

Deaths from Alzheimer's disease and other dementias, 2022

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This statistical report details information on the number of deaths that were registered in Scotland in 2022 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 6,277 deaths caused by Alzheimer's disease and other dementias in Scotland in 2022, an increase of 4% (231 deaths) on 2021.
- The rate of mortality caused by Alzheimer's disease and other dementias was 121 deaths per 100,000 people in 2022. This makes these conditions one of the highest causes of death in Scotland.
- There was a slight increase from 117 deaths per 100,000 in 2021. The current rate of 121 deaths per 100,000 people is more than twice as high as it was in 2000 (56 deaths per 100,000).
- Of the 6,277 deaths caused by Alzheimer's disease and other dementias in 2022, 3,989 (64%) took place within care homes, 1,366 (22%) within hospitals, and 869 (14%) within a home/non-institution.
- Where Alzheimer's disease and other dementias are mentioned on the death certificate as a contributing factor there was 10,705 deaths in 2022 with a mortality rate of 205 per 100,000 people (an increase of 54% in since 2000). In 2020, deaths in this category peaked at 241 deaths per 100,000. This is most likely due the effect of 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 4,139 (66%) female deaths and 2,138 (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 is slightly higher at 88 but for males the average is 85.
- After adjusting for age and population size, the mortality rate for deaths caused by Alzheimer's disease and other dementias was highest in the Lanarkshire, Greater Glasgow and Clyde, and Forth Valley NHS board areas.
- 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.

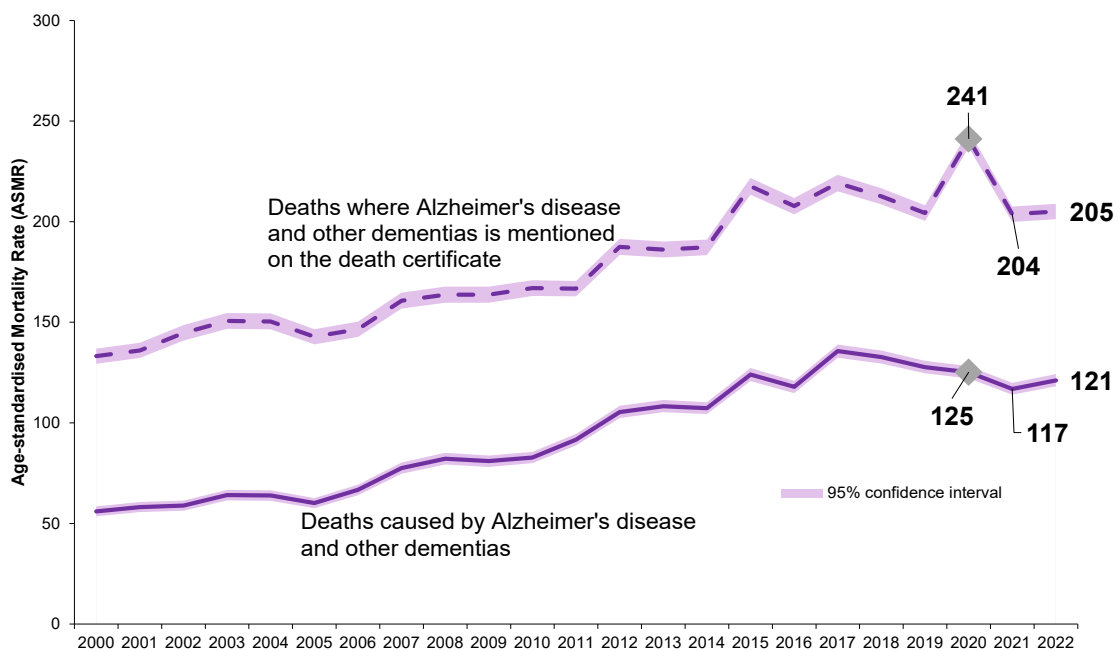
These are deaths which are defined by the International Classification of Diseases (ICD), which is maintained by the World Health Organisation (WHO), as the following:

- 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 6,277 deaths caused by Alzheimer's disease and other dementias in Scotland in 2022, an increase of 4% (231 deaths) on 2021. 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 121 deaths per 100,000 people in 2022 (Figure 1). There was a slight increase from 117 deaths per 100,000 in 2021. The current rate of 121 deaths per 100,000 people is more than twice as high as it was in 2000 (56 deaths per 100,000)

Figure 1: Age standardised mortality rate for deaths caused by Alzheimer's disease and other dementias¹, 2000-2022



Please note that within 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 these conditions are listed on the death certificate (this includes both deaths where Alzheimer’s disease and other dementias were the cause of death, and deaths where another cause of death occurred)

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. Since, it has slightly fallen to 121 deaths per 100,000 people in 2022.

