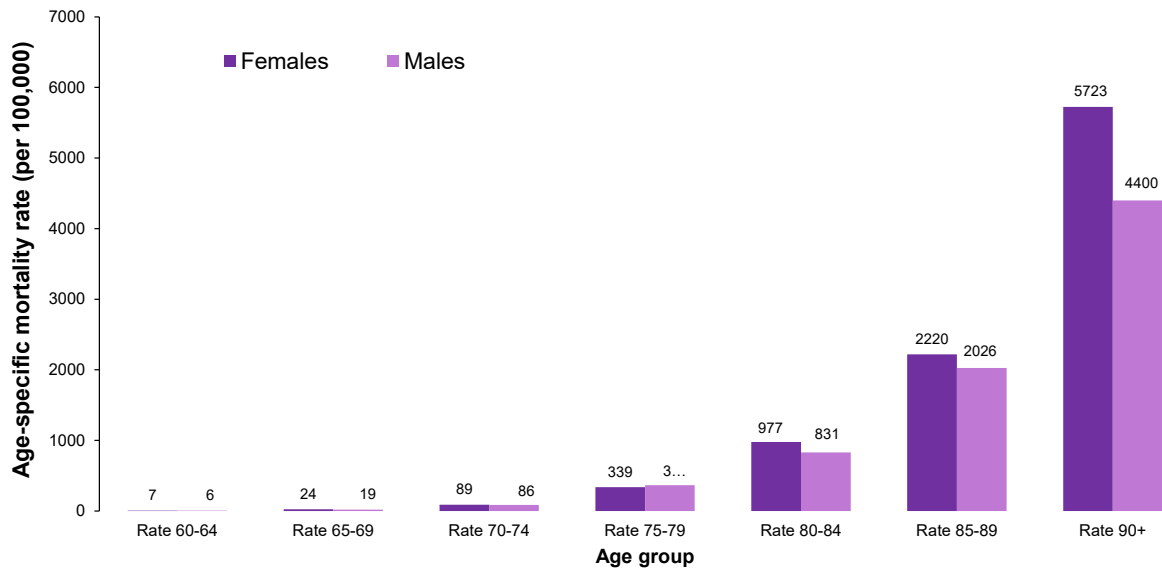
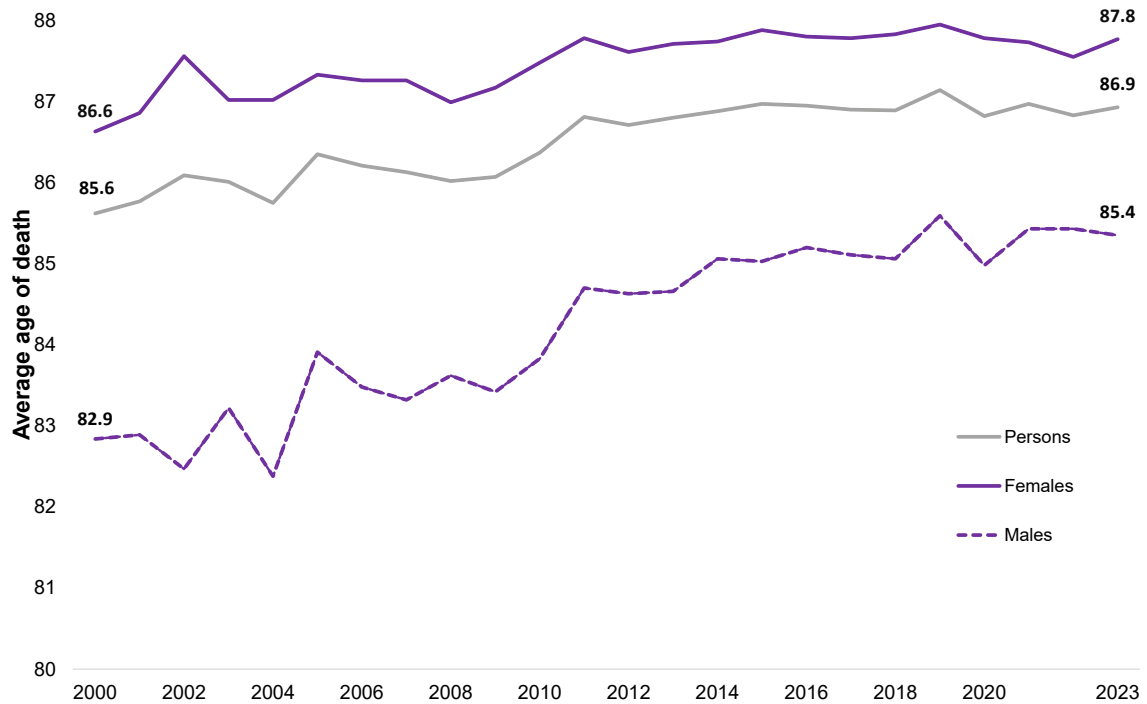


