Strategic Policy, Planning and Performance Report

Public Health Intelligence

Subject:	Jersey Mortality Statistics 2019
Date of report:	May 2021

Please note that this report covers mortality statistics up to the end of 2019. The report for 2020 will be published later this year and will include statistics on COVID-19 related mortality.

Introduction

The numbers of deaths occurring in calendar year 2019[1], and their distribution by age, sex, and cause of death are presented. Age-standardised mortality rates (ASMRs) have been calculated to enable comparisons across time and between jurisdictions. Information on the data sources and processing are given in the notes section of this report.

2019 Summary

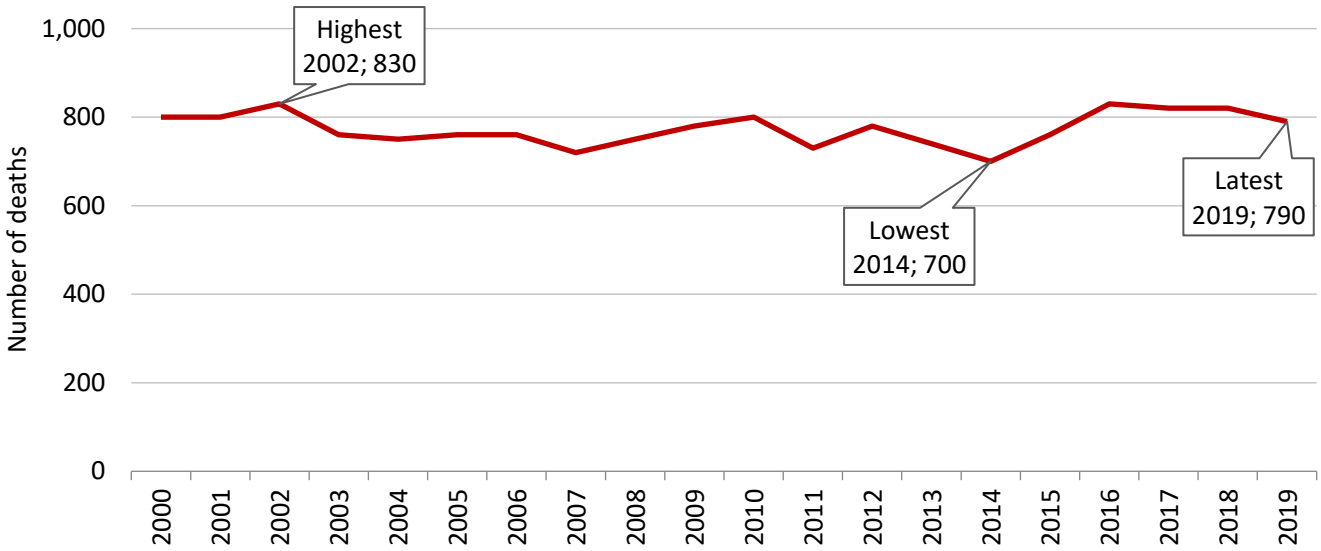
- There were 790 Jersey residents recorded as having died, comprising 410 deaths of males and 390 deaths of females[2], a decrease of 4.0% compared with 2018 (820 deaths)
- The crude mortality rate[3] was 7.4 deaths per 1,000 population
- The age-standardised mortality rate (ASMR) for Jersey was 823 per 100,000 population, significantly lower than the overall ASMR for England in 2019 (1,071)
- The average (mean) age at death for Jersey residents was 78 years; an increase of 11 years since 1960 (67 years)
- Neoplasms (cancers) remained the most frequent cause of death, accounting for almost one in three (31%) of all deaths
- There were 110 deaths of individuals of working age (aged 16-64 years), of whom three-fifths (60%) were male
- Almost a third (32%) of all deaths were of people below 75 years of age
- In total, around 2,250 years of life of males and 1,300 years of life of females were lost (YOLL)[4]

[1] Annual numbers of deaths include those that were registered in Jersey, plus deaths that occurred abroad to Jersey residents where the body was repatriated to Jersey.
[2] Numbers of d*eaths are independently rounded throughout this report to the nearest 10.*
[3] Crude mortality rate is defined as the number of deaths divided by the total population, multiplied by 1,000.
[4] Years of life lost (YOLL) is a measure of premature mortality that quantifies the years **not** lived by individuals who die under 75 years of age (an arbitrary cut-off used to enable comparisons)

Annual numbers of deaths

- In 2019, there were a total of 790 deaths of Jersey residents

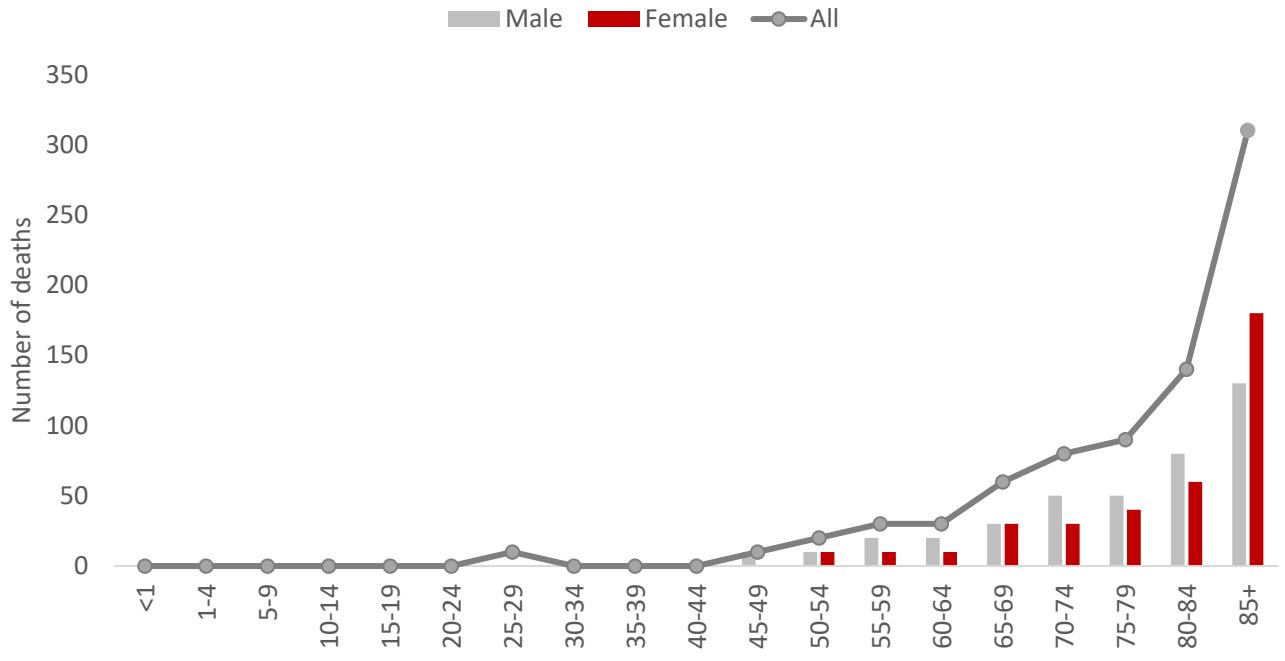
Figure 1: Annual number of deaths of Jersey residents, 2000–2019