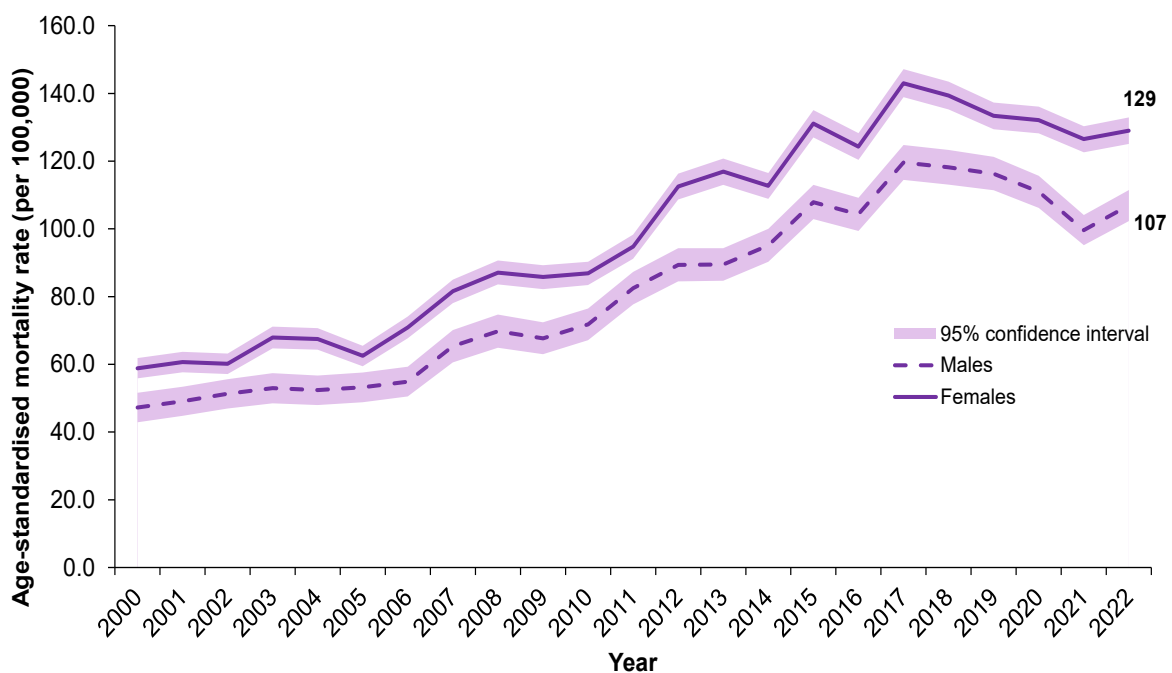
Where Alzheimer’s disease and other dementias are mentioned on the death certificate as a contributing factor there was 10,705 deaths in 2022, with a rate of mortality of 205 per 100,000 people. In 2020, there was increased mortality in deaths where Alzheimer’s disease and other dementias is mentioned, 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, 2000-2022



In 2022 there were 4,139 (66%) female deaths and 2,138 (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.

Figure 3a: Deaths caused by Alzheimer’s disease and other dementias, by age and sex, 2022