Figure 3b: Alzheimer’s disease and other dementia age-specific death rates, by age and sex, 2023



Deaths caused by Alzheimer’s disease and other dementias in males tend to be at slightly younger ages than for females. In 2023, the average age of death for females was 87.8 years and for males it was 85.4 years. In all persons, over 4 in 5 (84%) of Alzheimer’s disease and other dementia deaths occur over the age of 80.

Figure 4: Deaths caused by Alzheimer’s disease and other dementias, average age of death, 2000-2023

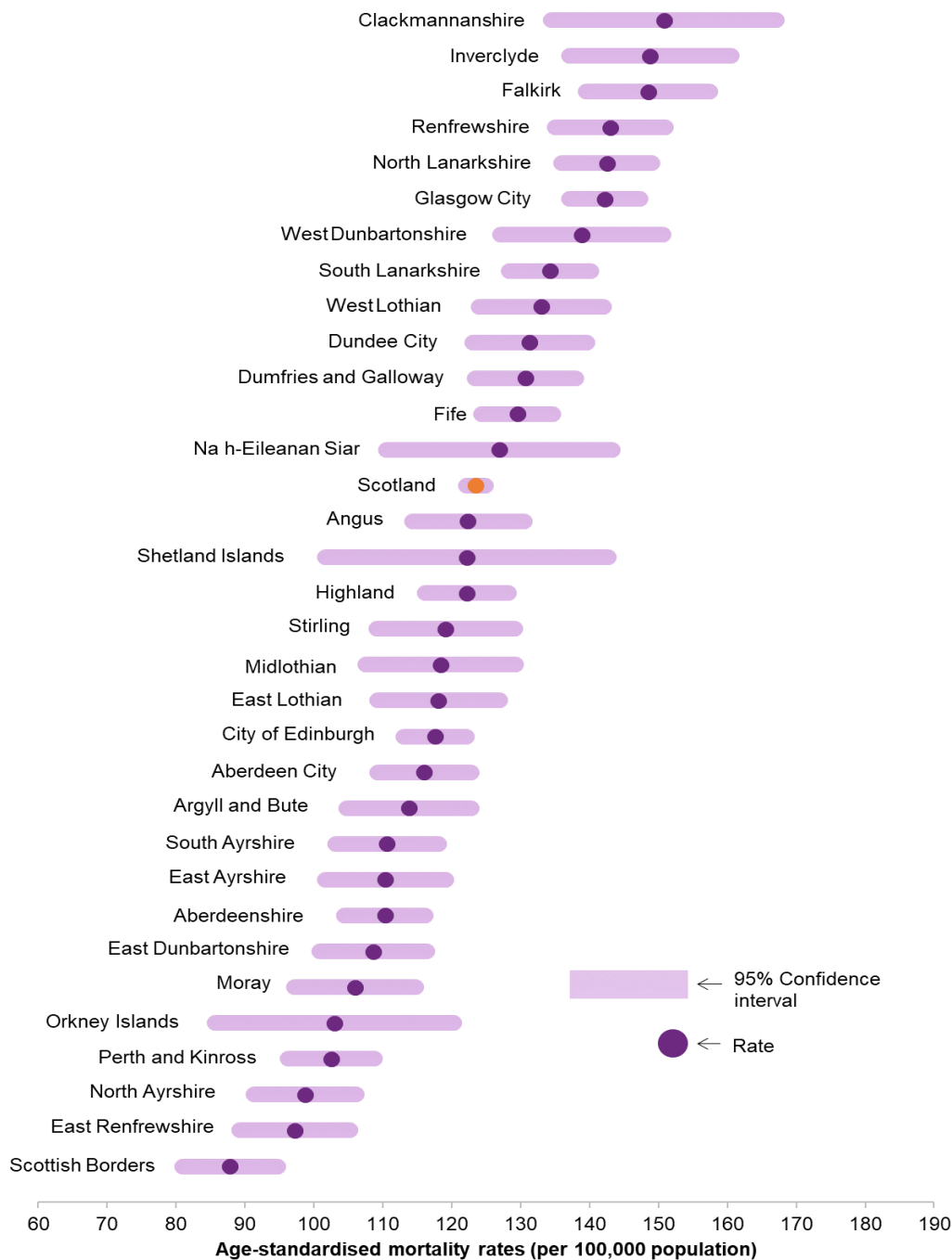