Numbers of deaths by age and sex

- In 2019 there were 410 deaths of males and 390 deaths of females
- The proportion of male deaths to female deaths has not changed significantly since 2000
- The number of deaths of males was greater than the number of deaths of females in each age group up to, and including, 80-84 years of age (see Figure 2); in contrast, there were a greater number of deaths of females in the 85 years and over age group

Figure 2: Numbers of deaths by age and sex, 2019



Infant and child deaths

- There were fewer than five recorded deaths for children aged under one[5]; as in the previous seven years, there were fewer than five deaths in children aged between one and fifteen years in 2019

Working age deaths (aged 16-64 years of age)

- In 2019 there were 110 deaths of people of working age (aged 16-64 years), accounting for over one in seven (13%) of all deaths; 60% of these deaths were male

Premature deaths (under 75 years of age)

- There were 250 deaths of Jersey residents in 2019 before 75 years of age ('premature deaths')
- Premature deaths accounted for around 1 in 3 of all deaths in 2019 (32%)
- Around 3,550 years of life were lost[6] (YOLL) in 2019; three-fifths (63%; 2,250) were due to male premature death

Deaths of people aged 75 or over

- There were 540 deaths of people aged 75 or over in 2019, accounting for 68% of all deaths; this proportion was similar to a decade earlier (65% in 2009)

Deaths of people aged 85 or over (old age deaths)

- There were 310 deaths of people aged 85 or over in 2019, accounting for 38% of all deaths; almost three-fifths (59%) of deaths in this age group were female, due to there being more females in this age category

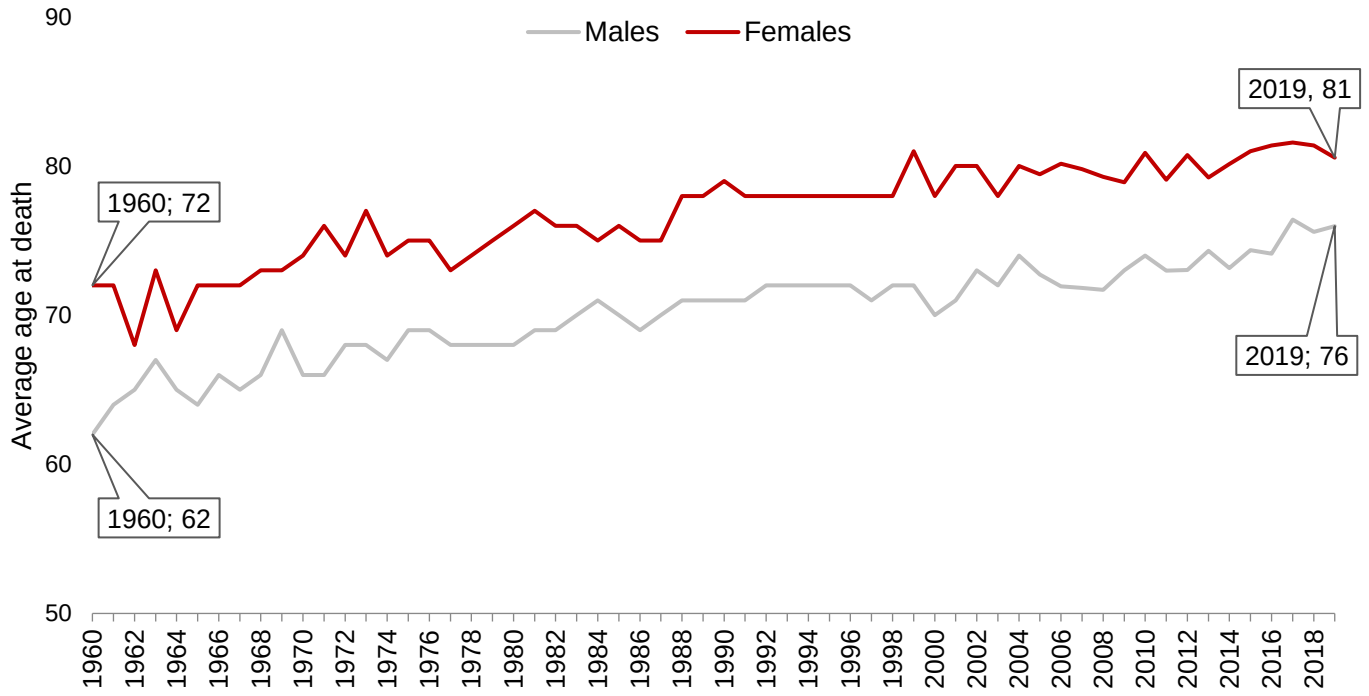
Average age of deaths

- The average (mean) age at death for Jersey residents was 78 years; an increase of 11 years since 1960 (67 years)
- The average (mean) age at death for women in 2019 was 81 years; the mean for men was 76 years
- The mean age at death for women has increased by 9 years (Figure 3) between 1960 and 2019 (from 72 to 81 years), and has increased by 14 years for men over the same time period (62 to 76 years)

[5] Small numbers are not disclosed to ensure that information does not identify an individual.

[6] Years of Life Lost (YOLL) is a measure of premature mortality that quantifies the years **not** lived by individuals who die under 75 years of age (an arbitrary cut-off used to enable comparisons).