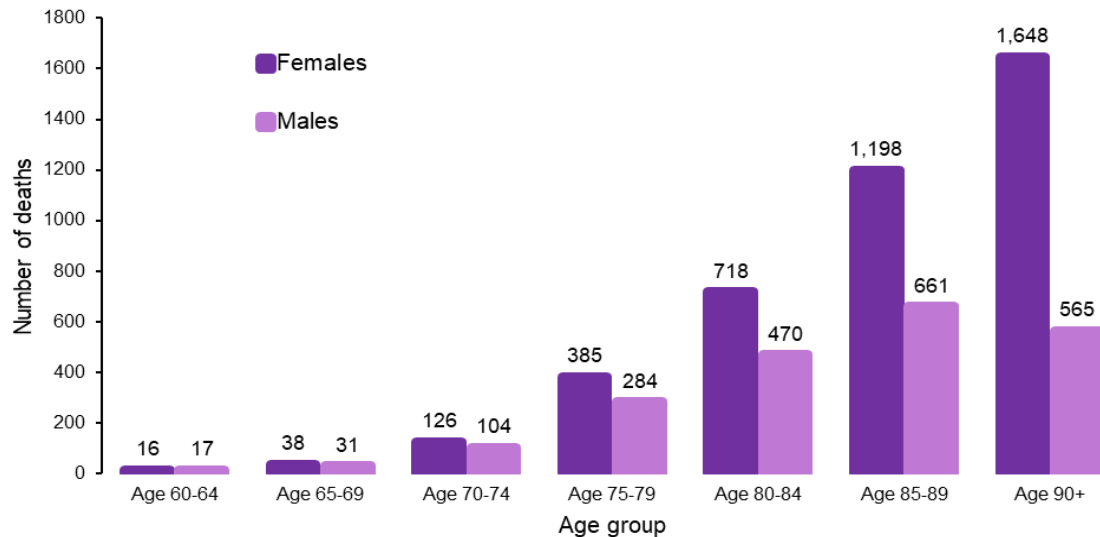
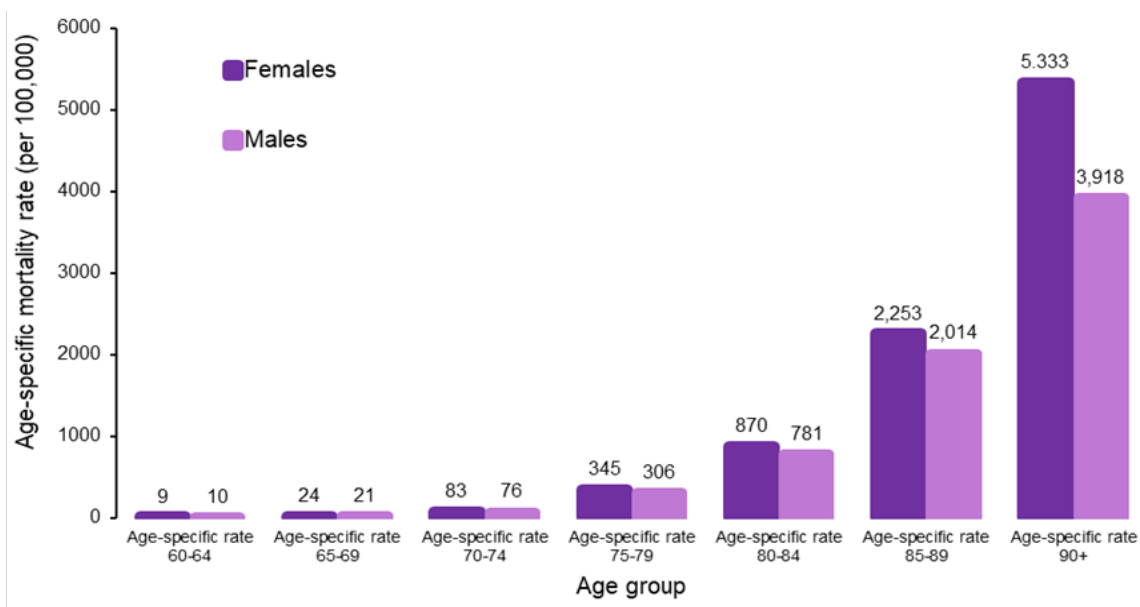