3. Deaths caused by Alzheimer’s disease and other dementias in Scottish areas

For council areas, Inverclyde and Falkirk had the highest 5-year average mortality rates. The rates were lowest in the Scottish Borders, East Renfrewshire and North Ayrshire (Figure 5).

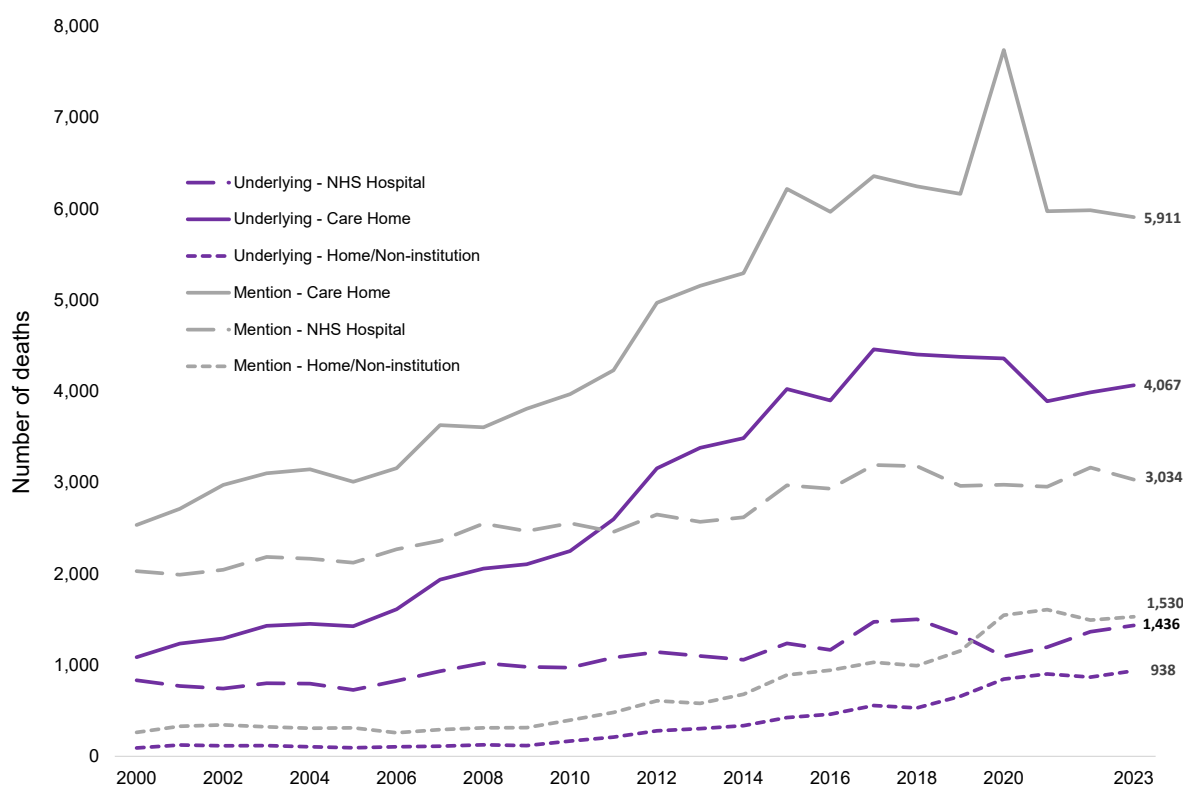
The rates for Shetland and Orkney are lower than the Scottish average, while the rate for Clackmannanshire is the highest of all council areas. However, the confidence interval around the rates for these areas is very wide, making the estimate less certain. This is likely due to the smaller populations in these areas.

