Public Health Directorate Report

Public Health Intelligence



Subject: Jersey Mortality Statistics 2021

Date of report: 22 September 2022

Introduction

The numbers of deaths occurring in calendar year 2021¹, 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.

At the time of publication, the population figures used to calculate rates presented in this report have been based on the results of the 2021 census (21st March 2021) rather than mid-year population estimates which have not yet been published for 2021. Historic trend data relating to the intercensal period (2012-2020) have not been presented in this report as new population estimates for these years based on the 2021 results have not yet been published.

Summary

In 2021:

• there were 820 Jersey residents recorded as having died, comprising 410 deaths of males and 410 deaths of females²; this was higher than the numbers of recorded deaths in 2020

- the age-standardised mortality rate (ASMR) for Jersey was 759 per 100,000 population, significantly lower than the overall ASMR for England in 2021 (985 per 100,000)³
- the average (mean) age at death for Jersey residents was 79 years; an increase of 12 years since 1960 (67 years)
- neoplasms (cancers) and diseases of the circulatory system have remained as the leading two causes of death since 2007, and in 2021 accounted for 58% of all deaths
- deaths where COVID-19 was recorded as the underlying cause of death⁴ accounted for 4% of all deaths in Jersey, and 12% of all deaths in England and Wales⁵
- the proportion of deaths attributed to Dementia and Alzheimer's Disease was 10% in 2021, similar to the proportion recorded in 2020
- there were 140 deaths of individuals of working age (aged 16-64 years), of whom around three-fifths (57%) were male
- a third (33%) of all deaths were of people below 75 years of age

¹ Annual numbers of <u>actual</u> 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 deaths are independently rounded throughout this report to the nearest 10 as there is still a small number of outstanding inquests for 2021 deaths (15).

³ Deaths registered in England and Wales, 2021

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⁴ Mortality statistics are based on a single underlying cause for each death. Causes of death recorded on death certificates are coded according to the International Statistical Classification of Diseases and Related Health Problems, Tenth Revision. Cause-of-death data are based on the underlying cause of death, which is the disease or condition responsible for initiating the chain of events leading to death.

⁵ Office for National Statistics - Deaths due to COVID-19, registered in England and Wales:2021. available from www.ons.gov.uk.

Jersey Mortality Statistics 2021

820

Deaths of Jersey residents in 2021 (higher than 2020)

Crude Mortality Rate -

7.9

deaths per year, per 1,000 people

COVID-19



was recorded as the underlying cause of death in

4%

of all deaths in Jersey

Age Standardised Mortality Rate

759

per 100,000 persons

58% of all deaths

Neoplasms (cancer) and diseases of the circulatory system

remain the main causes of death in Jersey residents

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The proportion of deaths in hospital of Jersey residents (on-Island) has decreased from

50% (2010) to 37% (2021)

Dementia and Alzheimer's Disease

The proportion of deaths attributed in 2021 was

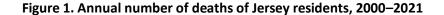
10%

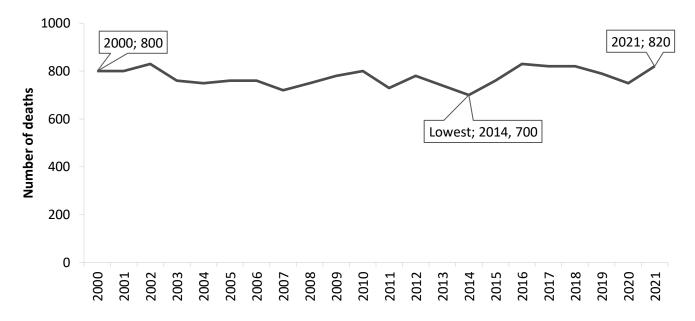
79 years

the average (mean) age at death for Jersey residents

Annual numbers of deaths

• in 2021, there were a total of 820 deaths of Jersey residents, which was an increase of 9% compared with 2020 (750 deaths)⁶

