

Joint Strategic Needs Assessment



Life expectancy, mortality & end of life care

Last updated: May 2019

Summary / Key Points

Life expectancy for males at birth, on the Island is 79.8 years and 83.6 for females;

Life expectancy from birth for males has seen a slight increase following a decreasing trend whilst for females there was a decrease following an increasing trend;

There is a 5.3 year gap between the least and most deprived areas on the Island for males and 5.4 years for females;

Nationally the life expectancy gap is wider for males whereas locally it is wider for females;

Locally and nationally there has been a slow-down in life expectancy

Healthy Life Expectancy (HLE) has decreased (worsened) locally for both males and females

Disability-free life expectancy (DFLE) for both males and females locally has decreased (worsened) and is below the national average but only statistically significantly so for males

The Island's mortality rate from all causes, all ages is 938.93 per 100,000 and is not statistically significantly lower than the England average of 967.86 per 100,000: For males locally, this rate continues to decrease but has increased (worsened) for females (albeit still lower than the rate for males)

The all-cause mortality rates for the under 75's has increased locally, whilst decreasing nationally;

Mortality rates for males under 75, all causes is statistically significantly higher (worse) than the female rate both on the Island and nationally;

For 2017, the highest major causes of death on the Island were circulatory disease, cancers and respiratory diseases;

The number of deaths due to circulatory disease and cancers is forecast to rise slightly by 2021 whilst deaths due to respiratory disease is forecast to decrease;

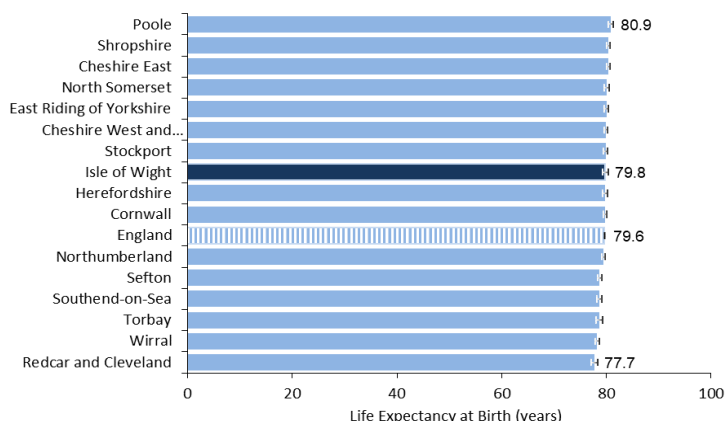
The Island sees a higher rate of lifestyle risk factors contributing to cause of death as compared to England

Life Expectancy

Life Expectancy at birth

On the Isle of Wight, life expectancy for males at birth, for the most recent data period (2015 to 2017 pooled) is 79.8 years. This is slightly above the England average of 79.6 years. This is statistically significantly higher than two of the comparator group:

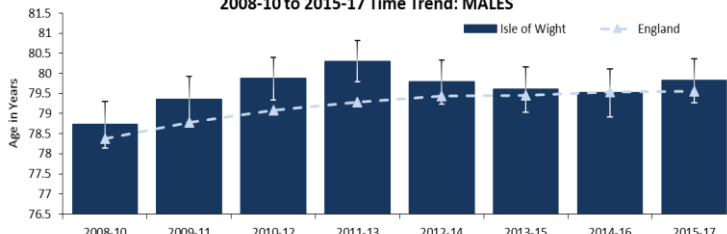
Life Expectancy at Birth: 2015-17 (pooled)
Isle of Wight & CIPFA Comparator Authorities: MALES



Source : PHE Fingertips tool - Public Health Outcomes Framework
<https://fingertips.phe.org.uk/profile/public-health-outcomes-framework> (accessed 15 February 2019)

Life expectancy from birth for males had seen a slightly decreasing trend locally from a peak in 2011 to 2013. Despite this, 2015 to 2017 saw a slight increase of 3 months on the previous figure:

Life Expectancy at Birth:
2008-10 to 2015-17 Time Trend: MALES



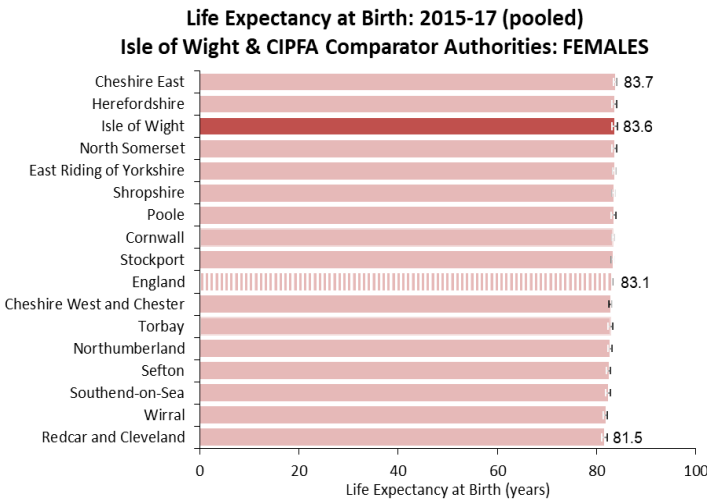
Source : PHE Fingertips tool - Public Health Outcomes Framework
<https://fingertips.phe.org.uk/profile/public-health-outcomes-framework> (accessed 15 February 2019)

Nationally the Isle of Wight is now ranked 177th out of 389 Local Authorities for males' life expectancy. This is down from a peak of 113th in 2011 to 2013.

Life expectancy for females on the Isle of Wight is 83.6 years and is above the England average of 83.1 years,



but not statistically significantly so. The Isle of Wight's figure is however, statistically significantly higher than 5 of the comparator group:



Source: PHE Fingertips tool - Public Health Outcomes Framework
<https://fingertips.phe.org.uk/profile/public-health-outcomes-framework> (accessed 15 February 2019)

The Isle of Wight is now ranked 152nd for female life expectancy, a reduction from 119th in 2014 to 2016 and from a peak in 2004 to 2006 of 64th.

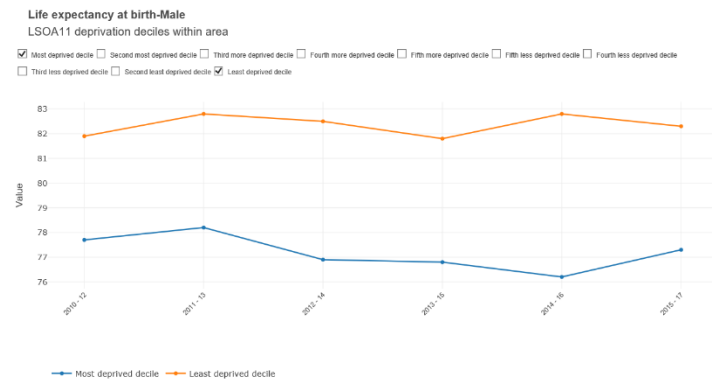
This slow-down in life expectancy for both males and females mirrors a national trend which has seen a pronounced slowdown in life expectancy across all regions during the second decade of the twenty-first century with females seeing a smaller gain to males (Health state life expectancies, UK: 2015 to 2017).