Figure 5: Age-standardised mortality rates for deaths caused by Alzheimer’s disease and other dementias, by council area, 2017 to 2023



Of the 6,491 deaths that were caused by Alzheimer’s disease and other dementias, 4,067 (63%) took place within care homes, 1,436 (22%) within hospitals, and 938 (14%) within a home/non-institution.

Figure 6: Deaths caused by Alzheimer’s disease and other dementias, by location, 2000 to 2023



Of the 10,546 deaths where Alzheimer’s disease and other dementia is mentioned on the death certificate as the underlying cause or a contributing factor, the highest number of deaths, (5,911) were seen within care homes (56%). As shown in [Figure 6](#), this value reached 7,742 in 2020. This peak is due to a large number of deaths caused by COVID-19, but Alzheimer’s disease or other dementia were a contributory factor.

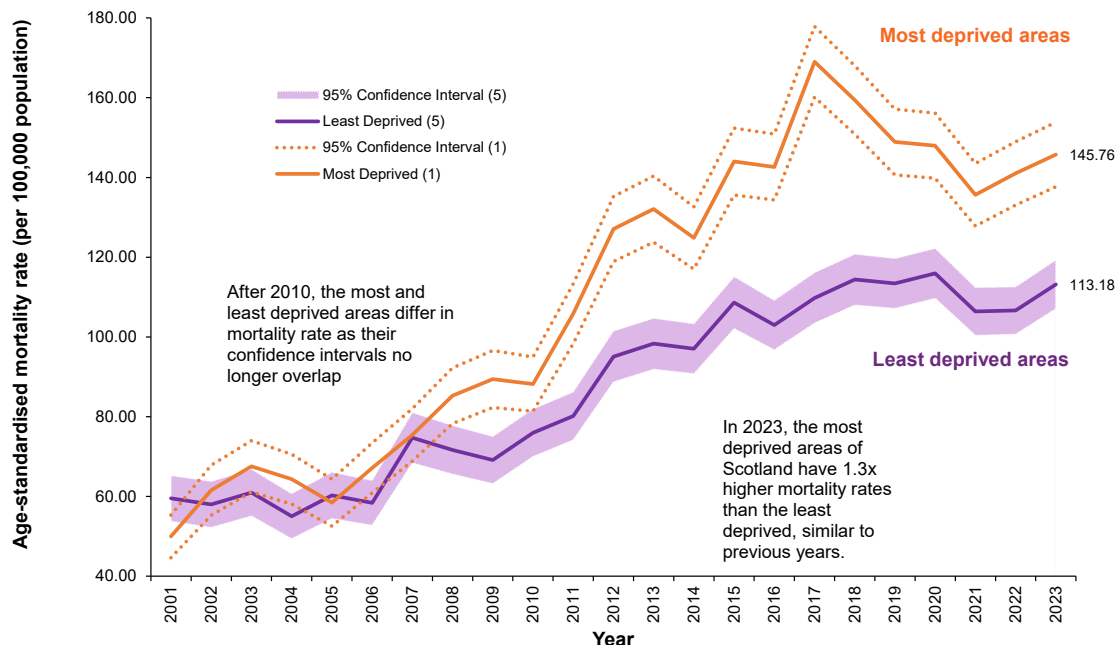
4. Multiple deprivation and urban rural classification

After adjusting for age, deaths caused by Alzheimer’s disease and other dementias were 1.3 times as high in the most deprived areas of Scotland as in the least deprived areas.

This disparity in rates of deaths caused by Alzheimer’s disease and other dementias has generally increased since 2007 ([Figure 7](#)). From 2011 onwards, the confidence intervals of the most and least deprived areas no longer overlap. This suggests that there is a statistically significant difference in age-standardised mortality rates for the most and least deprived areas. It appears that these types of deaths are more

common in deprived areas. For deaths of all causes, people in the most deprived areas are around twice as likely to die as those in the least deprived areas.

