AVOIDABLE MORTALITY 2016

Statistics Jersey

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Avoidable Mortality 2016

190 out of **830**

Deaths due to avoidable causes

Almost a quarter of all deaths in 2016

24 Years of potential life lost per avoidable death

The majority of these deaths were among males

Jersey avoidable mortality rates were similar to those for England

100 deaths

were from causes considered amenable to healthcare

40 of these amenable deaths (39%) were due to cardiovascular disease

160 deaths

deaths were preventable through public health interventions

60 of these preventable deaths (39%) were due to cancers

Introduction

This is the second report to present figures for Jersey on death due to causes that are considered avoidable in the presence of timely and effective healthcare (amenable deaths) or public health interventions[1] (preventable deaths).

Data for 2015 and 2016 are presented in this report. 2016 is the latest year for which data is available in Jersey, and this is presented and compared to previous years' data. However, the latest data for England and Wales published by the UK Office for National Statistics (ONS) is 2015: we compare this to Jersey's 2015 data.

Avoidable mortality is based on the concept that premature deaths from certain conditions should be rare, and in principle should not occur in the presence of timely and effective health care[2]; avoidable mortality is used as an indicator to measure the contribution of such health care. However, avoidable mortality is not intended to serve as a definitive source of evidence of differences in the effectiveness of healthcare systems between areas. Rather, it was designed to highlight areas of potential weakness in healthcare that could benefit from further in-depth investigation.

While a particular condition may be considered avoidable, not every death from that condition could, in practise, be prevented. This is because factors such as lifestyle, age, extent of disease progression and the potential existence of other medical conditions are not taken into account in the definition of avoidable mortality. Therefore, a degree of caution is recommended when interpreting the data.

The avoidable deaths presented in this report are based on a definition of avoidable mortality developed and recently updated by the ONS. A public consultation ran in the UK in 2015 to review and update the definitions used; as a result, this latest definition takes into account advances in medical technology and wider public health interventions. Therefore, it is not appropriate to use this definition on data for deaths before 2014 (as advised by the ONS). In practice, deaths due to some particular disease classifications (according to ICD-10[3]) at particular age / sex combinations are defined as either amenable or preventable (or both). For further details on the definitions used here, see *Revised definition of avoidable mortality and new definition for Children and Young People*[4].

Numbers of deaths in this report are independently rounded to the nearest 10. Rates and percentages are calculated using actual numbers.

[1] Interventions to tackle the causes of disease or health issues in a population
[2] The ability of primary care, hospital care and personalised health services to diagnose and treat health issues once they have occurred
[3] International Statistical Classification of Diseases and Related Health Problems, 10th Revision
[4] Available on https://www.ons.gov.uk/

Definitions

Amenable mortality:

- a death is considered amenable (treatable) if, in the light of medical knowledge and technology at the time of death, all or most deaths from that cause (subject to age limits if appropriate) could be avoided through good quality healthcare

Preventable mortality:

- a death is considered preventable if, in the light of understanding of the determinants of health at the time of death, all or most deaths from that cause (subject to age limits if appropriate) could be prevented by public health interventions in the broadest sense

Avoidable mortality

- avoidable deaths are all those defined as preventable, amenable (treatable) or both, where each death is counted only once; where a cause of death is defined to be both preventable and amenable, all deaths from that cause are counted in both categories when they are presented separately

Main Points

In 2016

- almost a quarter of all deaths (23 per cent, 190 out of 830) in Jersey were from causes considered avoidable through timely and effective healthcare or public health interventions
- males were more likely to die from avoidable causes than females. More than a quarter (28 per cent) of male deaths were from avoidable causes (110 out of 400 deaths) compared with fewer than a fifth (18 per cent) of female deaths (80 of 430 deaths)
- there was no significant difference in the amenable mortality rate between males (109 deaths per 100,000) and females (102 deaths per 100,000); however the preventable mortality rate was significantly higher for males in Jersey (212 per 100,000) than females (121 per 100,000)
- fewer than five deaths of children and young people in Jersey were considered avoidable (according to ONS definitions)

Comparison with England and Wales (based on 2015 data)[5]:

- the amenable mortality rate for Jersey was lower than that for England and Wales
- the preventable mortality rate was similar to the rate for England and Wales
- the avoidable mortality rate for Jersey was similar to the rate for England and Wales

[5] The latest data available for England and Wales from the Office of National Statistics relates to 2015; this is compared with Jersey's 2015 data.