There is a social gradient in lifespan; people living in the most deprived areas in England have on average a lower life expectancy compared to those living in more affluent areas. Males living in the most deprived tenth of areas can expect to live 9 fewer years compared with the least deprived tenth, and females can expect to live 7 fewer years.

The Department of Health sees tackling inequalities as a priority and aims to reduce differences in life expectancy and healthy life expectancy between communities which will promote greater improvements in more disadvantaged communities (PHOF, Health Equity Report).

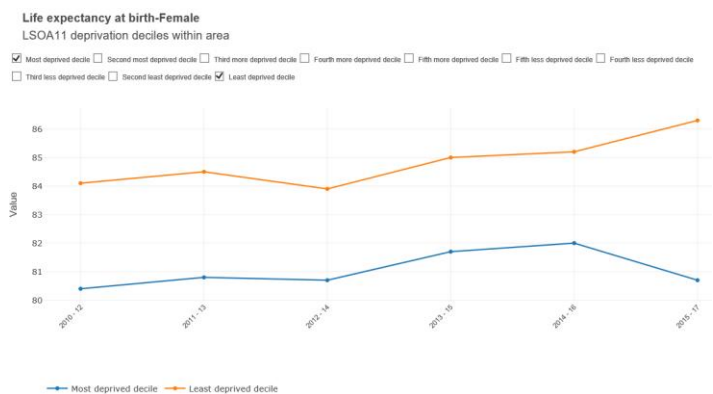
Inequalities in life expectancy can be monitored by using the Indices of Multiple Deprivation (IMD 2015) to compare areas of relative deprivation both nationally and locally. Life expectancy from birth for males is lower (worse) in the most deprived areas on the Island with life expectancy for those living in the most deprived deciles at 77.3 years compared to 82.3 years

for those living in the least deprived decile, a statistically significant difference:



Source: https://connect.healthdatainsight.org.uk/health_inequalities/dashboard/

Life expectancy from birth for females is lower (worse) in the most deprived areas on the Island with an average expected life of 80.7 years in the most deprived decile compared to 86.3 years in the least deprived decile, a statistically significant difference:



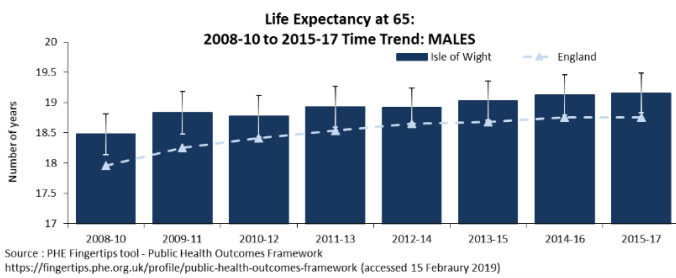
Source: https://connect.healthdatainsight.org.uk/health_inequalities/dashboard/

The Slope Index of Inequality (SII) represents the gap in life expectancy between the most deprived and least deprived deciles on the Island. It is a statistical analysis of the relationship between life expectancy and deprivation scores across the Local Authority area. The SII indicates that there is a 5.3 year gap between the least and most deprived areas on the Island for males and 5.4 years for females. The gap is statistically significantly lower (better) than England and the South East averages for males (9.4 and 8.0 respectively) and for England (7.4) for females. Of note is that the SII is lower (better) for females as compared to males for England and the South East, whereas locally the SII is higher (worse) for females, suggesting perhaps that deprivation has a greater effect on females on the Isle of Wight than males.

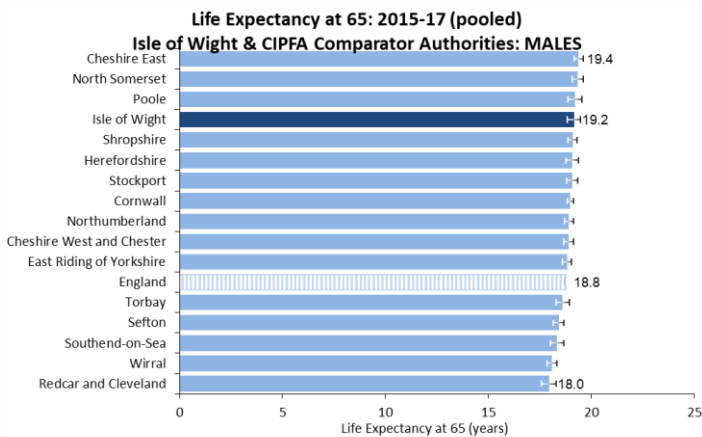
Life Expectancy at age 65

Life expectancy at age 65 is an estimate of the number of years a person aged 65 would survive if he or she were to experience the particular areas' age-specific mortality rates for that time period throughout his or her life. Data is again pooled over three-year periods to present more even trends over time.

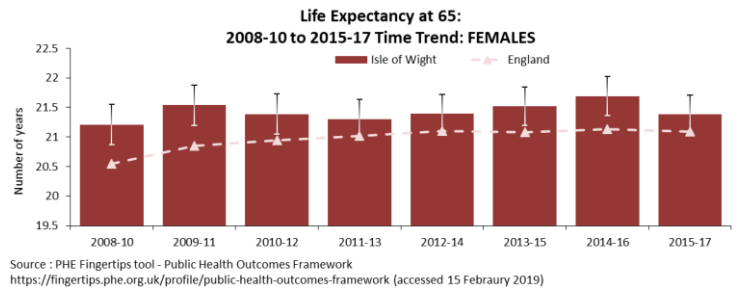
Life expectancy at age 65 for males on the Island has increased by 3.8% since 2008/10 from 18.5 to 19.2 years in 2015/17. This is a slower increase than the previous eight pooled periods which saw an 11.4% increase between 2001/03 and 2008/10. This slowdown mirrors that with life expectancy from birth:



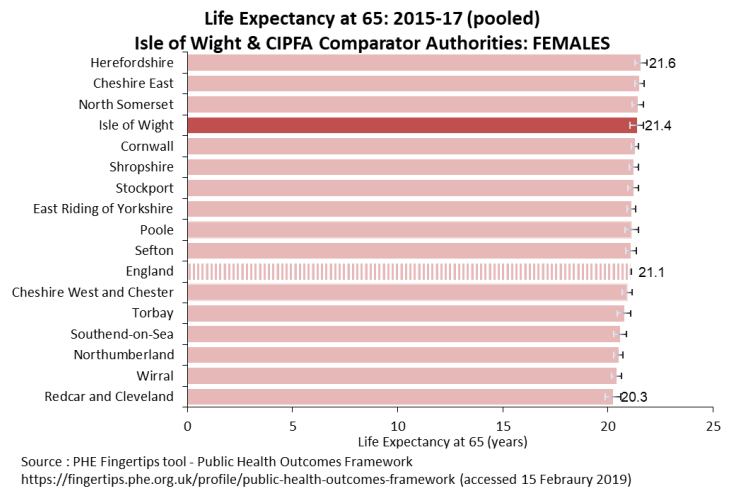
Life expectancy at 65 for males locally is above the England average (18.8) but not statistically significantly so. The Island's figure is statistically significantly higher than four of the comparator group:



Life expectancy at age 65 for females on the Island is statistically significantly higher than males at 21.4. However, life expectancy at 65 for females has increased at the slower rate of 0.9% between 2008/10 and 2015/17. This is again a slowdown from the previous eight pooled years from 2001/03 which saw an increase of 7.0%:



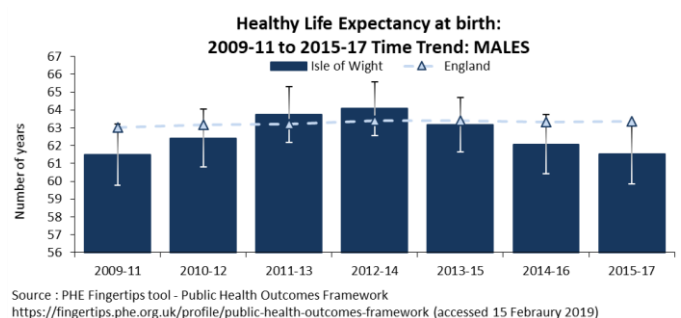
Life expectancy for females at 65 is just above the England average (21.1) but not statistically significantly so. The Island is statistically significantly higher than four of the comparator group:



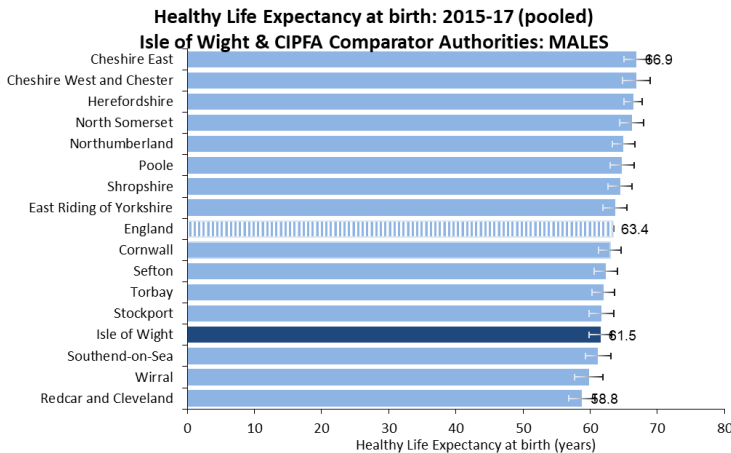
Healthy Life Expectancy (HLE)

Healthy life expectancy (HLE) is an estimate of the number of years lived in "Very good" or "Good" general health, based on how individuals perceive their general health.

On the Isle of Wight, healthy life expectancy for males at birth, for the most recent data period (2015 to 2017 pooled) is 61.5 years (77.1% of their life). This is slightly below the England average (63.4 years and 79.6%) but not statistically significantly so and ranks the Isle of Wight 97th out of 150 areas. HLE for males locally has decreased from a peak in 2012/14:

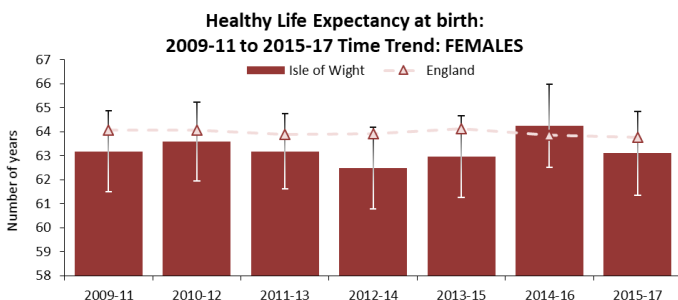


The Island's HLE for males from birth is statistically significantly lower than five of the comparator group:



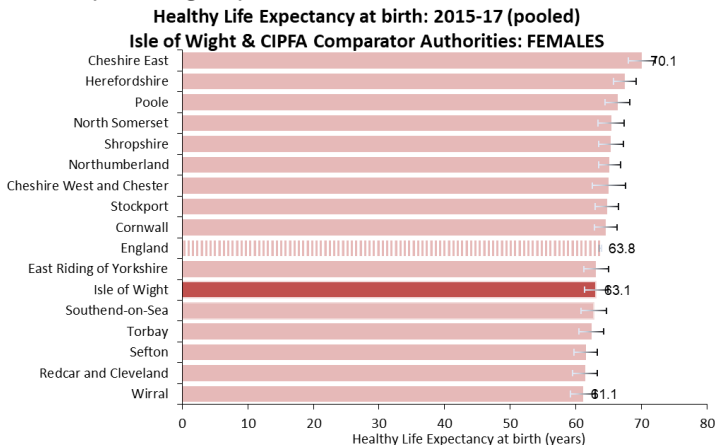
Source : PHE Fingertips tool - Public Health Outcomes Framework
<https://fingertips.phe.org.uk/profile/public-health-outcomes-framework> (accessed 15 February 2019)

Healthy Life Expectancy for females from birth is 63.1 (75.5% of their life). This is slightly below the England average (63.8 years and 76.3%) but not statistically significantly so and ranks the Island 79th out of 150 areas. HLE has decreased locally for females (a trend not seen nationally) from a peak in 2014/16:



Source : PHE Fingertips tool - Public Health Outcomes Framework

The Island's HLE for females from birth is now statistically significantly lower than two of the comparator group:



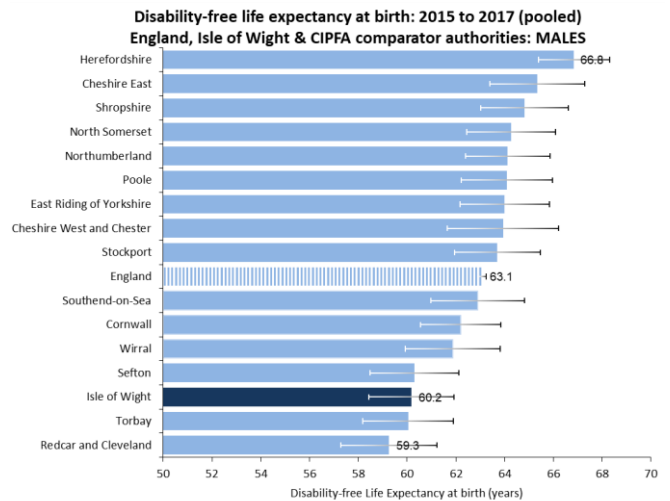
Source : PHE Fingertips tool - Public Health Outcomes Framework
<https://fingertips.phe.org.uk/profile/public-health-outcomes-framework> (accessed 15 February 2019)

Healthy Life Expectancy at age 65 for males is 10.4 years locally, a drop from a peak of 11.3 years in 2014/16. This ranks the Island at 67th out of 150 areas. For females, HLE at 65 is 11.8 years, a reduction from its peak in 2014/16 when the figure stood at 12.5 years. The Island is now ranked 36th out of 150 areas.