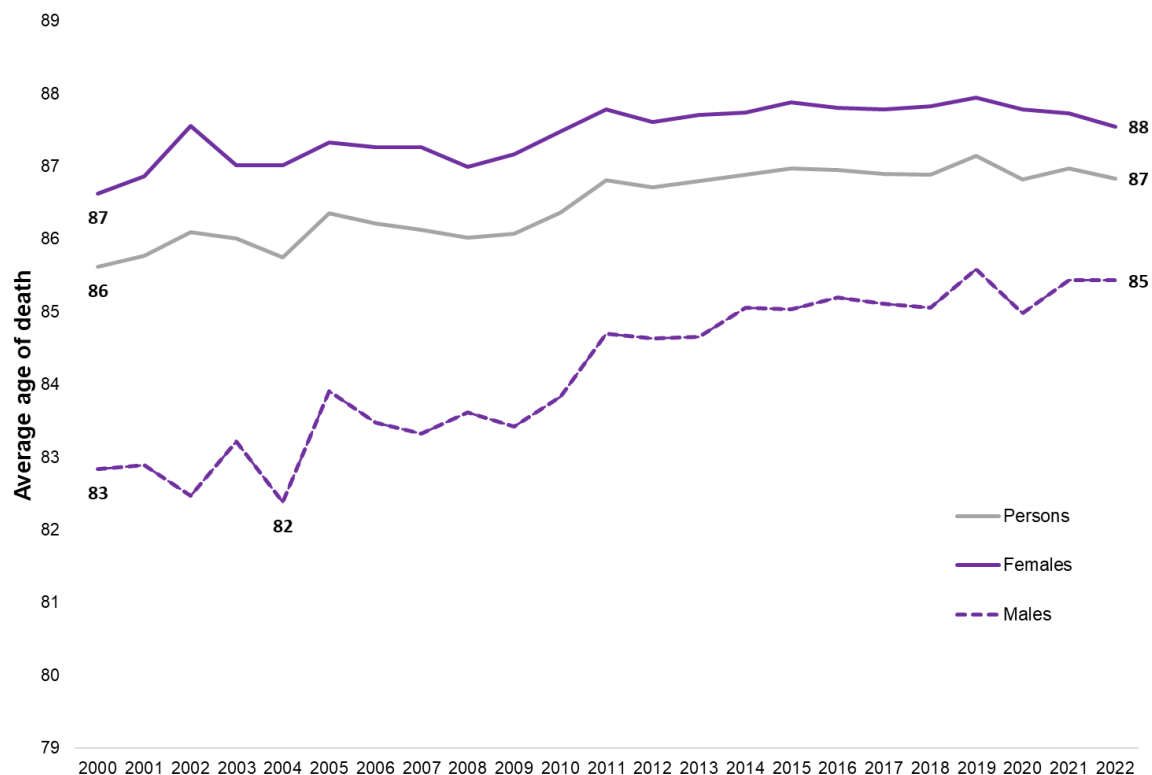
Figure 3b: Alzheimer’s disease and other dementia age-specific death rates, by age and sex, 2022



In 2022, there were 2,213 (35%) deaths in those aged 90 and above. There were far higher numbers of deaths in females than males across all age groups above 60 years of age. However, this difference is reduced when looking at age-specific rates of deaths. These rates better reflect the disparity between males and females at each age range.

Deaths caused by Alzheimer’s disease and other dementias in males tend to be at slightly younger ages than for females. In 2022, the average age of death for females was 87.6 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, 2000-2022



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

For health boards in the past five years, after adjusting for age, the rate of mortality from deaths caused by Alzheimer’s disease and other dementias was highest in Lanarkshire, Greater Glasgow and Clyde, and Forth Valley. The lowest rate is seen in the Borders.

The rate for Shetland, the Western Isles and Orkney is lower than the Scottish average. Yet, the confidence interval is so large that it is hard to tell if it is truly lower due to the small populations (Figure 5). For council areas, in the last five years, Inverclyde, Renfrewshire, and West Dunbartonshire had the highest mortality rates. The rates were lowest in the Scottish Borders, Moray, and North Ayrshire (Figure 6).