Figure 3: Mean average age of death, 1960-2019

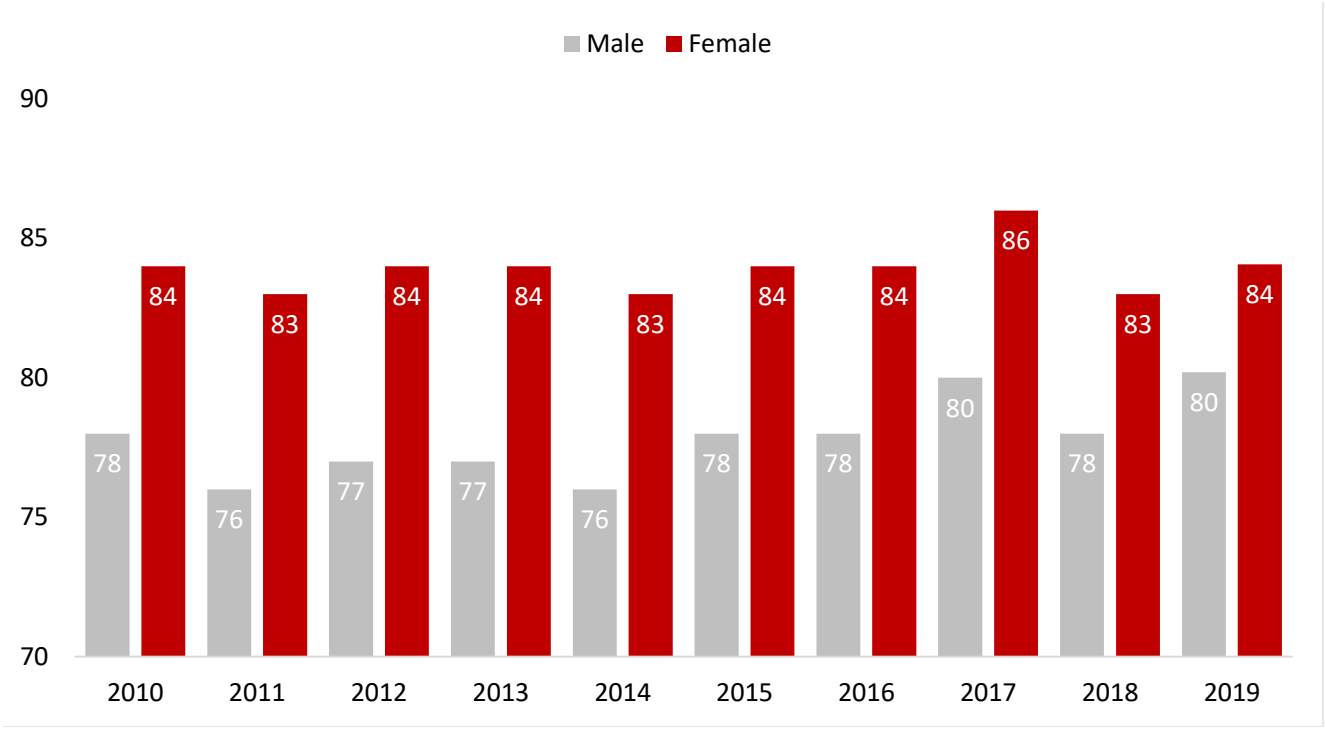


Median age of deaths

The median average of deaths in 2019 is the age at which half of deaths occurred below, and half occurred above.

- The median age of deaths in 2019 was 80 years for males, and 84 years for females (Figure 4)

Figure 4: Median age at death, Jersey 2010–2019, years

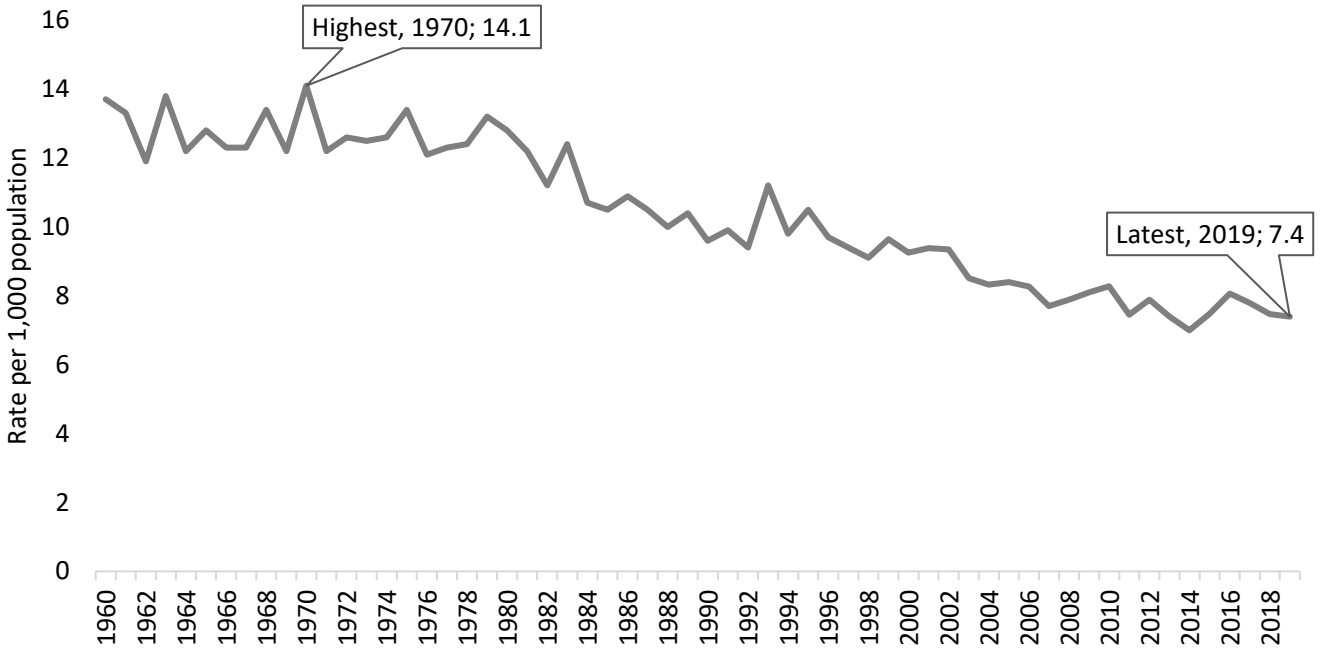


Crude mortality rates

The crude mortality rate refers to the number of deaths during a particular year, expressed per 1,000 of the mid-year resident population.

- The crude mortality rate has remained relatively stable since 2008
- The crude mortality rate decreased over time (7.4 per 1,000 in 2019) (see Figure 5); the latest rate was almost half that seen at the highest recorded point in 1970 (14.1 per 1,000)

Figure 5: Crude mortality rate (per 1,000 per population), Jersey residents, 1960-2019



Age-standardised mortality rate

The age-standardised mortality rate (ASMR) is calculated as a weighted average of the age-specific mortality rates per 100,000 persons, where the weights are the proportions of persons in the corresponding age groups of the European standard population (see notes). Age-standardised rates allow comparisons to be made across geographical areas and through time, without being affected by differences in the underlying age and sex structures of the population.