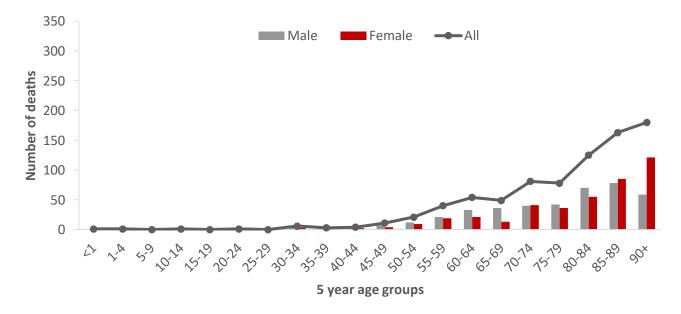




Numbers of deaths by age and sex

- in 2021, there were 410 deaths of males and 410 deaths of females
- the proportion of male deaths to female deaths has not changed significantly since 2000
- the number of deaths of males was similar or greater than the number of deaths of females in each age group from 25-29, up to and including, 80-84 years of age (see Figure 2); there were a greater number of deaths of females in the 85 years and over age groups

Figure 2. Numbers of deaths by age and sex, 2021



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⁶ Death statistics are compiled from information supplied when deaths are certified and registered as part of civil registration. Figures represent the number of deaths that occurred in the calendar year. Figures represent deaths which occurred in Jersey and elsewhere if usual residence was Jersey. The figures do not include the deaths of visitors i.e. individuals whose usual residence was outside of Jersey.

Infant and child deaths

- there have been fewer than five recorded deaths annually for children aged under one⁷ which has been consistent since 2013
- as in the previous 13 years, in 2021 there had been fewer than five deaths in children aged between one and fifteen years

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

• in 2021, there were 140 deaths of people of working age (aged 16-64 years), accounting for over one in six (17%) of all deaths; 57% of these deaths were male

Premature deaths (under 75 years of age)

- there were 270 deaths of Jersey residents in 2021 before 75 years of age ('premature deaths')
- premature deaths accounted for one in three of all deaths in 2021 (33%); 58% of these deaths were male

Deaths of people aged 75 or over

• there were 550 deaths of people aged 75 or over in 2021, accounting for two in three of all deaths (67%); this proportion was similar to that recorded over the last decade

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

• there were 340 deaths of people aged 85 or over in 2021, accounting for 42% of all deaths; three-fifths (60%) of deaths in this age group were female, due to there being more females in this age category

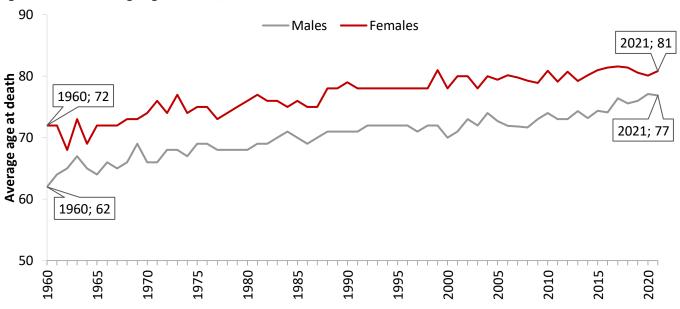
Average age of deaths

• the average (mean) age at death for Jersey residents was 79 years; an increase of 12 years since 1960 (67 years)

- the average (mean) age at death for women in 2021 was 81 years; the mean for men was 77 years
- the mean age at death for women has increased by 9 years (Figure 3) between 1960 and 2021 (from 72 to 81 years), and has increased by 15 years for men over the same time-period (62 to 77 years)

⁷ Small numbers are not disclosed to ensure that information does not identify an individual.

Figure 3. Mean average age of death, 1960-2021

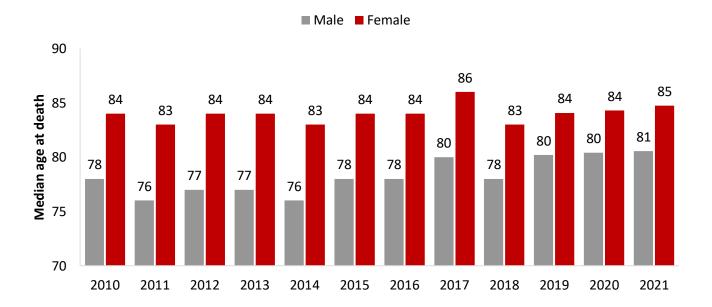


Median age of deaths

The median average of deaths in 2021 is the age at which half of deaths occurred below, and half occurred above.