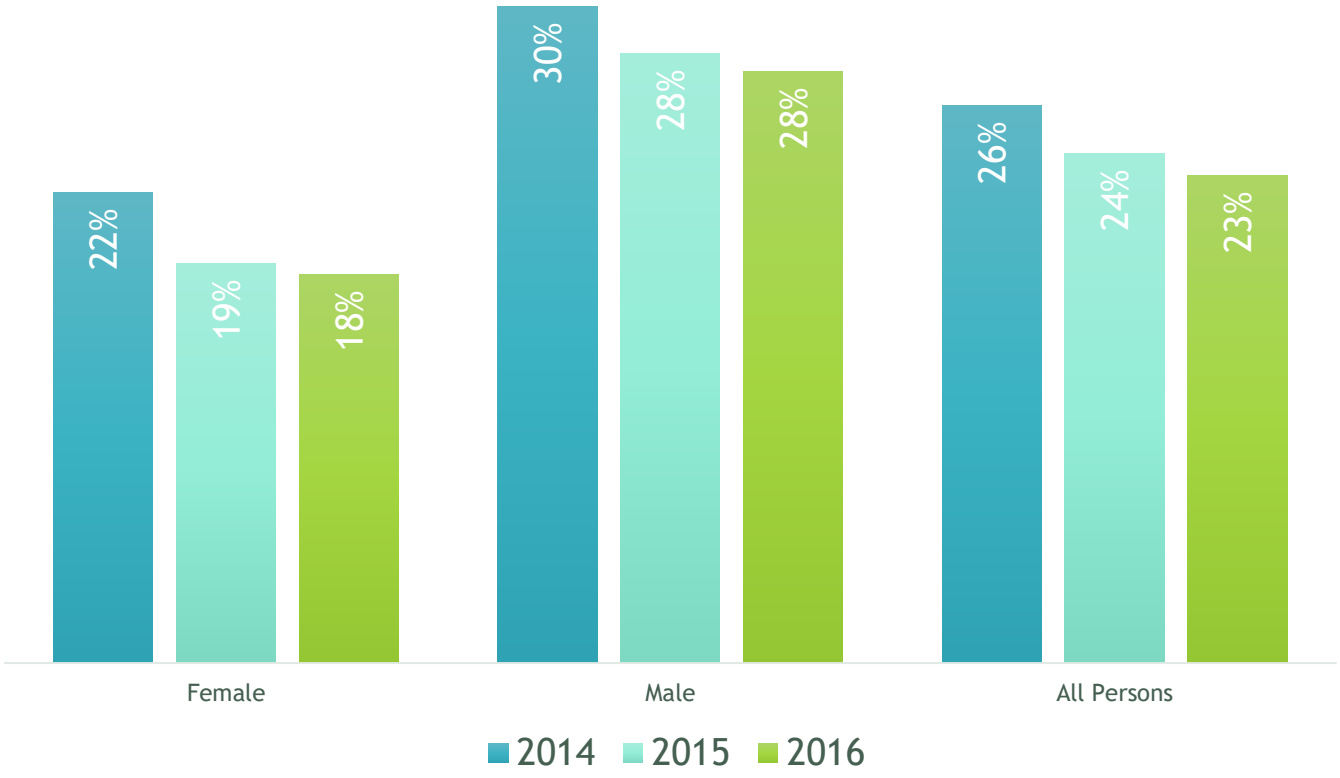
Avoidable Deaths

In 2016, almost a quarter (23 per cent) of deaths in Jersey were from causes considered avoidable (190 out of 830 deaths). The majority (59 per cent) of these deaths were of males.