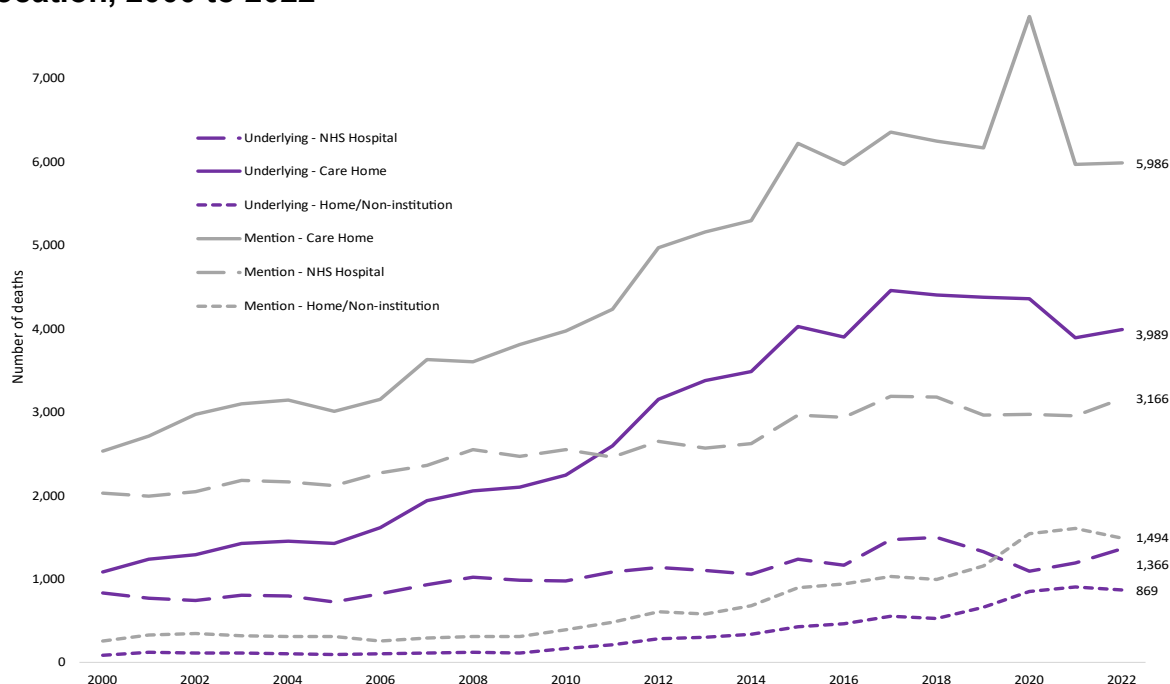
Figure 5: Age-standardised mortality rates for deaths caused by Alzheimer’s disease and other dementias, by NHS board areas, 2018-2022



Figure 6: Age-standardised mortality rates for deaths caused by Alzheimer’s disease and other dementias, by council area, 2017 to 2022



Figure 7: Deaths caused by Alzheimer’s disease and other dementias, by location, 2000 to 2022



Of the 6,277 deaths that were caused by Alzheimer’s disease and other dementias, 3,989 (64%) took place within care homes, 1,366 (22%) within hospitals, and 869 (14%) within a home/non-institution.

Of the deaths where Alzheimer’s disease and other dementia is mentioned on the death certificate as a contributing factor, the highest number of deaths were seen within care homes (56%). As shown in [Figure 7](#), 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 8](#)). 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. However, the disparity between the most and least deprived from deaths of all causes is greater at 1.8 in 2022.

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 9](#)). Additionally, the most

rural areas have a larger confidence interval 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 SIMD classification, 2001 to 2022