• the median age of deaths in 2021 was 81 years for males, and 85 years for females (Figure 4)

Figure 4: Median age at death, Jersey 2010–2021, 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 population⁸.

• the crude mortality rate decreased over time (13.9 per 1,000 in 1961 to 7.9 in 2021) (see Figure 5); the latest rate was 43% lower than that seen in 19619

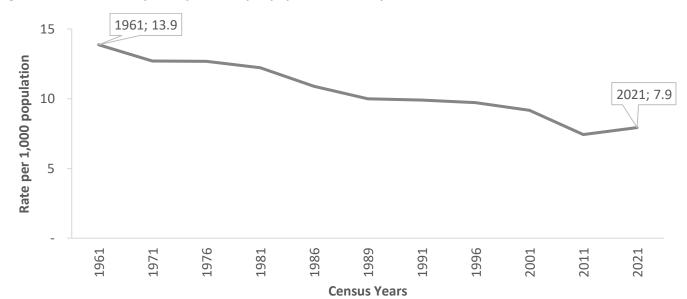


Figure 5. Crude mortality rate (per 1,000 per population), Jersey residents, 1961-2021

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 2021:

 comparison with England shows that Jersey had a lower overall ASMR rate, and both lower male and female ASMR than all the English regions (see Table 1)

[•] the ASMR for Jersey was 759 per 100,000; the ASMR for males (871 per 100,000) was significantly higher than that for females (667)

⁸ Population by age and gender (source - 2011 Census) - Datasets - Government of Jersey Open Data

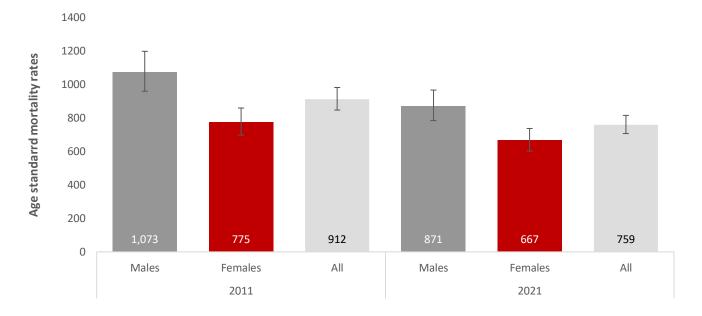
⁹ While waiting for population figures for the intercensal years since 2011 which weren't available at time of publication, we have chosen to show data for census years only to show a trend (Data c/o Statistics Jersey)

Table 1. Age-standardised mortality rates overall per 100,000 population, by sex, for Jersey, England and regions (2021)¹⁰

	Males	Females	Persons
JERSEY ¹¹	871	667	759
ENGLAND	1,153	844	985
NORTH EAST	1,280	965	1,110
NORTH WEST	1,279	944	1,097
YORKSHIRE AND THE HUMBER	1,213	894	1,038
EAST MIDLANDS	1,202	876	1,023
WEST MIDLANDS	1,231	888	1,044
EAST OF ENGLAND	1,104	812	944
LONDON	1,064	771	906
SOUTH EAST	1,068	777	909
SOUTH WEST	1,073	780	913
WALES	1,235	917	1,062
SCOTLAND ¹²	1,375	1,024	1,181

- since 2011, the overall ASMR for Jersey has fallen, from 912 in 2011 to 759 in 2021
- between 2011 and 2021 the ASMR for males has fallen by 19% (from 1,073 to 871), while for females the ASMR decreased by 14% (from 775 to 667)

Figure 6. Age-standardised mortality rates per 100,000 population, by sex, for Jersey (2011 and 2021)¹³



¹⁰ Office for National Statistics, deaths registered in England and Wales: 2021, available from www.ons.gov.uk.

¹¹ Jersey figures are calculated for all deaths recorded as occurring in calendar year 2021, whilst figures for England and Wales are for deaths registered in 2021 (i.e., some of the deaths will have occurred in 2020 but were not registered until 2021).