The age-standardised avoidable mortality rate (per 100,000 population) in Jersey was 194 in 2016, similar to the rate in 2015 (198).

Males were more likely to die from avoidable causes than females in 2016. More than a quarter (28 per cent) of male deaths were from avoidable causes (110 out of 400 deaths) compared with fewer than a fifth (18 per cent) of female deaths (80 of 430 deaths), as shown in Figure 1. A similar pattern was seen in 2015, 28 per cent of male and 19 per cent of female deaths were classed as avoidable.

Figure 1: Deaths considered avoidable as a proportion of all deaths registered, 2016



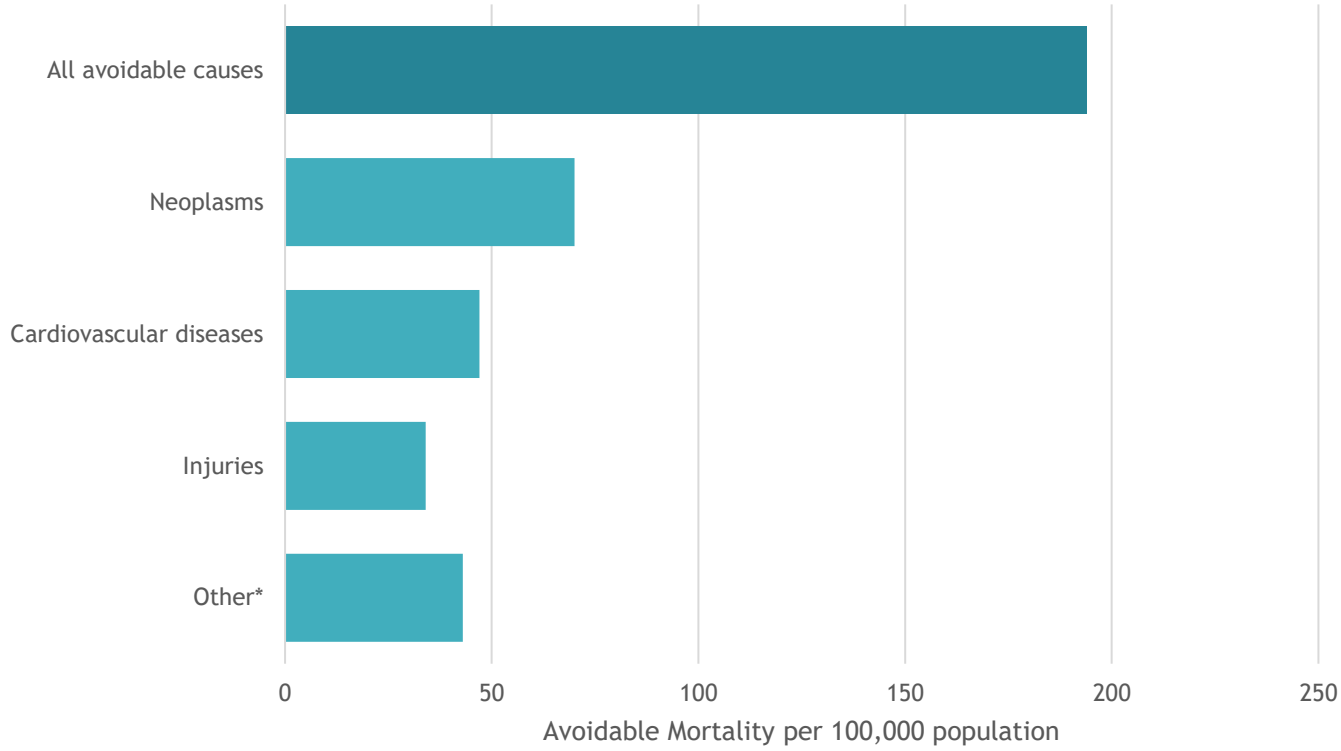
The age-standardised avoidable mortality rate of males (234 deaths per 100,000 males) is similar[6] to that for females (155 deaths per 100,000 females).