Disability-free life expectancy (DFLE)

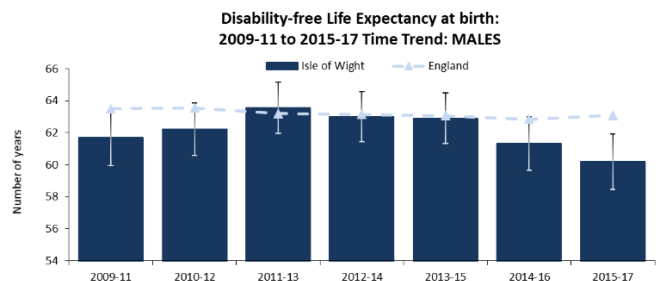
Disability-free life expectancy (DFLE) is an estimate of the number of years lived without a long-lasting physical or mental health condition that limits daily activities.

Disability-free life expectancy at birth for males on the Isle of Wight is 60.2 years. This is statistically significantly below (worse) the England average (63.1 years) and seven of the comparator groups:



Source : ONS - Health state life expectancy - all ages, UK
<https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/healthandlifeexpectancies/datasets/healthstatelifeexpectancyallagesuk> (accessed 11 March 2019)

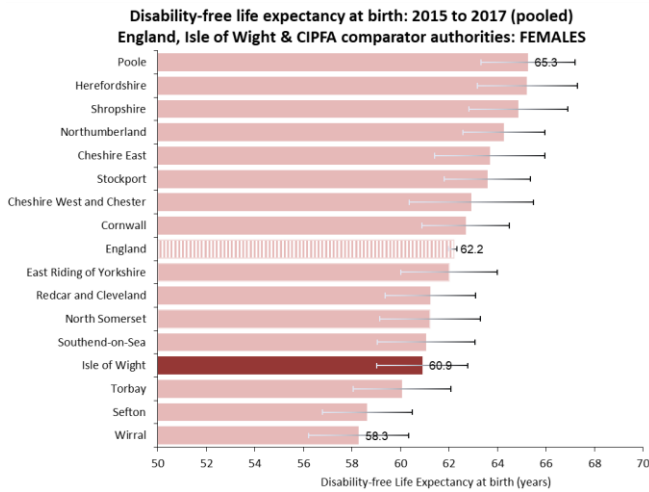
Locally disability-free life expectancy for males peaked in 2011/13 and is now decreasing. Therefore, although life expectancy for males is increasing locally, males are living longer but in a less healthy state:



Source : ONS - Health state life expectancy - all ages, UK
<https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/healthandlifeexpectancies/datasets/healthstatelifeexpectancyallagesuk> (accessed 11 March 2019)

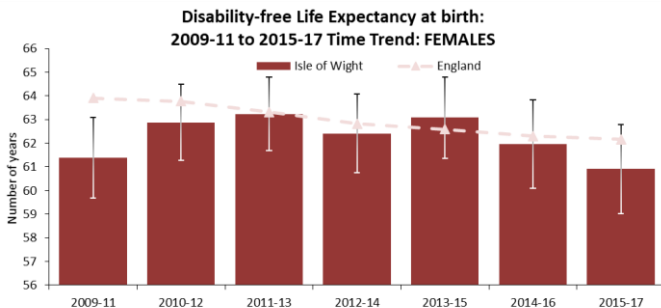
Disability-free life expectancy at birth for females on the Isle of Wight is 60.9 years. This is lower (worse) than the England average (62.2) but not statistically

significantly so. The Island figure is statistically significantly lower than two of the comparator group:



Source : ONS - Health state life expectancy - all ages, UK
<https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/healthandlifeexpectancies/datasets/healthstatelifeexpectancyallagesuk> (accessed 11 March 2019)

Locally, disability-free life expectancy for females peaked in 2013-15 and is now decreasing, along with their life expectancy:



Source : ONS - Health state life expectancy - all ages, UK
<https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/healthandlifeexpectancies/datasets/healthstatelifeexpectancyallagesuk> (accessed 11 March 2019)

Disability-free life expectancy at age 65 for males on the Island is 10.1 years and equates to 52.9% of their predicted remaining life expectancy. There is no statistically significant difference between the figure for the Island and England or any of the comparator group. For females, disability-free life expectancy at age 65 is 10.9 years and 51.1% of their remaining predicted life expectancy. Again, there is no statistically significant difference between the Island and England or any of the comparator group. Males on the Isle of Wight, as well as England, have a slightly greater proportion of their remaining life expectancy at 65 disability free compared to females.

Mortality

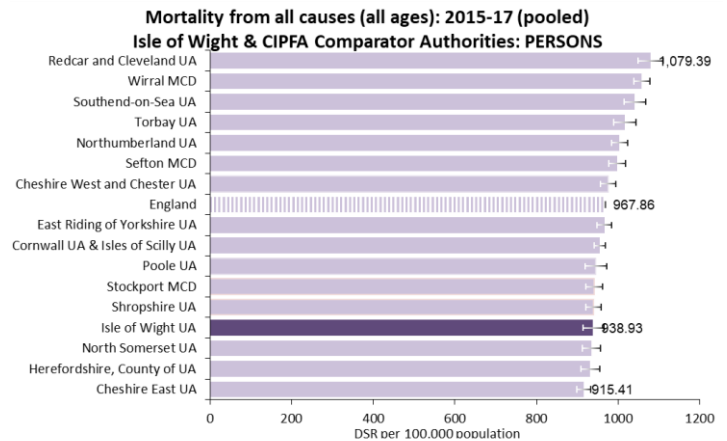
Mortality Rate

The mortality rate is the number of deaths in a population during a certain period of time and is

usually expressed as a rate per 100,000 resident population. Mortality rates are also standardised for age to take account of the underlying age structure of an area's population.

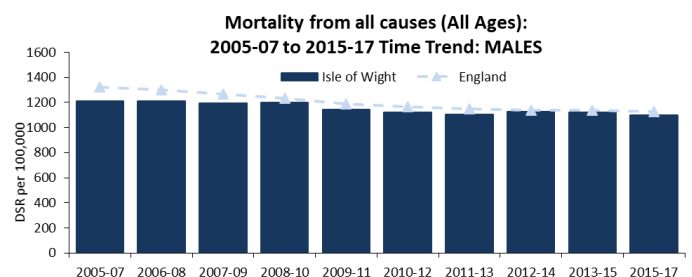
All Ages, All Causes Mortality Rate

The Island's mortality rate from all causes, all ages (938.93 per 100,000) for the pooled period 2015 to 2017 is significantly lower (better) than six of the comparator group but not statistically significantly lower than the England average of 967.86 per 100,000:



Source : NHS Digital Indicator Porta - https://files.digital.nhs.uk/83/6244D9/03C_073DR00%2B%2B_D.xls (accessed 29 March 2019)