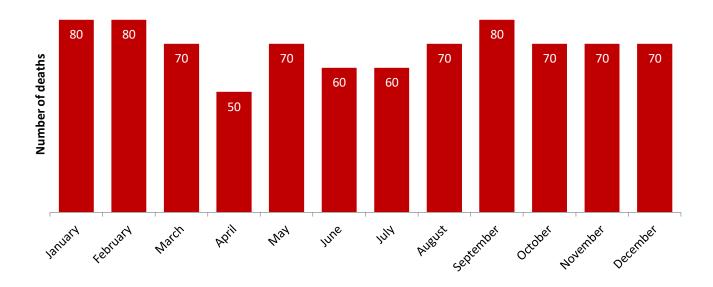
¹² Figures for Scotland are for deaths registered in 2021.

¹³ Awaiting population estimates for intercensal years – Statistics Jersey

Seasonality

• in 2021, the average deaths per month was 70, with the lowest being April (50) and the highest January, February, March and September (80)

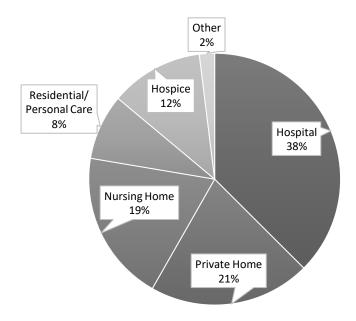
Figure 7. Deaths by month, 2021 (rounded to the nearest 10)



Place of death

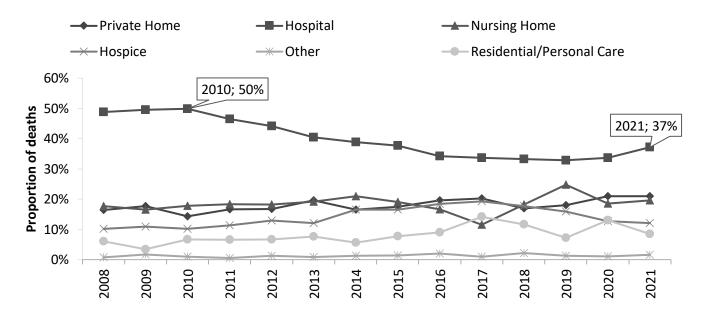
• of the deaths of Jersey residents in 2021, a little under four in ten (38%) occurred in a hospital; one in five died in a private home (21%); one in five died in a nursing home (19%), one in eight in Jersey Hospice (12%) and one in twelve in a placement for residential or personal care (8%) (Figure 8)

Figure 8. Location of Jersey resident deaths, 2021



• 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 one in two (50%) of all deaths in 2010 to under two in five (37%) in the latest year

Figure 9: Location of on-Island deaths, 2010 - 2021



Cause of death

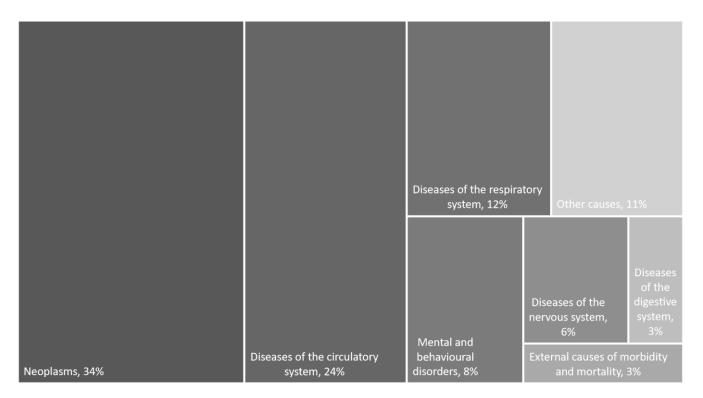
In the previous sections of this report, analysis included data from the deaths in Jersey of residents, plus deaths off-Island of residents who were repatriated (a total of 820 deaths). A small number of deaths were awaiting a coroner's verdict at the time of publication and have not been included in the remainder of this report as the cause of death has not been finalised. For the remaining 800 deaths¹⁴, the underlying cause of death has been coded according to the International Classification of Diseases (ICD-10¹⁵).

 most deaths of Jersey residents in 2021 were attributed to neoplasms (cancers), diseases of the circulatory system (cardiovascular diseases including stroke), respiratory disease and Mental and behavioural disorders; altogether, these four causes accounted for four in five (78%) of all deaths in 2021 (Figure 10)

¹⁴ Rounded to the nearest 10.