In 2019:

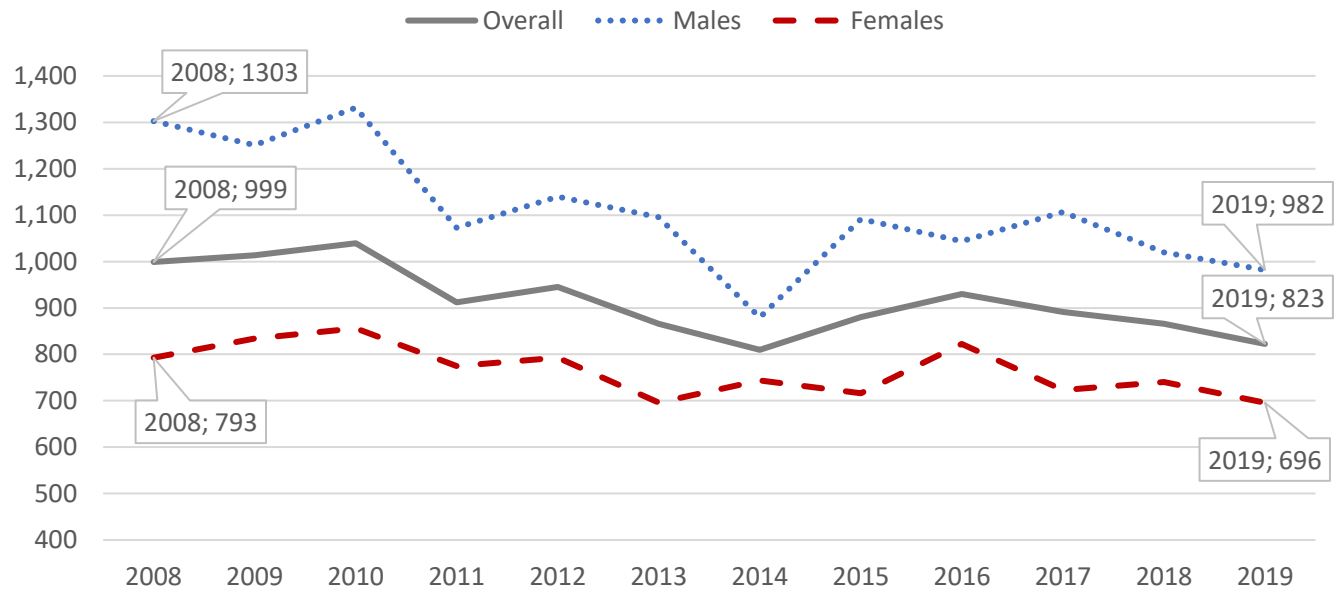
- The ASMR for Jersey was 823; the ASMR for males (982) was significantly higher than that for females (696)
- Comparison with England shows that Jersey had a lower overall ASMR rate, and a lower female ASMR than most of the English regions (see Table 1)

Table 1: Age-standardised mortality rates overall per 100,000 population, by sex, for Jersey, England and regions (2019)[7]

	Males	Females	Persons
Jersey[8]	**982**	**696**	**823**
England	**1,071**	**793**	**918**
North East	1,221	920	1,054
North West	1,191	893	1,028
Yorkshire and the Humber	1,172	861	999
East Midlands	1,106	831	954
West Midlands	1,119	819	954
East of England	1,019	762	877
London	950	693	809
South East	989	730	846
South West	1,025	739	867
Wales	1,163	868	1,000
Scotland[9]	1,275	971	1,108

- Since 2008, the overall ASMR fell by 18%, from 999 in 2008 to 823 in 2019
- Between 2008 and 2019 the ASMR for males fell by 25% (from 1,303 to 982), while for females the ASMR decreased by 12% (from 793 to 696)

Figure 6: Age-standardised mortality rates per 100,000 population, by sex, for Jersey (2008-2019)

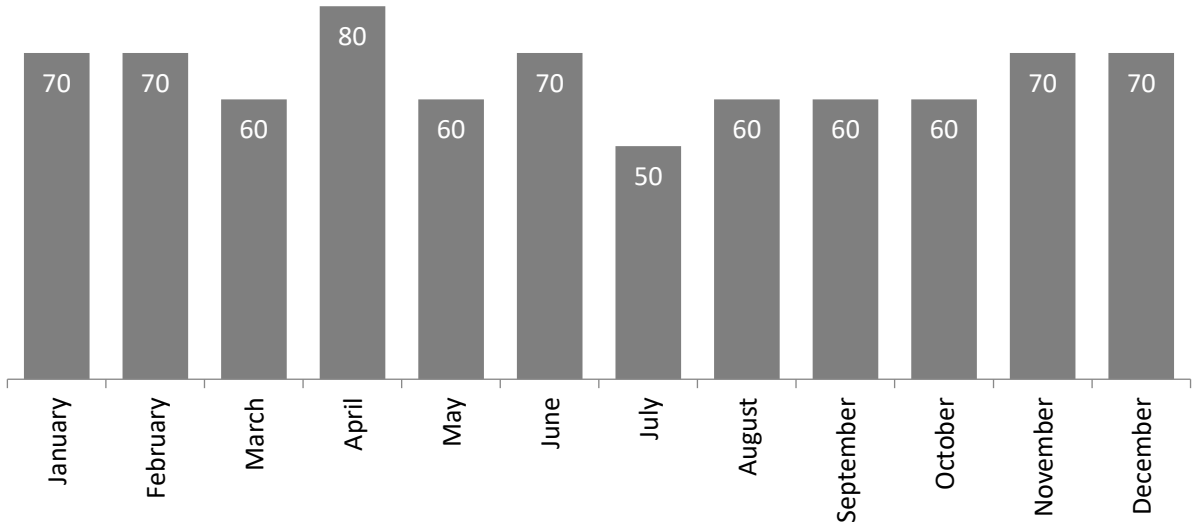


[7] Office for National Statistics, deaths registered in England and Wales: 2019, available from www.ons.gov.uk
[8] Jersey figures are calculated for all deaths recorded as occurring in calendar year 2019, whilst figures for England and Wales are for deaths registered in 2019 (i.e. some of the deaths will have occurred in 2018 but were not registered until 2019).
[9] Figures for Scotland are for deaths registered in 2019

Seasonality

- In 2019 the monthly variation in the number of deaths was not statistically significant