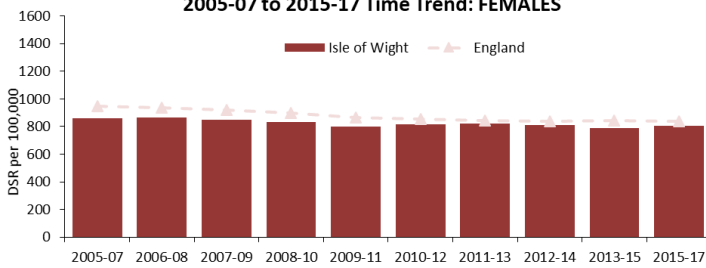
Over time, all ages, all causes mortality rates both locally and nationally have been decreasing. For males locally, this decrease has continued for 2015 to 2017 pooled period and now stands at 1,096.30 per 100,000; a 2.1% decrease from 1,120.07 per 100,000 in 2013 to 2015:



Source : NHS Digital Indicator Porta - https://files.digital.nhs.uk/83/6244D9/03C_073DR00%2B%2B_D.xls (accessed 29 March 2019)

Conversely, for females the rate has actually seen as 2.4% increase locally from 2013 to 2015 period (albeit still lower than the rate for males) from 787.91 per 100,000 to 807.13 per 100,000 in 2015 to 2017:

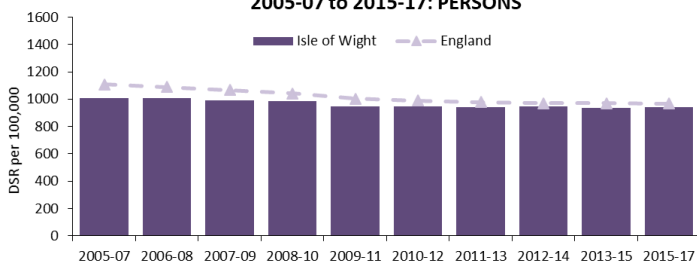
**Mortality from all causes (All Ages):
2005-07 to 2015-17 Time Trend: FEMALES**



Source : NHS Digital Indicator Porta - https://files.digital.nhs.uk/83/6244D9/03C_073DR00%2B%2B_D.xls (accessed 29 March 2019)

The rise in all causes, all ages female mortality rate for the Isle of Wight has led to an overall increase, of 0.5%, for all persons from 934.62 to 938.93. Nationally, the rate for all persons has continued to decrease but at a very gradual rate:

**Mortality from all causes (All ages):
2005-07 to 2015-17: PERSONS**



Source : NHS Digital Indicator Porta - https://files.digital.nhs.uk/83/6244D9/03C_073DR00%2B%2B_D.xls (accessed 29 March 2019)

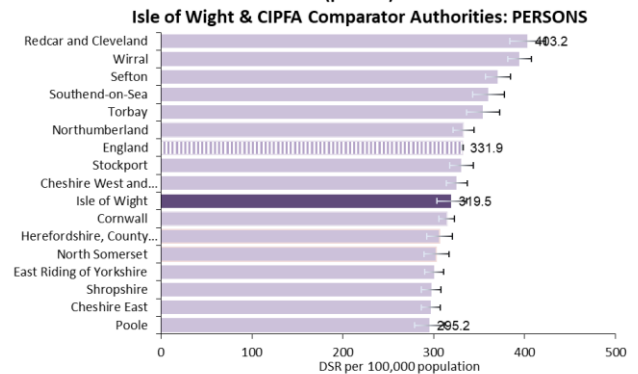
Mortality rates can be split into the following categories:

- Premature mortality - mortality rates for deaths under age 75 for all causes combined and leading causes of death;
- amenable (treatable/preventable) mortality - deaths that could be avoided through timely and effective healthcare;
- preventable mortality - deaths that could be avoided by public health interventions;
- avoidable mortality – deaths that are amenable, preventable or both, where each death is counted only once

Premature Mortality - Under 75 All Causes Mortality Rate:

For 2015 to 2017 all-cause mortality rate for under 75s on the Island was statistically significantly lower than four of the comparator group with an overall rate of 319.5 per 100,000. However, this is not statistically significantly different to the England average of 331.9 per 100,000:

Mortality from all causes (less than 75 years): 2015-17 (pooled)

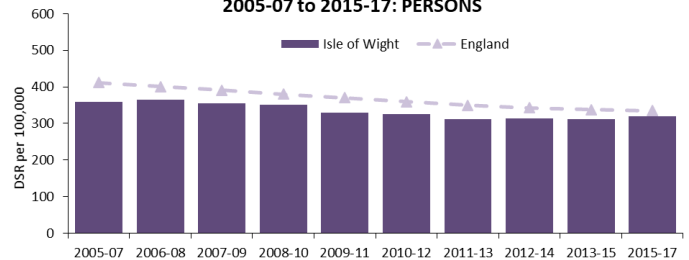


Source : https://files.digital.nhs.uk/83/6244D9/03C_073DR00%2B%2B_D.xls (accessed 29 March 2019)

Mortality rates for males under 75, all causes is statistically significantly higher than the female rate both on the Island and nationally. The rate for Island males is 396.5 per 100,000 whilst the rate for females is 246.6 per 100,000 population. Both are lower than the national average (403.2 and 264.1 respectively) although not statistically significantly so. Both rates for the males and females on the Island are statistically significantly lower (better) than three of the comparator group.

The all-cause mortality rates for the under 75's locally was on a decreasing (improving) trend until 2011 to 2013 and has now increased to 319.52 per 100,000. This is an increase of 2.8% from 2013 to 2015. Nationally, the trend continues to decrease:

**Mortality from all causes (less than 75 years):
2005-07 to 2015-17: PERSONS**



Source : Public Health Fingertips tool <https://fingertips.phe.org.uk/profile/mortality-profile> (accessed 1/03/2019)

The Isle of Wight's rate for premature mortality (which includes under 75's deaths from cardiovascular disease, heart disease, stroke, certain cancers such as breast and colorectal, liver disease, respiratory disease and injuries) is not statistically significantly different to the England average except stroke and respiratory disease where we are under the England rate (9.5 per 100,000 compared to 13.1 and 26.6 per 100,000 compared to 34.3 respectively).

Amenable Mortality:

Mortality rates from causes considered amenable to treatment are conditions that are defined as those from which it is reasonable to expect death to be averted even after the condition has developed, for example, through early discovery and effective treatment. Amenable mortality rate for the Isle of Wight is 113.1 per 100,000 (2015 to 2017) which is not statistically significantly different to the England rate of 117.8 per 100,000. The England rate has reduced from 2014 to 2016 (118.2 per 100,000) whilst the Isle of Wight rate has increased (from 108.7 per 100,000). No change is statistically significant.

Preventable Mortality:

Mortality rates from causes considered preventable refer to deaths from conditions that are considered avoidable given timely and effective health care. Preventable conditions include those for which there are effective means of preventing the condition from occurring. They are related to lifestyle factors such as smoking and preventable deaths such as traffic accidents due to not wearing a seat belt or speeding.