[6] see the section on confidence intervals in Background Notes for further explanation

Main Causes

For broad cause groups,[7] the leading cause of avoidable deaths was neoplasms (cancers and other non-cancerous tissue growths), with an age-standardised mortality rate of 70 per 100,000 population.

Figure 2: Avoidable mortality rates by broad cause group, 2016



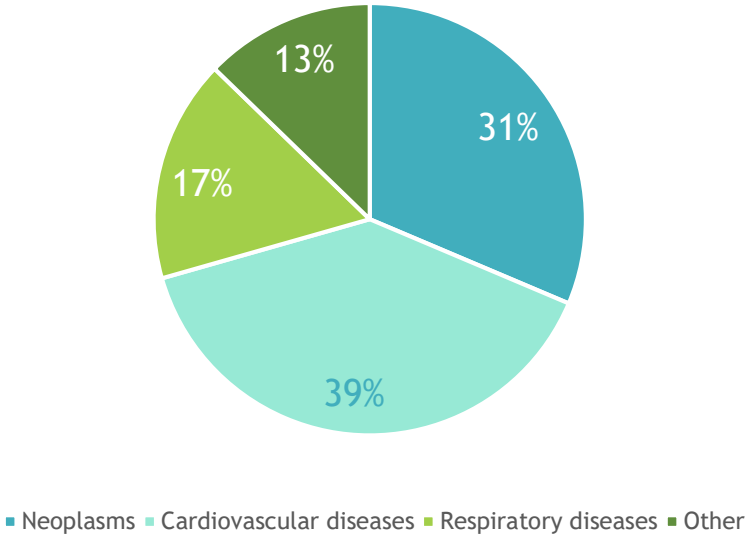
**The 'other' cause group consists of infections, nutritional, endocrine and metabolic disorders, drug use disorders, neurological disorders, respiratory diseases, digestive disorders, genitourinary disorders and maternal and infant conditions*

[7] Broad cause groups refer to the highest level of coding within the International Statistical Classification of Diseases, Injuries and Causes of Death (tenth revision, ICD-10) used to code the underlying cause of death.

Amenable Deaths

There were 100 deaths from causes considered amenable to healthcare in 2016 in Jersey, representing an age-standardised mortality rate of 105 per 100,000 population. This was similar to the rate seen in the previous year, 2015, in which 90 deaths were attributed to amenable causes, corresponding to an age standardised mortality rate of 95 per 100,000 population.

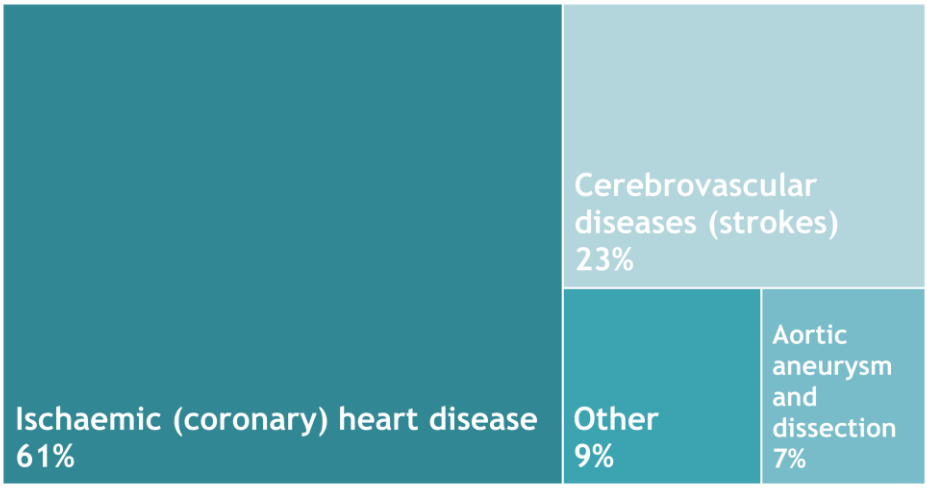
Figure 3: Breakdown of amenable deaths, 2016



The largest causes of amenable death were cardiovascular diseases, neoplasms and respiratory diseases (Figure 3). Cardiovascular disease was responsible for 40 deaths, an age-standardised rate of 39 per 100,000 population and for two fifths of all deaths due to amenable causes.