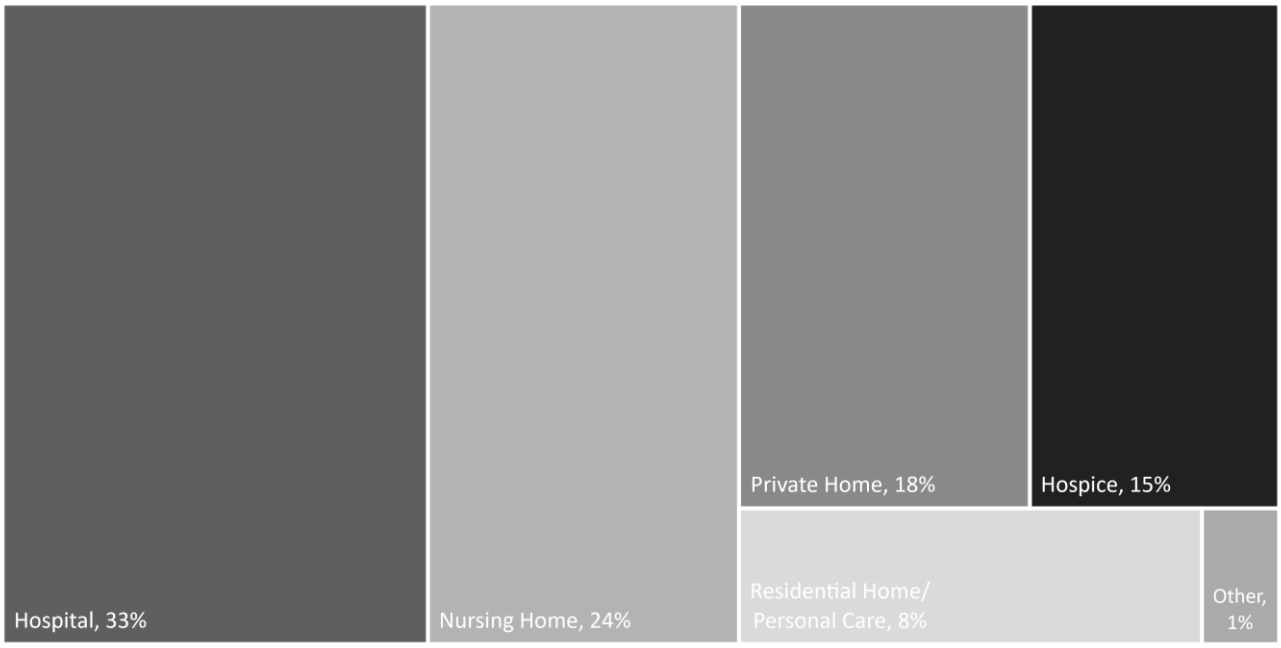
Figure 7: Deaths by month, 2019



Place of death

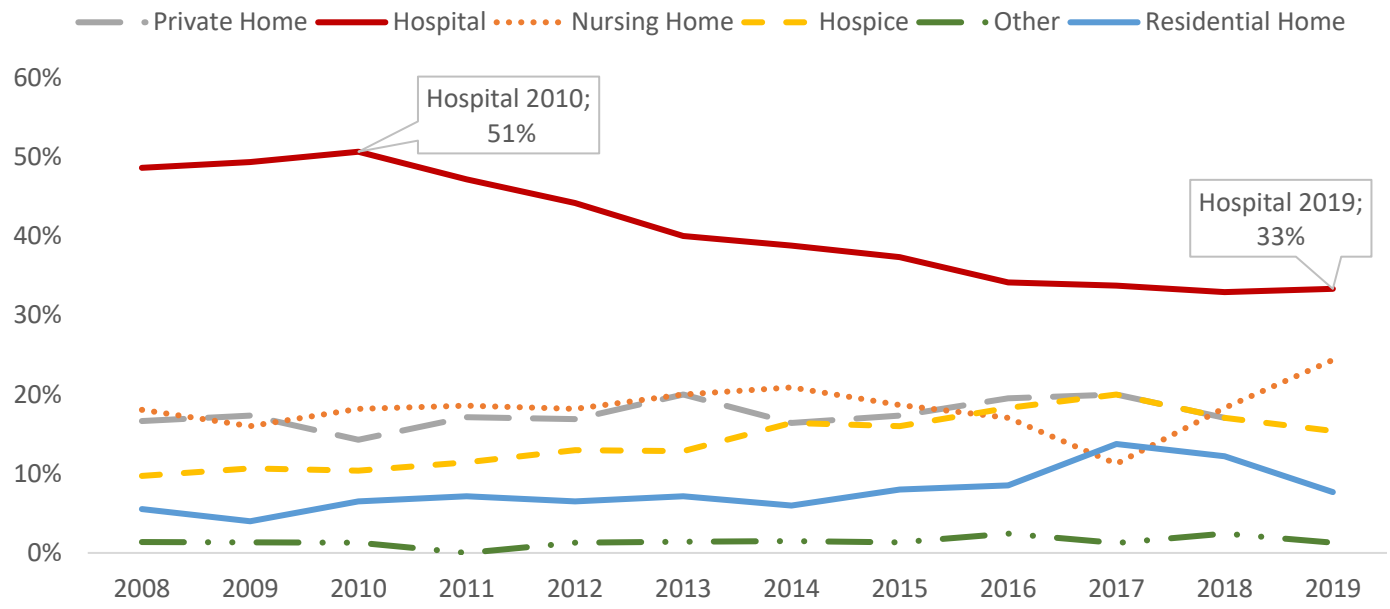
- Of the deaths of Jersey residents that occurred on-Island in 2019, one in three (33%) occurred in a hospital; one in four died in a nursing home (24%), one in five in a private home (18%) and one in seven in Jersey Hospice (15%) (Figure 8)

Figure 8: Location of on-Island deaths, 2019



- Figure 9 shows that the proportion of deaths of Jersey residents occurring on-Island which took place in a hospital has decreased over recent years, from half (51%) of all deaths in 2010 to a third (33%) in the latest year; deaths in private homes, residential homes and Jersey Hospice have seen a complementary increase over the same period

Figure 9: Location of on-Island deaths, 2010 – 2019



Cause of death

In the previous sections of this report, analysis included data from the deaths on Jersey of residents, plus deaths off-Island of residents who were repatriated (790 deaths). A number of deaths were awaiting a coroner's verdict at the time of publication and have not been included in the remainder of this report as the cause of death has not been finalised. For the remaining 780 deaths[10], the cause of death has been coded according to the International Classification of Diseases (ICD-10[11]).