¹⁵ Ranking causes of death is a useful method of describing patterns of mortality in a population and allows comparison over time and between populations. 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). This hierarchical classification system allows for analysis at different levels of detail. For the purpose of this report, the main causes of death are considered at the highest level of classification (known as chapters). Tabulations of the Leading causes are based on research presented by the World Health Organisation. The determination of groupings in this list is primarily driven by data from individual countries representing different regions of the world.

Figure 10. Main causes of death, 2021 (Percentages may not add up to 100% due to rounding)



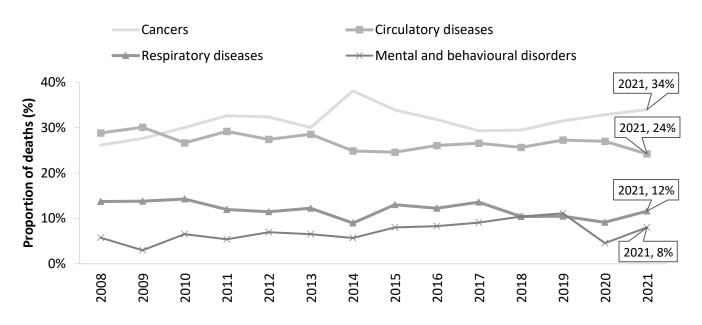
- the two leading causes of death have remained the same since 2007, (Neoplasms (cancer) and diseases of the circulatory system) these two causes accounted for 58% of all deaths in 2021; cancer remains the main cause of death in Jersey, having exceeded the number of deaths from circulatory diseases for the first time in 2010 (Figure 11)¹⁶
- diseases of the respiratory system were the third leading cause of death in 2021¹⁷
- mental and behavioural disorders were the fourth leading cause of death in 2021¹⁸
- deaths with an underlying cause of COVID-19 accounted for 4% of all deaths
- cancer was the leading cause of death for the age groups between 55-59 years and 85-89 years (40% of deaths in those age-groups), whereas it was the second leading cause for those aged 75-99 years (17% of deaths in that age-group)
- Diseases of the digestive system were the leading cause of death for the age groups 90+ years (31% of deaths in that age-group)

¹⁶ Diseases of the circulatory system include Acute rheumatic fever, Chronic rheumatic heart diseases, Hypertensive diseases, Ischemic heart diseases, Pulmonary heart disease and diseases of pulmonary circulation

¹⁷ Diseases of the Respiratory system include Acute upper respiratory infections, Influenza and pneumonia

¹⁸ Mental and Behavioural disorders include deaths due to psychoactive substance use, Schizophrenia, schizotypal, delusional, and other non-mood psychotic disorders, Mood [affective] disorders, Anxiety, dissociative, stress-related, somatoform and other nonpsychotic mental disorders

Figure 11. Proportion of deaths caused by the four main disease groups, Jersey, 2010-2021



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

• the main cause of death at working age in Jersey was neoplasms (cancer), accounting for 47% of deaths; diseases of the circulatory system accounted for 20% of the age group (Table 2)

Table 2. Main causes of working age deaths (aged 16-64 years), 2021

Cause of death	Proportion (%)	
Neoplasms	47	
Diseases of the circulatory system	20	
Diseases of the digestive system	6	
Diseases of the respiratory system	5	
External causes of morbidity	5	
Other	21	

Causes of death – aged 75 and over

• the leading cause of death for people aged 75 and over was cancers, accounting for 34% of deaths for this age group; diseases of the circulatory system, accounted for 22% (Table 3)