Figure 4: Specific cardiovascular diseases responsible for amenable deaths, 2016

Breaking cardiovascular disease down further, ischaemic heart disease (coronary heart disease) was the main sub-category (Figure 4.



Percentage of amenable deaths due to cardiovascular disease

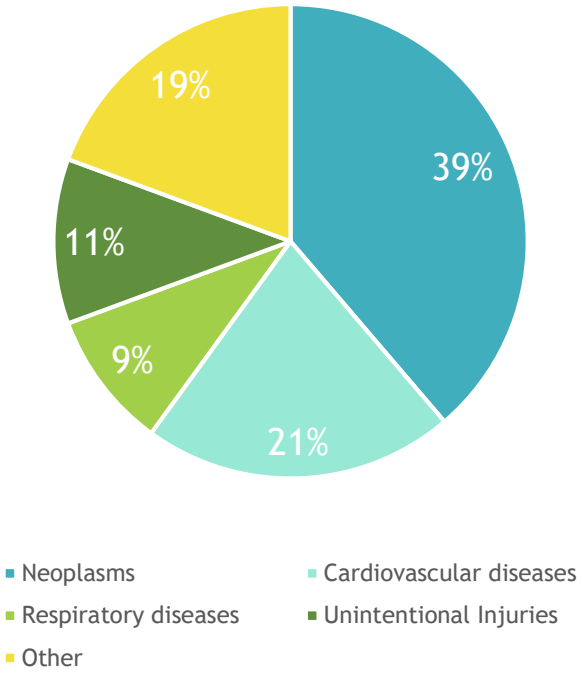
The age-standardised rates for males and females were not significantly different for deaths from causes amenable to healthcare.

Preventable Deaths

There were 160 deaths in 2016 from causes considered preventable in light of public health interventions, corresponding to an age-standardised rate of 166 per 100,000 population.

Figure 5: Breakdown of preventable deaths, 2016

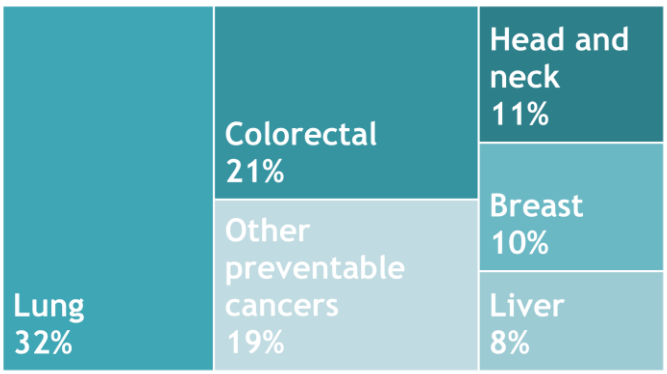
2016 saw a decrease in the number of preventable deaths due to neoplasm (60 compared to 80 in 2015) at an age standardised rate of 65 deaths per 100,000 population. While neoplasm was still the predominant cause of preventable death, representing two fifths of preventable deaths, this proportion decreased from 2015, when it accounted for half (51 per cent) of all preventable deaths in Jersey. Cardiovascular disease was the second major cause of preventable death in 2016 with 30 deaths (an age-standardised rate of 35 deaths per 100,000 population).