- Most deaths of Jersey residents in 2019 were attributed to neoplasms (cancers), diseases of the circulatory system (cardiovascular diseases including stroke), mental and behavioural disorders, and respiratory disease; altogether, these four causes accounted for four in five (79%) of all deaths in 2019 (Figure 10)

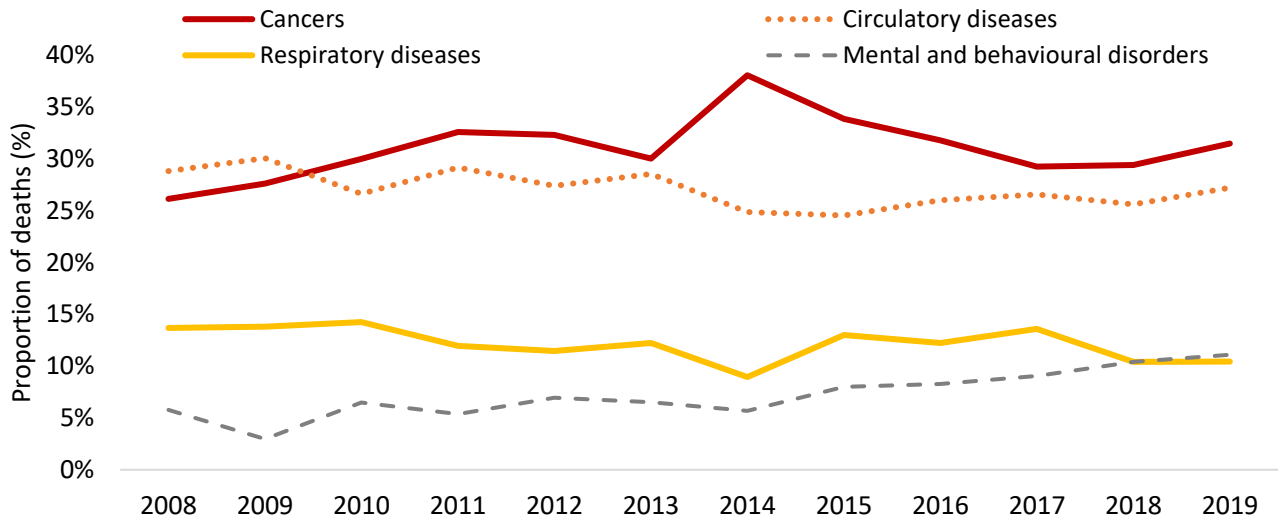
[10] Rounded to the nearest 10.

[11] Cause of death coding is carried out by the Office for National Statistics, following the International Statistical Classification of Diseases and Related Health Problems, version 10 (ICD-10)

Figure 10: Main causes of death, 2019 *(Percentages may not add up to 100% due to rounding)*

- Cancer remains the main cause of death in Jersey, having exceeded the number of deaths from circulatory diseases for the first time in 2010 (Figure 11)
- A similar pattern has been seen in England and Wales, with deaths from cancer exceeding deaths from circulatory disease[12] since 2011
- The four leading causes of death remained the same as in 2018 (cancer; diseases of the circulatory system; mental and behavioural disorders; and diseases of the respiratory system)
- Cancer was the leading cause of death for the age groups 40-64 (40% of deaths) and 65-74 (51%), whereas it was the second leading cause for those aged 75 and over (24% of deaths)
- The proportion of deaths caused by mental and behavioral disorders increased from 3% in 2009 to 12% in 2019[13]

Figure 11: Proportion of deaths caused by the four main disease groups, Jersey, 2010-2019



[12] Office for National Statistics, Deaths registered in England and Wales: 2019, published 01 July 2020, available from www.gov.uk

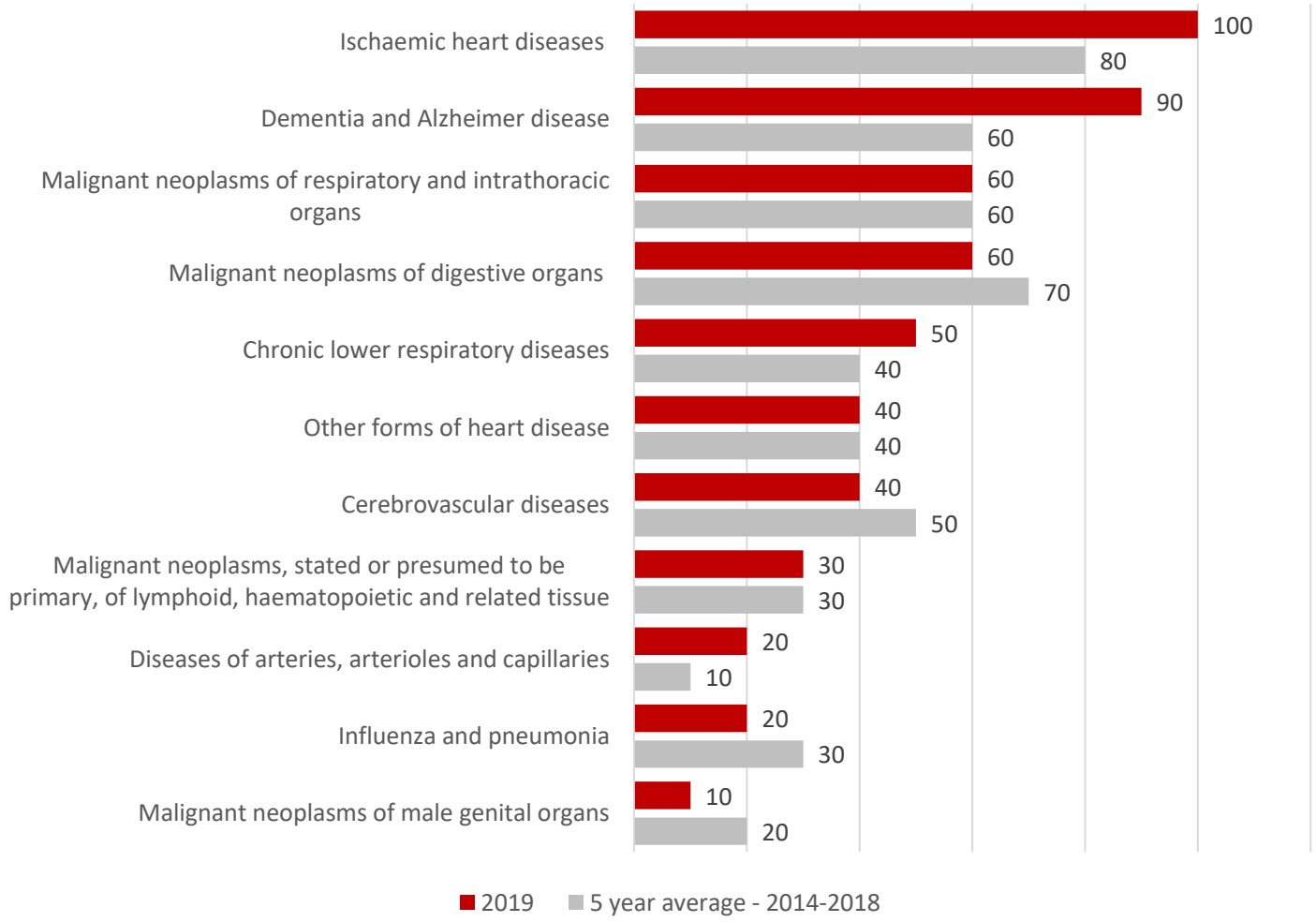
[13] There has been an increase in mortality rates for mental and behavioral disorders in recent years. Individuals are living longer and surviving other illnesses; there is increased reporting of deaths from diseases such as dementia due to greater awareness and improved diagnosis; updates to the coding framework used to code cause of death have also contributed to an increase in numbers of deaths attributed