Isle of Wight's rate is 179.0 per 100,000 and is not statistically significantly different to England's rate 181.6 per 100,000. The England's rate is a slight decrease from previously (182.9) whilst the Isle of Wight has seen a slight increase (from 175.8) but no change is of statistical significance.

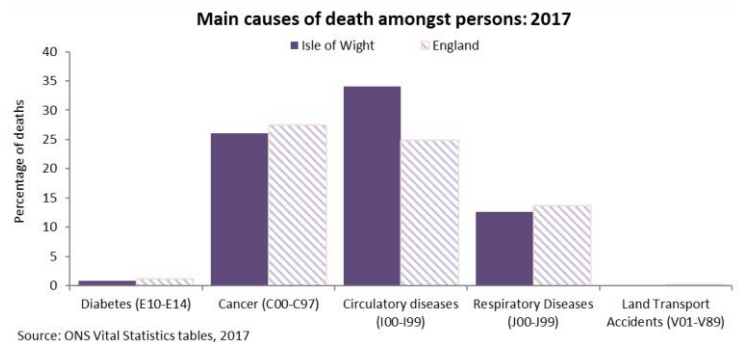
The Isle of Wight's rates for diseases considered preventable (including cardiovascular diseases, cancers, liver disease and respiratory disease) is in line with the national average apart from respiratory disease where the Island's rate (14.8 per 100,000) is statistically significantly lower than the national average (18.9 per 100,000).

Avoidable mortality

The avoidable mortality rate for the Isle of Wight is 213.3 per 100,000 and is not statistically significantly different to the national average of 217.3. As with amenable mortality, the rate for the Island has increased (from 206.9 in 2014 to 2016) whilst the England rate has decreased (from 219.8 in 2014 to 2016) the England change is statistically significantly different whereas the Island change is not.

Cause of Death

The ONS vital statistic tables indicate that for 2017, the highest major cause of death on the Island was circulatory disease such as heart disease and strokes; accounting for over a third of deaths. This is higher than the England average of 24.9%. Next highest cause of death was cancers at 26.0% similar to the national average of 27.4%:



Primary Care Mortality Database (PCMD)

Between 2016 and 2018 there were 5,160 deaths on the Isle of Wight. The bubble diagram below shows the deaths by underlying cause. Of the 5,160 deaths over a third (36.5%) were circulatory diseases. Of these, nearly a third (31.0%) were from Ischaemic heart disease and 14.0% were resulting from Strokes.

Just over a quarter (26.3%) of total deaths were from cancers. Of these, nearly a third (29.4%) were of the digestive system, 17.1% resulted from lung cancer, 7.9% resulted from prostate cancer and 5.7% from breast cancer. A further 8.5% resulted from lymphoid, blood and related tissue cancers such as leukaemia and multiple myeloma.

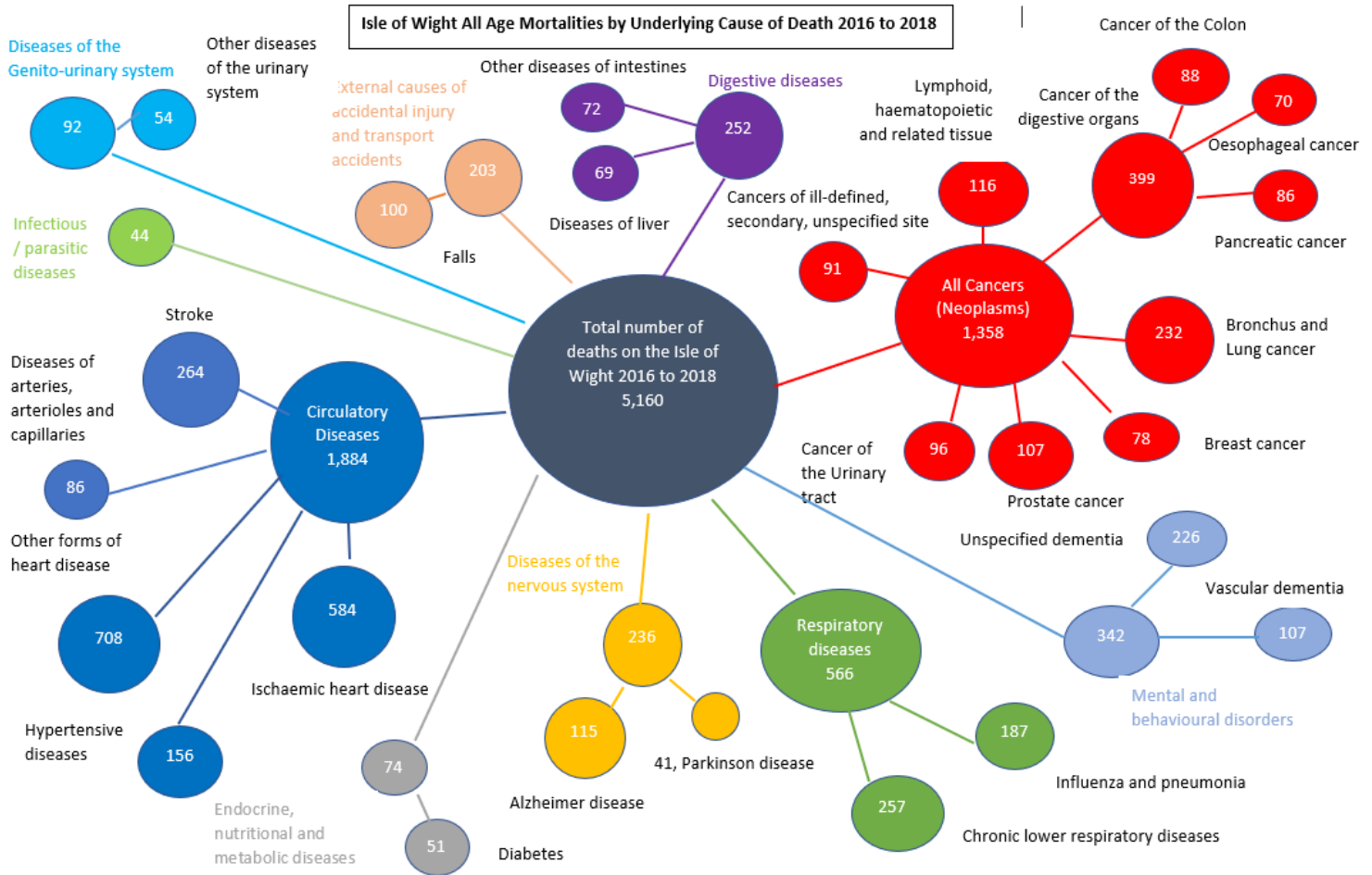
11.0% of the total deaths were as a result of respiratory diseases, with 45% related to chronic lower respiratory diseases and a third (33.0%) flu or pneumonia.