'Other' preventable deaths include intentional injuries, nutrition and drug related deaths

As in the previous year, the 2016 age standardised rate for preventable male deaths was significantly higher than that for female deaths (212 per 100,000 male population compared to 121 per 100,000 female population) although the gap has narrowed slightly (226 and 119 per 100,000 in 2015) though not significantly. Rates for males and females were similar for unintentional injuries, respiratory diseases and neoplasms; however the rate for cardiovascular disease was significantly higher for males.

Figure 6: Specific neoplasms responsible for preventable deaths, 2016



A breakdown of the specific types of neoplasm (cancer) responsible for preventable deaths (Figure 6) shows that lung cancer was the largest individual cancer type, followed by colorectal cancers.

The 'Other preventable cancers' consist of neoplasms of the oesophagus, cervix, skin, and stomach.

The age standardised mortality rate of preventable deaths has remained similar over the period 2014-2016.

Comparisons to England and Wales

The latest available data for England and Wales considers those deaths registered in 2015. In order to compare on a like for like basis, deaths occurring in Jersey in 2015 have been used.

The avoidable mortality rate in Jersey in 2015 was 198 per 100,000 population, a similar rate statistically to that for England and Wales (223 per 100,000). A consistent pattern of higher mortality rates for males was seen in both jurisdictions, as shown in Table 1.

Table 1: Age standardised rates of avoidable mortality per 100,000 population: 2015

	Male	Female	All persons
England and Wales	278	171	223
Jersey	257	144	198

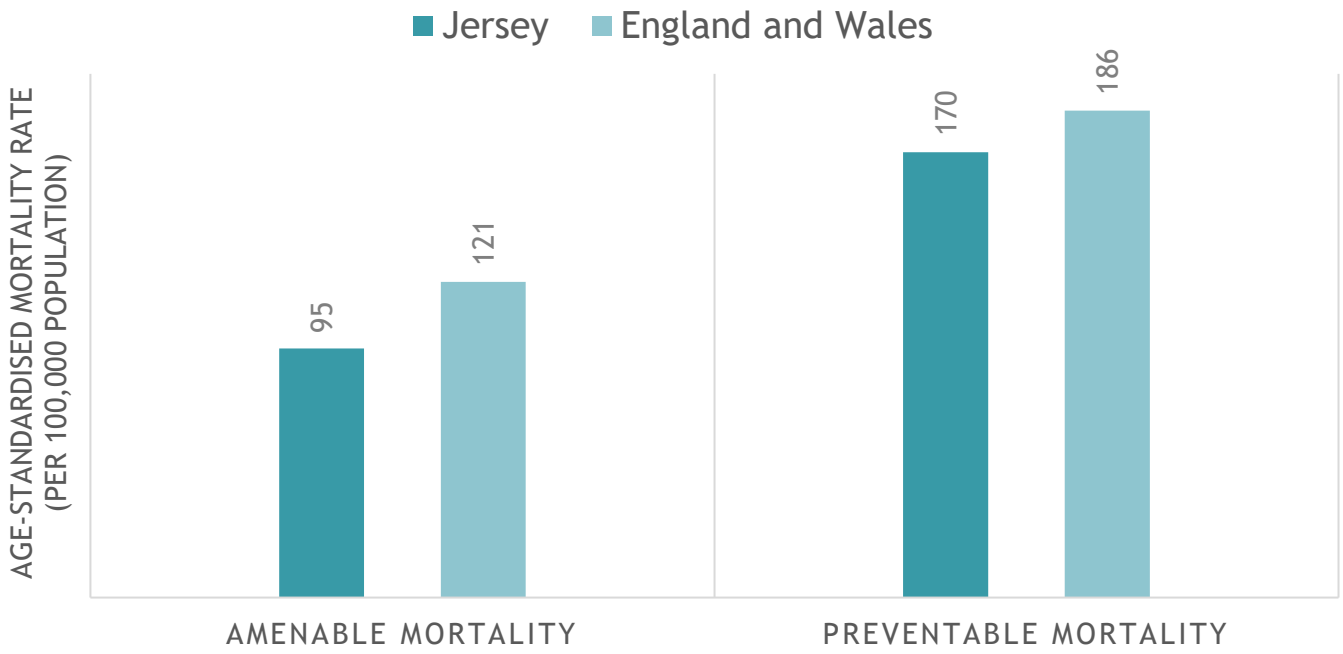
Source: Statistics Jersey and ONS

The rate of male and female avoidable mortality in Jersey was similar to rates in England and Wales.