Table 3. Main causes of deaths (aged 75 years and over), 2021

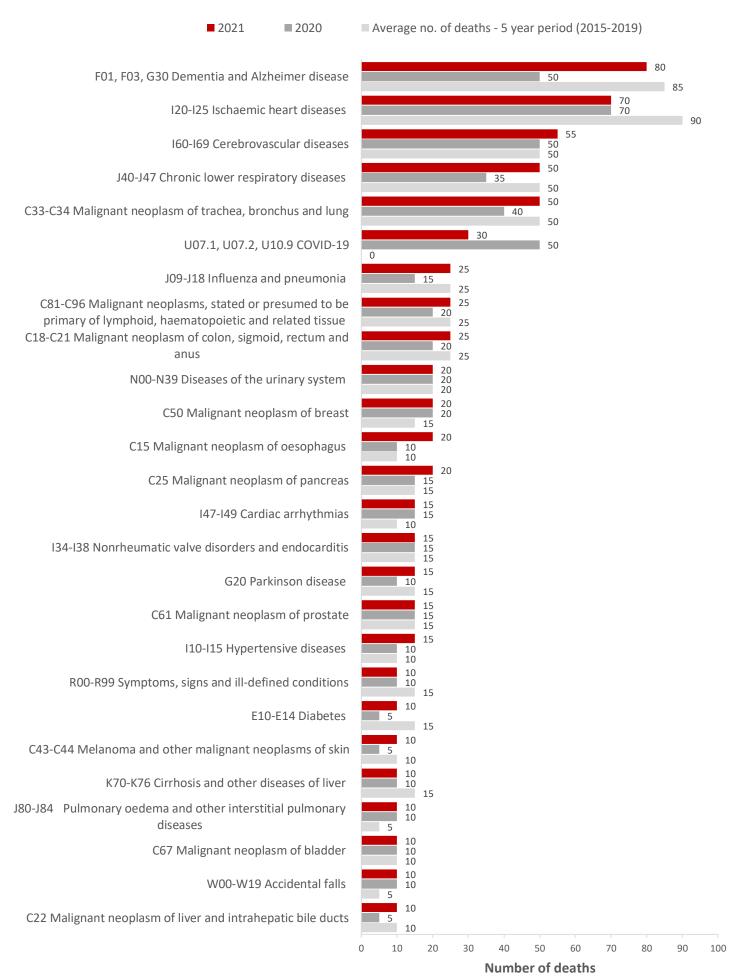
Cause of death	Proportion (%)	
Neoplasms	34	
Diseases of the Circulatory system	22	
Diseases of the respiratory system	10	
Diseases of the digestive system	8	
Mental and behavioural disorders	6	
External causes of morbidity	6	

Leading causes of death

The leading cause of death groupings are based on a list developed by the World Health Organization (WHO). This categorises the underlying cause of death using the International Classification of Diseases, tenth edition (ICD-10) into groups that are epidemiologically more meaningful than single ICD-10 codes¹⁹, for the purpose of comparing the most common causes of death in the population.

- the top 5 leading causes of death accounted for nearly two in five of all deaths registered in Jersey in 2021 (37%)
- Dementia and Alzheimer's disease (80) and Ischaemic heart disease (70) were the leading causes of deaths in 2021. While the number of deaths from these causes were lower when compared to the five-year average (2016-2020), the differences were not statistically significant

Figure 12. Leading causes of death Jersey, 2021, 2020 & five-year average number of deaths (2015-2019)



Leading causes of death by sex

- in 2021, Ischaemic heart disease accounted for 11% of all male deaths; Dementia, Alzheimer's disease and Chronic Heart Disease accounted for 7% of all male deaths
- Dementia and Alzheimer's disease accounted for 13% of all female deaths; Cerebrovascular diseases accounted for 8% of all female deaths

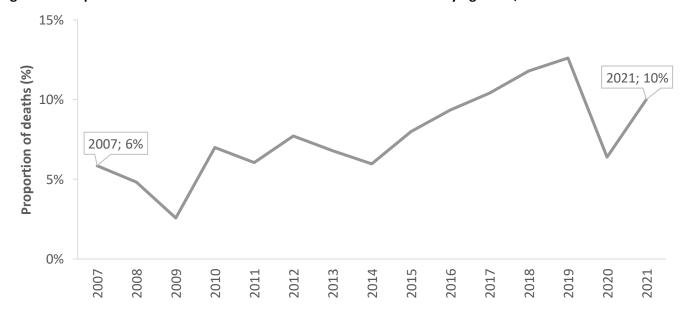
Table 4. Leading cause of deaths by sex, 2021

Cause of death	Female%	Male%	Total%
Ischaemic heart diseases	6	11	9
COVID-19	2	5	4
Cerebrovascular diseases	8	6	7
Dementia and Alzheimer's disease	13	7	10
Malignant neoplasm of trachea, bronchus and lung	5	7	6
Chronic lower respiratory disease	5	7	6

Dementia deaths

- there were around 80 deaths recorded with an underlying cause of dementia and Alzheimer's disease (all subtypes) in 2021; the proportion of deaths due to this cause increased from 3% in 2009 to 13% in 2019; the proportion of deaths due to dementia and Alzheimer's in 2021 was 10%²⁰ (Figure 13)
- a higher proportion of the deaths with underlying cause of dementia and Alzheimer's disease were female (63%) compared to male (37%)
- the age-standardised rate of deaths from Dementia and Alzheimer's disease increased from 53 per 100,000 persons in 2011 to 82 per 100,000 persons in 2021

Figure 13. Proportion of deaths with dementia or Alzheimer's as an underlying cause, 2007-2021



²⁰ 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.