Leading causes of death

The leading cause of death groupings are based on a list developed by the World Health Organization (WHO). This categorises cause of death using the International Classification of Diseases, tenth edition (ICD-10) into groups that are epidemiologically more meaningful than single ICD-10 codes, for the purpose of comparing the most common causes of death in the population.

- the top 10 leading causes of death accounted for 62% of all deaths registered in Jersey in 2019
- Ischaemic heart disease (100), and Dementia and Alzheimer's disease (90) were the leading causes of deaths in 2019. While the number of deaths from these causes were higher when compared to the five-year average (2014-2018), the differences were not statistically significant

Figure 12: Leading causes of death Jersey, 2019 & five-year average number of deaths (2014-2018)



Causes of working age deaths (aged 16-64 years)

- The main cause of death at working age in Jersey was neoplasms (cancer), accounting for 37% of deaths; diseases of the circulatory system accounted for 26% of the age group (Table 2)

Table 2: Main causes of working age deaths (aged 16-64 years), 2019

Cause of death	*Proportion*
Neoplasms	37%
Diseases of the circulatory system	26%
External causes of morbidity and mortality	7%
Diseases of the digestive system	4%
Endocrine, nutritional and metabolic diseases	4%

Causes of death – aged 75 and over

- The leading cause of death for people aged 75 and over was diseases of the circulatory system, accounting for 29% of deaths for this age group; neoplasms (cancer) accounted for 24% (Table 3)

Table 3: Main causes of deaths (aged 75 years and over), 2019

Cause of death	*Proportion*
Diseases of the Circulatory system	29%
Neoplasms	24%
Mental and behavioural disorders	15%
Diseases of the respiratory system	12%
Diseases of the nervous system	6%

More detailed cause of death classification

The ICD-10 cause of death codes can be re-categorised into a different, more granular cause of death classification, developed by the World Health Organisation (WHO). This classification system shows that, in 2019:

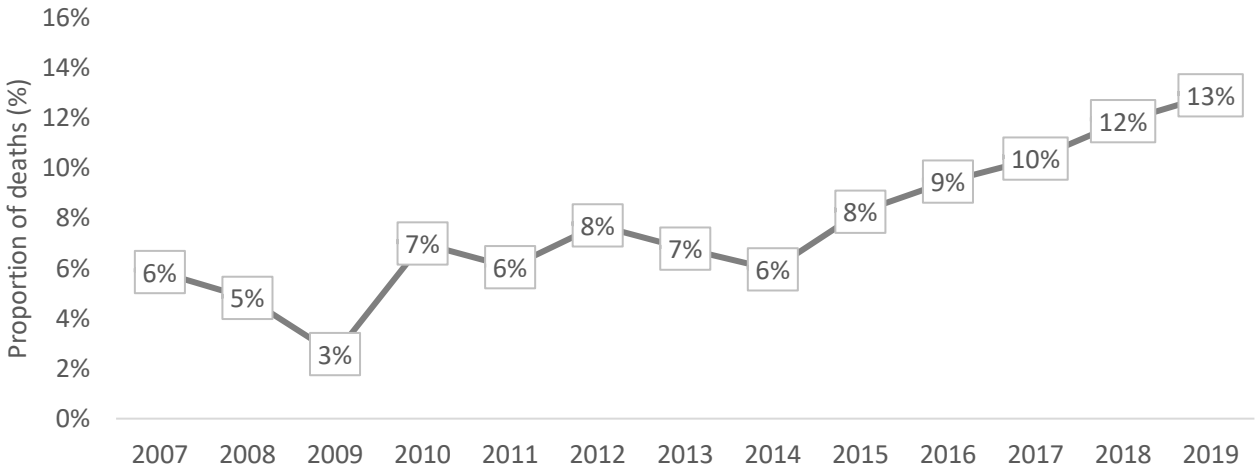
- Dementia and Alzheimer's disease accounted for 16% of all female deaths
- Ischaemic heart disease accounted for 15% of all male deaths

Table 4: More detailed cause of deaths, Jersey, 2019

Cause of death	*Female*	*Male*	*Total*
Dementia and Alzheimer's disease	16%	10%	13%
Ischaemic heart diseases	10%	15%	12%
Malignant neoplasm of digestive organs	7%	9%	8%
Malignant neoplasm of trachea, bronchus and lung	5%	8%	7%
Cerebrovascular diseases	8%	4%	6%
Chronic lower respiratory diseases	6%	7%	6%

- There were 100 deaths recorded with an underlying cause of dementia and Alzheimer's disease (all subtypes) in 2019; the proportion of deaths due to this cause increased from 3% in 2009 to 13% in 2019[14] (Figure 12)
- A higher proportion of the deaths with underlying cause of dementia and Alzheimer's disease were female (62%) compared to male (38%)
- The age-standardised rate of deaths from dementia and Alzheimer's disease has increased from 53 per 100,000 persons in 2008 to 107 per 100,000 persons in 2019 (108 per 100,000 persons in 2018)