Neoplasms (cancers) were the leading contributor to avoidable deaths, causing 34 per cent of avoidable deaths in England and Wales and 45 per cent of deaths in Jersey in 2015. The avoidable mortality rate for neoplasms was found to be similar in Jersey to that for England and Wales (91 in Jersey, 77 in England and Wales, per 100,000 population).

Figure 7 shows the rates for amenable and preventable mortality in Jersey, and England and Wales in 2015.

Figure 7: Amenable and preventable mortality rates per 100,000 population 2015, by jurisdiction



Source: Statistics Jersey and ONS

In 2015, the amenable mortality rate in Jersey (95 per 100,000) was significantly lower than that in England and Wales (121 per 100,000). The main cause of amenable deaths in both jurisdictions was cardiovascular disease. The rate for cardiovascular disease in Jersey in 2015 (36 per 100,000) was lower than the rate for England and Wales (52 per 100,000) – see Figure 7.

In 2015, the preventable mortality rate in Jersey (170 per 100,000) was similar to that in England and Wales (186 per 100,000) - Figure 7.

Neoplasms were the leading cause of preventable deaths in Jersey and England and Wales in 2015. This cause group was responsible for almost two fifths of all deaths in England and Wales (39 per cent), whereas in Jersey it was responsible for over half (51 per cent) of preventable deaths. The preventable mortality rate for neoplasms was similar in Jersey to England and Wales (89 deaths per 100,000 population compared with 73 per 100,000 in England and Wales).

Comparisons to English Regions

The avoidable mortality rate in Jersey was similar to rates in the south and east of England. The rate for Jersey was significantly lower than those in the north of England, West Midlands and Wales (Figure 8).

Figure 8: Age-standardised avoidable mortality rates for all persons: 2015

Source: Statistics Jersey and ONS

Children and Young People

In 2016, there were fewer than five deaths of children and young people in Jersey considered avoidable (applying the ONS definitions) through good quality healthcare and public health interventions; this is similar to 2015.

Burden of Avoidable deaths

Analysis of avoidable mortality by considering standardised years of life lost (SYLL) provides a measure of the potential number of years lost when a person dies prematurely from any cause.

The latest data for Jersey shows that in 2016 there were 5,910 years of life lost per 100,000 males who died from an avoidable cause, compared with 3,410 years per 100,000 female deaths. A comparison of the rates of years of life lost by sex, year and jurisdiction can be seen in Table 2. To put these figures into context, in 2016 on average, each person who died from an avoidable cause lost 24 potential years of life. On average, males lost 27 years of potential life, while females lost 23 years of potential life due to death by avoidable causes.

Table 2: Age standardised years of life lost due to causes considered avoidable per 100,000 population in Jersey and England and Wales

	Jersey		England and Wales	
	Male	Female	Male	Female
2014	6,060	3,900	5,980	3,950
2015	5,900	3,020	6,000	3,970
2016	5,910	3,410	N/A	N/A

Source: Statistics Jersey and ONS

Using 2015 and 2014 data to compare Jersey to England and Wales, rates for male years of life lost in Jersey were similar to those in England and Wales (Figure 11). However, the rate of female years of life lost was significantly lower in Jersey than in England in Wales in 2015.

The 2015 rate for years of female life lost in Jersey is low, compared to data from other years and jurisdictions. This was due to a combination of low levels of standardised years of life lost to neoplasm and injuries (unintentional and intentional) for females in 2015.

Background notes

Data Sources

Data are taken from the Deaths Database held by Statistics Jersey. Data in this database originate from returns to the Registrars in each parish in Jersey. The Marriage and Civil Status (Jersey) Law 2001 requires all deaths to be notified within 5 days of the date of death.