6.6% of deaths resulted from mental and behavioural disorders with over two thirds (66.1%) resulting from unspecified dementia and 31.3% from vascular dementia:

4.6% resulted from disease of the nervous system with 48.7% as a result of Alzheimers:

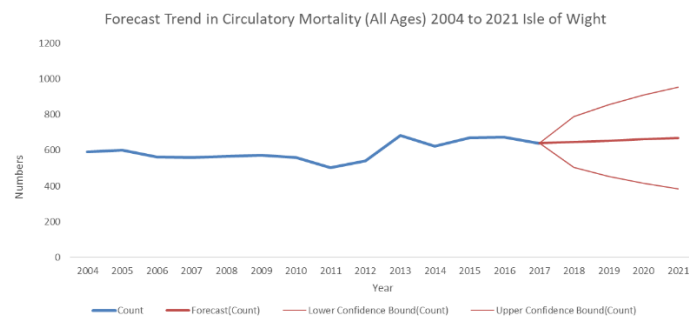
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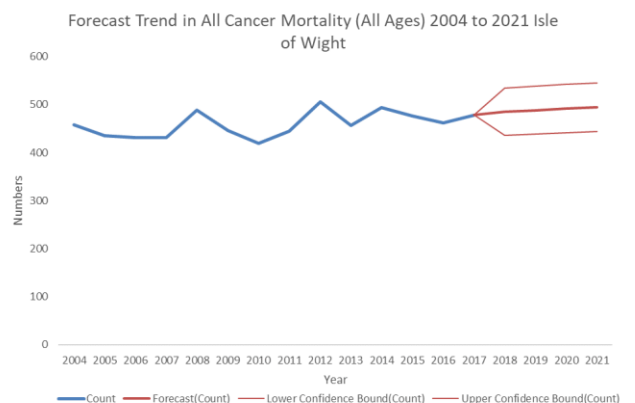


Source: Primary Care Mortality Database (PCMD) 2016 to 2018

Across the three main mortality causes, the number of deaths due to circulatory disease and cancers is forecast to rise slightly by 4.5% and 3.3% respectively by 2021 whilst deaths due to respiratory disease is forecast to decrease by 15% by 2021:



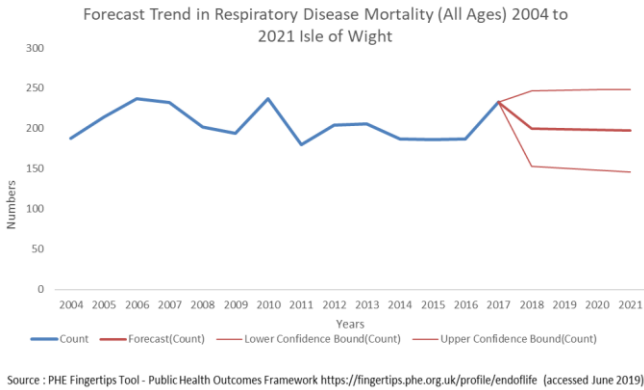
Source: PHE Fingertips Tool - Public Health Outcomes Framework <https://fingertips.phe.org.uk/profile/endoflife> (accessed June 2019)



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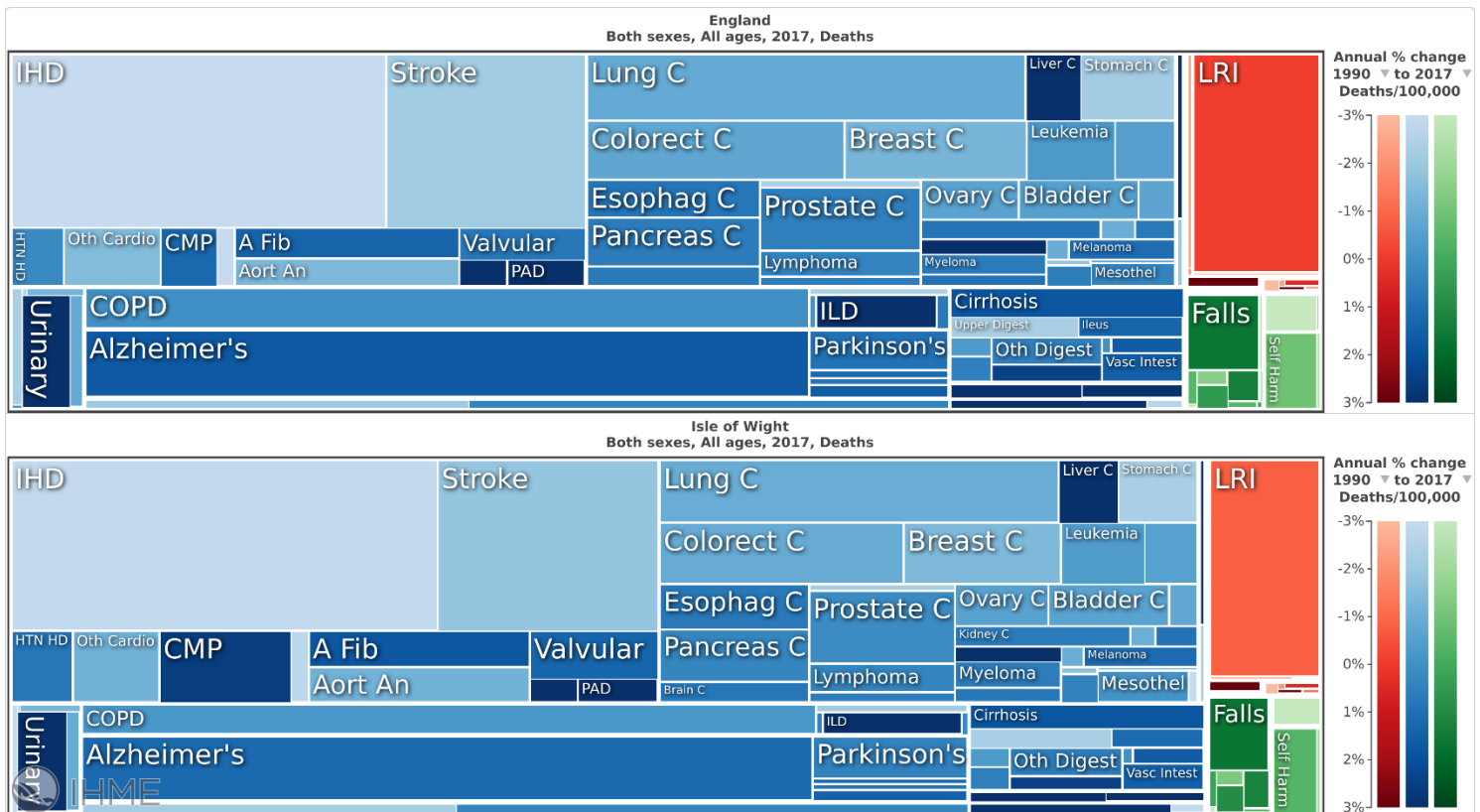


Blue denotes non-communicable diseases; red denotes communicable, neonatal, maternal and nutritional diseases; and green denotes injuries. The colour intensity indicates the percentage change in deaths per 100,000 attributable to that cause between 1990 and 2017; the darker the colour the greater the percentage change.