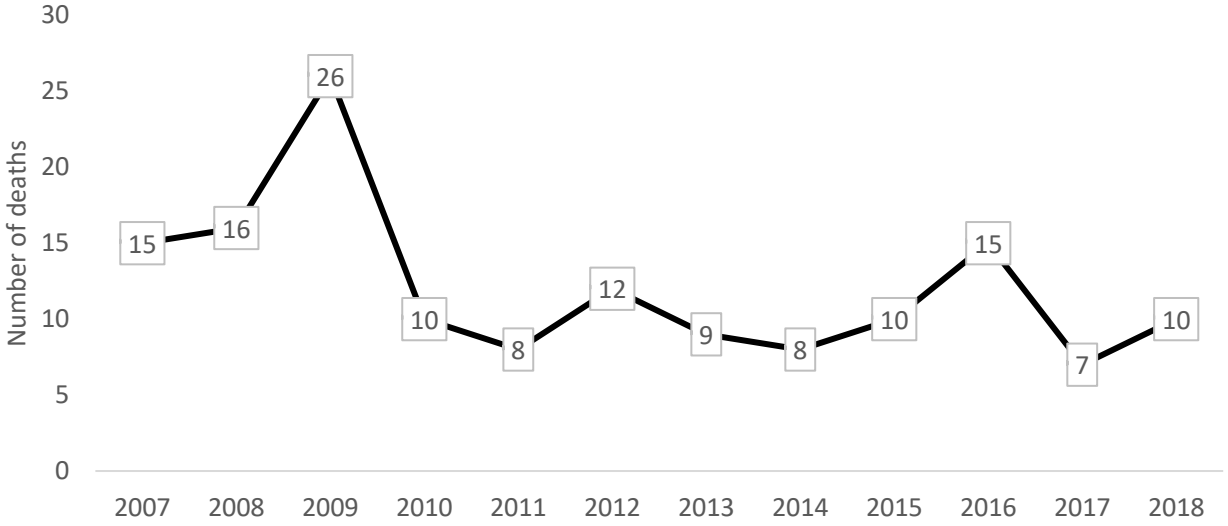
Figure 13: Proportion of deaths with dementia or Alzheimer's as an underlying cause, 2007-2019



Deaths by suicide

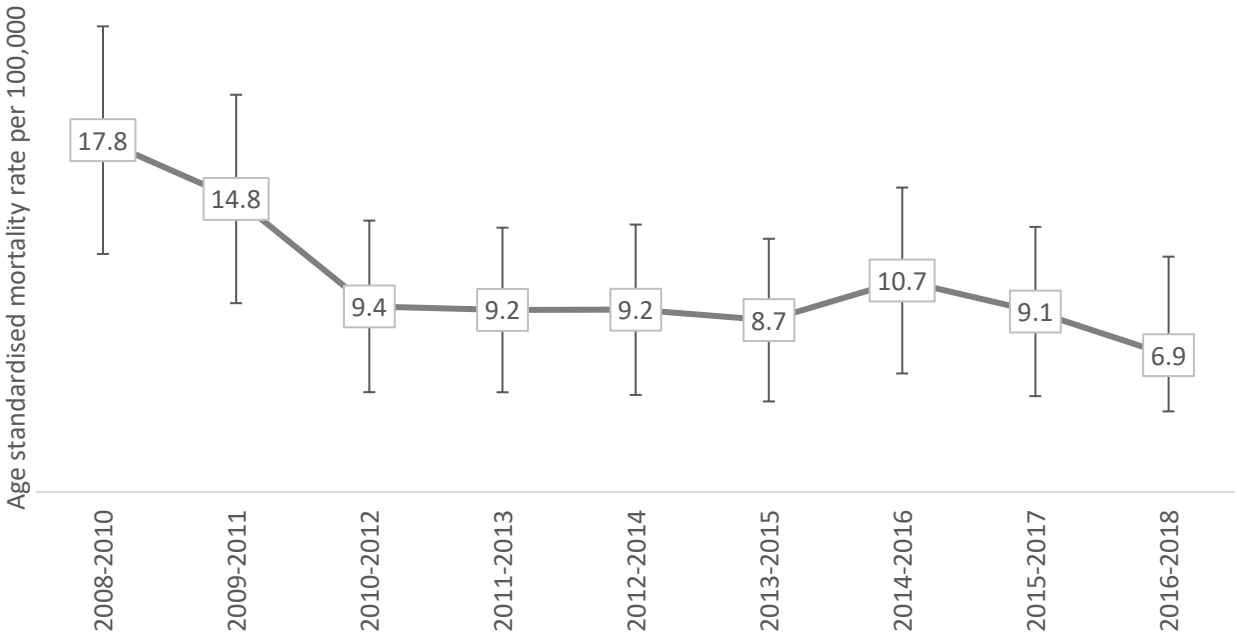
Due to a small number of outstanding inquests, comprehensive information on deaths by suicide is only available up to 2018. Deaths are included here where the cause of death was recorded as 'intentional self-harm' or 'undetermined intent'. Figure 13 gives the number of suicides by year in Jersey since 2007.

Figure 14: Number of deaths by suicide in Jersey, 2007 to 2018



[14] Updates to the coding framework used to code cause of death took place in 2011 and 2014. These updates were considered by Public Health England to partially (but not fully) contribute to the increase in the number of deaths with an underlying cause of dementia.

Figure 15: Age-standardised mortality rate per 100,000 population: cause of death recorded as 'intentional self-harm' or 'undetermined intent' (2008-2010 to 2016-2018). Rates are given for three-year periods due to the relatively small annual numbers.



Notes

Data sources

- The Marriage and Civil Status (Jersey) Law 2001 requires all deaths to be registered with the Superintendent Registrar within 5 days of the date of death, unless they have been referred to the Viscount. Data on deaths is compiled and clerically checked against other administrative sources to ensure that all deaths have been accurately detailed
- Cause of death is classified using the International Statistical Classification of Diseases, Injuries and Causes of Death (tenth revision, ICD-10). Coding of cause of death of Jersey registered deaths is undertaken by the Office for National Statistics on a quarterly basis

Methodology

- Crude rates were calculated as the number of deaths occurring in a year divided by the mid-year population estimate for that year, multiplied by 1,000
- The mid-year population estimate was calculated as the average of the two relevant end-year population estimates. This methodology assumes that half of births, deaths and migration occurs in the first half of the calendar year
- Age-standardised rates have been calculated using the 2013 European Standard Population. This allow comparisons of mortality rates across time and place excluding the impact of different underlying age and gender structures
- At the time of publication, a small number of inquests (20) were still outstanding for deaths occurring in calendar year 2019; therefore, numbers here should be treated as provisional
- All death numbers have been independently rounded to the nearest 10
- When the observed total number of deaths was fewer than 25, mortality rates were not calculated, as there were too few deaths to calculate directly standardised rates reliably

Confidence Intervals and statistical significance

- Confidence intervals have been used in this report to compare Jersey mortality rates with those of England, Wales and the English regions. Calculations based on small numbers of events are often subject to random fluctuations. The confidence interval indicates the range within which the variation could be considered due to random fluctuations