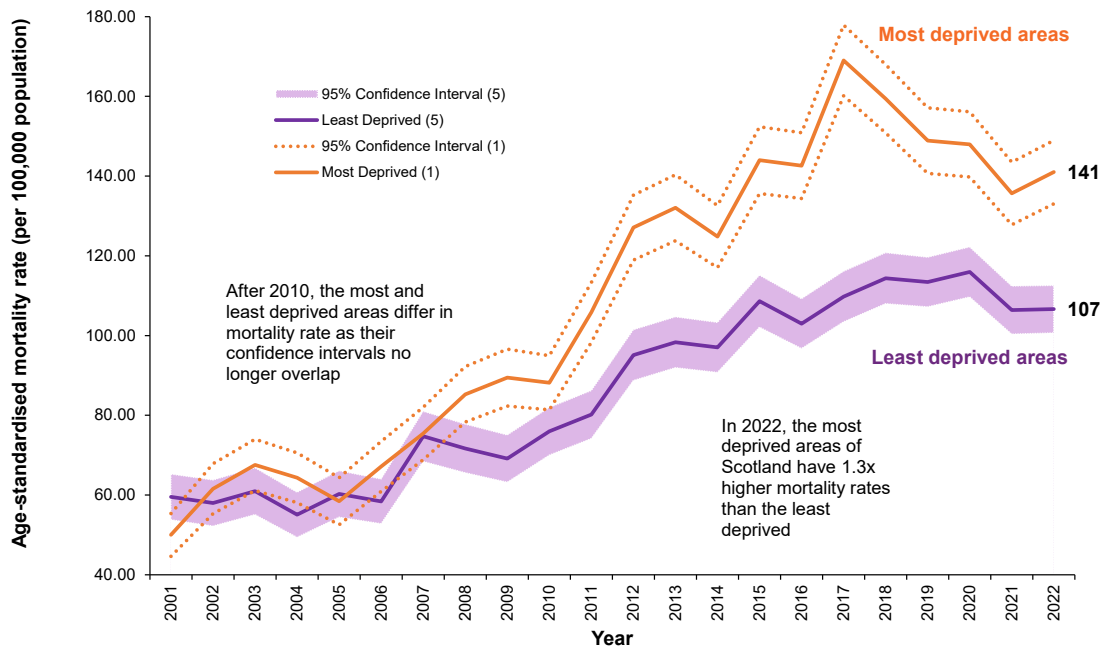
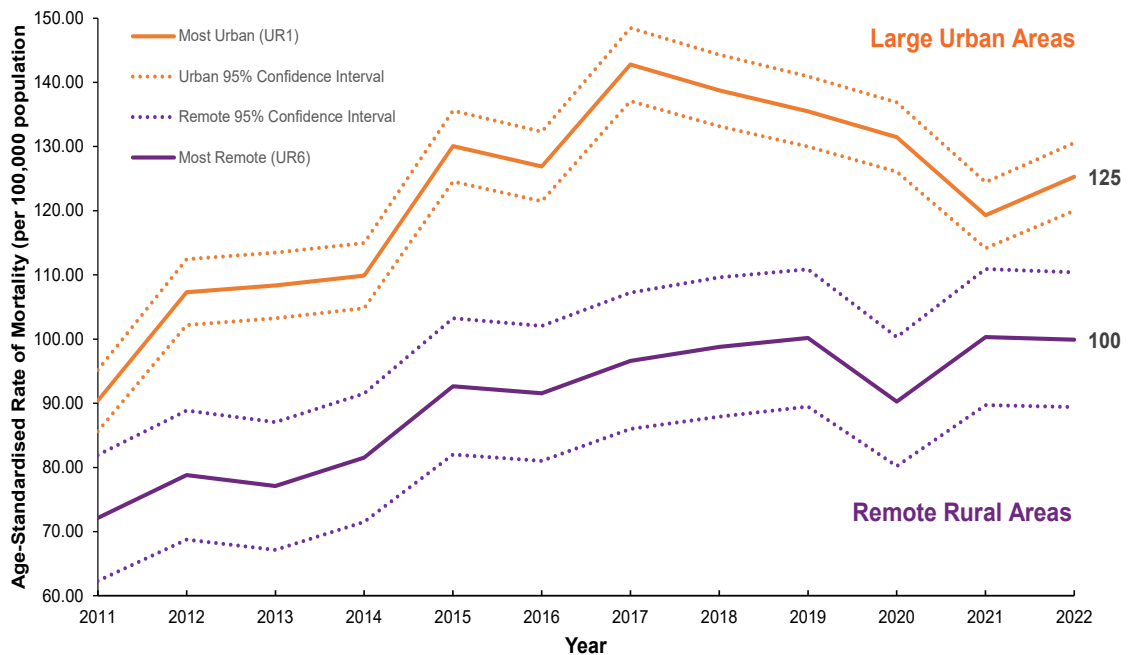


Figure 9: Age-standardised mortality rates for deaths by Alzheimer’s disease and other dementias, by selected urban rural classification, 2011 to 2022



5. Notes on statistical publications

National Statistics

The United Kingdom Statistics Authority (UKSA) has designated these statistics as National Statistics, in line with the Statistics and Registration Service Act 2007 and signifying compliance with the Code of Practice for Official Statistics (available on the [UKSA](#) website). National Statistics status means that official statistics meet the highest standards of trustworthiness, quality and public value.

All official statistics should comply with all aspects of the Code of Practice for Official Statistics. They are awarded National Statistics status following an assessment by the Authority's regulatory arm. The Authority considers whether the statistics meet the highest standards of Code compliance, including the value they add to public decisions and debate.

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

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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Recording the present – At our network of local offices, we register births, marriages, civil partnerships, deaths, divorces and adoptions in Scotland.

Informing the future – We are responsible for the Census of Population in Scotland which we use, with other sources of information, to produce statistics on the population and households.

You can get other detailed statistics that we have produced from the [Statistics](#) section of our website. Scottish Census statistics are available on the [Scotland's Census](#) website. We also provide information about [future publications](#) on our website. If you would like us to tell you about future statistical publications, you can register your interest on the Scottish Government [ScotStat website](#).

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