The main causes of death both on the Isle of Wight and in England are Cardiovascular diseases (CVD) such as heart attacks and strokes, Neoplasms such as lung and colorectal cancers and age-related diseases such as Alzheimer's and other dementias. As we have seen, this pattern is reflected to some extent in the PCMD data for the aggregated period 2016 to 2018 as depicted in the bubble diagram above which sees circulatory disease (such as heart attacks) and cancers as some of the main causes of death.

Global Burden of Disease (GBD)

The treemap below shows the causes of death for the Isle of Wight and England 2017. The size of the box illustrates the level of deaths attributable to that cause.



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The GDB shows that figures for the Isle of Wight are slightly above that for England for Ischemic heart disease (IHD) and stroke (see tables below). Other main causes are Alzheimer's and other dementias*, Chronic Obstructive Disease (COPD), Lower Respiratory infections (LRI), lung, breast and colorectal cancers of which the Isle of Wight is slightly below that of England:

Main cause of death	England		Isle of Wight	
	%	% change from 1990	%	% change from 1990
Ischemic Heart Disease (IHD)	14.14	-3.39	15.84	-2.92
Alzheimer's and other dementias*	10.7	1.75	10.52	1.23
Stroke	7.53	-2.11	8.23	-1.83
(COPD) Chronic Obstructive Pulmonary disease	6.48	0.071	5.1	-0.19
lung cancer	6.32	-0.86	5.44	-0.96
Lower Respiratory Infections (LRI)	6.16	-0.075	5.35	-0.77
Colorectal cancer	3.33	-0.72	3.26	-0.9
Breast cancer	2.35	-1.26	2.11	-1.39
Cardiomyopathy and myocarditis	0.70	1.27	2.05	2.61

It is important to recognise that codes are used in defining cause of death and that locally an area has some discretion in the codes they use. Coding helps explain the rise in Cardiomyopathy and myocarditis (CMP) seen locally. Research into this rise shows that there has been an increase in coding for CMP where previously codes relating to 'frailty due to old age' may have been used.

With respect to percentage change, the greatest increases since 1990 can often be seen in those diseases with quite small levels of death as compared to CVD and neoplasms where many have actually seen a decrease. The greatest percentage change can be seen in Diarrheal diseases which has seen an increase of over 8% but still only accounts for 0.20% of deaths nationally and 0.14% of deaths locally.

* While the number of deaths as a result of dementia and Alzheimer's disease has increased, there have also been coding changes that make dementia and Alzheimer's disease more likely to be classified, in place of other causes, as the main cause of death

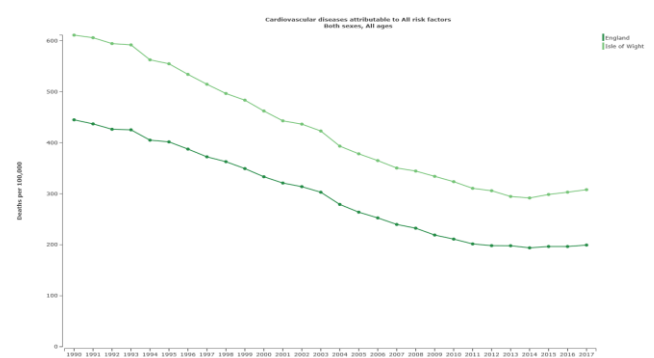
Other causes of death which have seen an increase from 1990 include lifestyle related diseases such as those associated with alcohol and drug disorders.

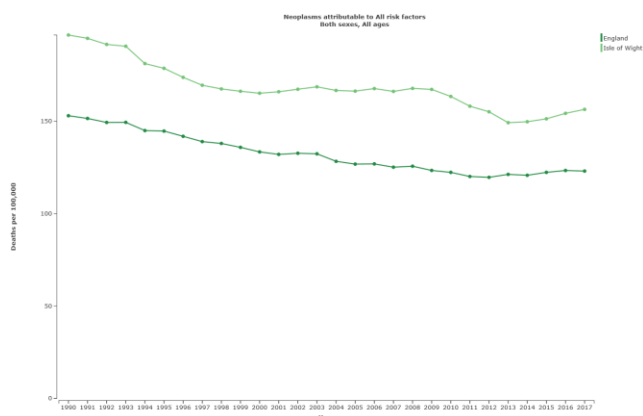
Peripheral artery disease (PAD), Urinary diseases and Interstitial Lung Disease and Pulmonary sarcoidosis (ILD) have also seen an increase but again account for under or around 1% of deaths both nationally and locally:

Main cause of death	England		Isle of Wight	
	%	% change from 1990	%	% change from 1990
Diarrheal diseases	0.20	8.3	0.14	8.33
alcohol use disorders	0.35	5.35	0.24	5.72
Peripheral artery disease (PAD)	0.37	4.61	0.37	4.86
Urinary diseases and male infertility	1.21	4.12	1.12	3.91
other neoplasms	0.39	3.76	0.34	3.58
drug use disorders	0.45	3.55	0.33	4.65
Interstitial Lung Disease and Pulmonary sarcoidosis (ILD)	0.90	3.55	0.71	3.3
Liver cancer	0.79	3.16	0.8	3.13

Some of the main causes of death and those that have seen the greatest increase since 1990 are related to lifestyle risk factors such as behavioural (including diet, alcohol, smoking and exercise), metabolic (including high blood pressure, high fasting plasma glucose and high body-mass index) and environmental factors (including air pollution and occupational risks).

In terms of risks factors, the Isle of Wight has a higher rate associated with the main causes of deaths such as cardiovascular disease (CVD) and neoplasms (cancers), compared to England and the gap appears to be widening:





End of Life Care

Since 2012 the proportion of deaths occurring at home and in care homes has remained relatively stable with deaths in hospital falling and deaths in the hospice on the increase:

Place of Death / Year	2012	2013	2014	2015	2016	2017
Home	17.8%	17.6%	19.1%	19.2%	19.6%	17.0%
Hospital	43.4%	41.4%	36.9%	37.1%	38.9%	38.8%
Hospice	9.2%	8.7%	11.6%	13.3%	14.3%	15.1%
Care Homes	28.2%	30.5%	29.6%	27.9%	25.4%	27.0%

References and useful links

- <http://www.healthdata.org/gbd>
- [Public Health Outcomes Framework: Health Equity Report, July 2017](#)
- https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/733093/PHOF_Health_Equity_Report.pdf
- <https://fingertips.phe.org.uk/>
- <https://digital.nhs.uk/>
- <https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/healthandlifeexpectancies/bulletins/healthstatelifeexpectanciesuk/2015to2017>
- <http://www.news-medical.net/health/Life-Expectancy-What-is-Life-Expectancy.aspx>
- Fair Society, Healthy Lives. The Marmot Review (2010), The Marmot Review.
- <https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/causesofdeath/datasets/avoidablemortalitybylocalauthorityinenglandandwales>

Life expectancy, mortality & end of life care

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