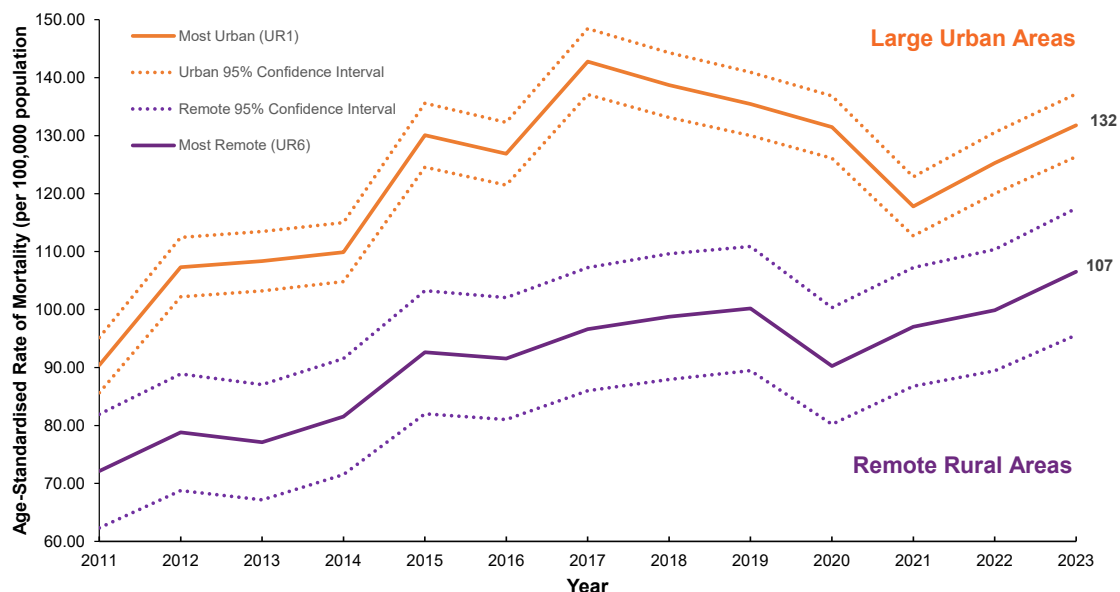
Figure 7: Age-standardised mortality rates for deaths by Alzheimer’s disease and other dementias, by selected SIMD classification, 2001 to 2023



From 2011 onwards, there appears to be a statistically significant difference between mortality rates for the most urban areas (UR1 and UR2) and the most rural areas (UR5 and UR6) as the confidence intervals do not overlap ([Figure 8](#)).

The most rural areas have a larger confidence interval than the most urban areas due to the lower number of deaths. For the less extreme urban and rural area classifications (UR3 and UR4), the pattern is less clear for the relationship between changing levels of rurality and the rate of Alzheimer’s disease and other dementia deaths.

Figure 8: Age-standardised mortality rates for deaths by Alzheimer’s disease and other dementias, by selected urban rural classification, 2011 to 2023



5. Notes on statistical publications

Accredited Official Statistics

The designation of these statistics as Accredited Official Statistics was confirmed in August 2011 following an independent review and compliance check by the [Office for Statistics Regulation](#). They comply with the standards of trustworthiness, quality and value in the Code of Practice for Statistics and should be labelled ‘accredited official statistics’.

In June 2024 the Office for Statistics Regulation introduced the new accredited official statistics badge, to denote official statistics that have been independently reviewed by the Office for Statistics Regulation (OSR) and judged to meet the standards in the Code of Practice for Statistics. The new badge replaces the current National Statistics badge, though the meaning is the same.

Accredited official statistics are called National Statistics in the [Statistics and Registration Service Act 2007](#).

It is National Records of Scotland’s responsibility to maintain compliance with the standards expected of accredited official statistics. If we become concerned about whether these statistics are still meeting the appropriate standards, we will discuss any concerns with the Office for Statistics Regulation promptly. Accredited official statistics status can be removed at any point when the highest standards are not maintained, and reinstated when standards are restored.

Notes on current publication

Please note that a decision was made to omit the 5-year average mortality rates broken down by health board in the current report. The reason for this is a technical error which we were not able to fix in time for the release of these statistics. We will update the rates in due course and publish them in the Tables and Figures supplementary file available on the National Records of Scotland website.

Information on background and source data

Further details on data source(s), timeframe of data and timeliness, continuity of data, accuracy, etc. can be found in the metadata that is published alongside this publication on the NRS website.

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