Cause of death is classified using the International Statistical Classification of Diseases, Injuries and Causes of Death (tenth revision, ICD-10).

Coding of deaths in Jersey is undertaken by the Office for National Statistics on a quarterly basis.

Comparisons

Comparisons to other jurisdictions are presented in this report to enable benchmarking and to explore where similar trends are being seen elsewhere. Data are extracted from published reports from the Office for National Statistics. All data are referenced and the time periods are noted in the report sections.

Timeliness

The results are based on analysis of all deaths of Jersey residents registered as having occurred in calendar years 2015 and 2016.

Methods

Statistics on avoidable mortality follow the methodology used by the UK Office for National Statistics.[8]
A consultation was conducted in the UK in 2015 in order to update and revise the methodology. As a result, the list of conditions considered to be avoidable has been updated and a new indicator of avoidable mortality in children and young people was created. Previously published data have not been recalculated according to these new definitions, however, as not all causes may have been previously considered preventable.

Age-standardised rates have been calculated using the number of potentially avoidable deaths occurring each year as the numerator and the mid-year population estimate for that year as the denominator. The rates have been standardised using the 2013 European Standard Population. The directly age-standardised rates adjust for differences in age and sex structures between populations to allow comparisons across time and place.

Jersey rates for annual data are calculated using the average of the two corresponding end-year population estimates as published by Statistics Jersey. This estimate of the mid-year population assumes that half of births, deaths and migration occurs in the first half of the calendar year.

Potential years of life lost (PYLL) is a measure of the potential number of years lost when people die prematurely from any cause. The basic concept underpinning PYLL is that deaths at younger ages are weighted more heavily than those at older ages. To enhance comparability between areas and the sexes, the

[8] Office for National Statistics, *Revised definition of avoidable mortality and new definition for Children and Young People*, May 2016, available from www.ons.gov.uk

PYLLs have been standardised using the 2013 European Standard Population. It is therefore referred to as standardised years of life lost (SYLL) for clarity. SYLL rates represent the potential years of life lost if the population of Jersey had the same population structure as the 2013 European standard population. The rates are presented as years of life lost per 100,000 population.

The average years of life lost (AYLL) has been calculated by summing up the number of deaths in each age group, weighted by the corresponding remaining life expectancy and then dividing the result by the total number of deaths across all age groups. This gives a measure of the potential number of years lost when an individual dies prematurely from any cause.

Both the PYLL and AYLL have used the age-specific life expectancy calculated using life tables derived from Jersey deaths for the corresponding calendar year. This approach is a change to the methodology applied in previous versions of this report, where an arbitrary age of 75 years was used to estimate the number of years lost due to premature deaths.

Confidence Intervals (CIs) and Statistical Significance

Confidence intervals are a measure of the statistical precision of an estimate and show the range of uncertainty around the estimated figure. The confidence interval indicates the range within which the true value for the population as a whole can be expected to lie, taking natural random variation into account. Confidence intervals should be considered when interpreting results.

Comparisons between rates or over time have been statistically tested to determine whether differences are likely to be genuine (i.e. statistically significant) or the result of natural random variation. Only those differences deemed as statistically significant have been described in this report using terms such as ‘increase’, ‘decrease’, ‘higher’ or ‘lower’.

Accuracy and reliability

When the observed total number of deaths is fewer than 10, rates are not calculated as there are too few deaths to calculate directly standardised rates reliably.

A small number of inquests may still be outstanding for deaths occurring in calendar year 2016, therefore numbers here should be treated as provisional.

Data quality and completeness

The number of deaths may differ from previously published figures due to the inclusion of data from inquests which can take up to 18 months to complete and register. Data on deaths of Jersey residents that occur outside of the Island may also result in a delay in registering the death with the Superintendent Registrar. This means that total deaths in a given year should be treated as provisional.

Contact details

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