COVID-19 deaths

COVID-19 was mentioned on 37 death certificates for deaths in Jersey in 2021 (deaths involving COVID-19), with 30 of these being classified as COVID-19 being the underlying cause of death (deaths due to COVID-19). In 2021, deaths where COVID-19 was recorded as the underlying cause of death accounted for 4% of all deaths in Jersey compared to 13% of all deaths in England and Wales²¹.

For deaths with COVID-19 as the underlying cause of the death:

- the age-standardised mortality rate (ASMR) was 30 deaths per 100,000 people, compared to 114 in England and Wales¹⁸
- 60% of COVID-19 deaths were among people aged 80 years and over
- Two thirds (67%) of COVID-19 deaths were males and one third (33%) were females

In addition to the 37 deaths which involved or were due to COVID-19, there were an estimated 8 people who died within 60 days of a positive test, where COVID-19 was not mentioned or classified on the death certificate²², less than 5 of whom died within 28 days of a positive test.

Deaths by suicide

Due to a number of outstanding inquests, comprehensive information on deaths by suicide is only available up to 2020. Deaths are included here where the cause of death was recorded as 'intentional self-harm' or 'undetermined intent'. Figure 14 gives the number of suicides by year in Jersey since 2007.

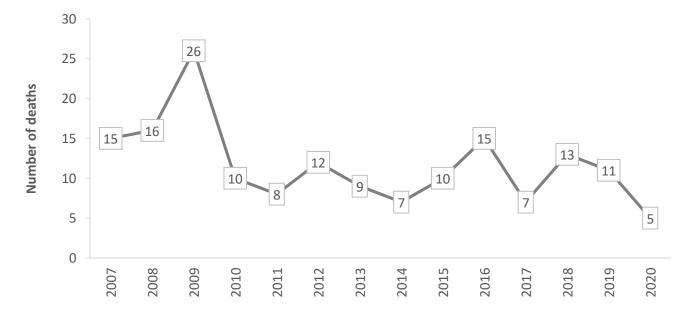


Figure 14. Number of deaths by suicide in Jersey, 2007 to 2020

Future editions of this report will include the ASMR for suicide but for this edition, whilst waiting for the updated population estimate data based on the 2021 census (published by Statistics Jersey), the rate has not been provided.

²¹ Deaths due to COVID-19, registered in England and Wales: 2021

²² This may be due to these individuals having been recovered from COVID-19 prior to their death, or because COVID-19 infection was not considered to have contributed to their death. This number is an estimate as it relies on matching of personal details across different administrative systems

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 census population estimate for that year, multiplied by 1,000
- The main measure of Jerseys population in this report is provided by the census, which was last held in March 2021. Between each census, 'Statistics Jersey' produce annual population estimates. The census figure is used as a baseline and then administrative and migration data is used to estimate the change in population. The 2021 census results are being published through a series of bulletins. The charts contained within this report for the years 2011-2020 will be revised upon receipt of the updated Statistics Jersey population bulletin
- Age-standardised rates have been calculated using the 2013 European Standard Population, in line with methodology used by Public Health England. This allows comparisons of mortality rates across time and place excluding the impact of different underlying age and gender structures.

Numerator data for each age band are divided by the denominator population data for each age band respectively to give age specific death rates for Jersey.

These age specific rates are multiplied by the standard population for each age group respectively and aggregated across all the age groups to give the age adjusted count of deaths for Jersey.

This age adjusted count of deaths is divided by the total standard population for the whole age range included in the indicator and multiplied by 100,000 to give the age standardised mortality rate for Jersey.

- At the time of publication, a small number of inquests (20) were still outstanding for deaths occurring in calendar year 2021; therefore, numbers here should be treated as provisional
- All death numbers have been independently rounded to the nearest 10 (Leading cause of death rounded to nearest 5)
- 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 age standardised mortality rates. 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