

# SIMEC USKMOUTH POWER STATION

## ENVIRONMENTAL STATEMENT

Town and Country Planning (Environmental Impact Assessment)  
(Wales) Regulations 2017

On behalf of Simec Uskmouth Power Ltd.

**Appendix 14.1 – Population and Health Baseline**



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## GLOSSARY

Term	Definition
WIMD	Wales Index of Multiple Deprivation
LSOA	Lower Super Output Area
HIA	Health Impact Assessment
WHO	World Health Organisation
CoCP	Code of Construction Practice
CEMP	Construction Environment Management Plan
PAH	Polycyclic Aromatic Hydrocarbons
PM	Particulate matter
NO <sub>2</sub>	Nitrogen dioxide
CRF	Concentration-response functions
HRAPIE	Health Risks of Air Pollution in Europe
PAF	Population attributable fraction
HDV	Heavy Duty Vehicle
HGV	Heavy Goods Vehicle
FPMP	Fire Prevention and Mitigation Plan
HHRA	Human Health Risk Assessment
ERF	Energy Recovery Facility
CO <sub>2</sub>	Carbon dioxide



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## Introduction

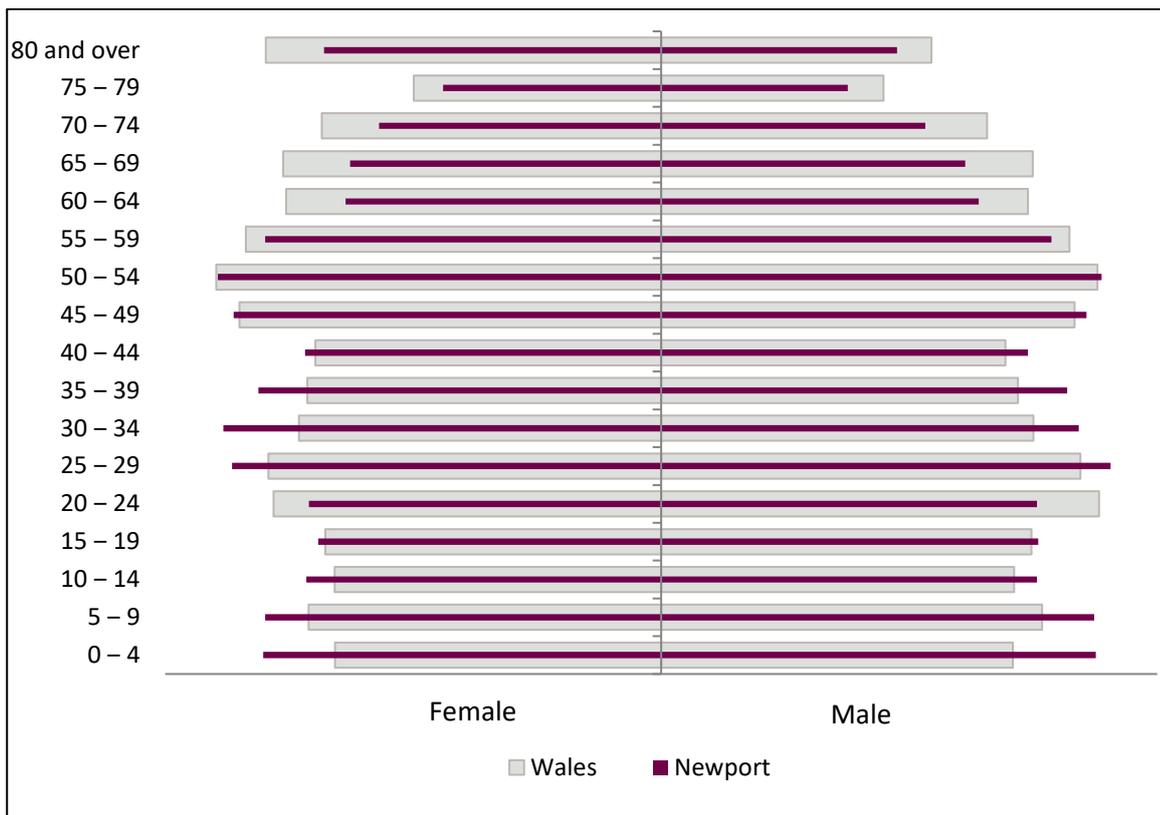
Individuals and communities have varying susceptibilities to adverse and/or beneficial population and health effects associated with changes in environmental and socio-economic conditions as a result of: demographic structure (i.e. age); existing burden of poor health; behaviours (i.e. lifestyle choices which constitute risk factors); and socio-economic circumstance. As an example, an elderly individual with an existing chronic cardiovascular health condition who is a smoker and has a lower than average socio-economic circumstance, would be considered more sensitive than a healthy working age individual.

The aim of the following information which makes up this population and health baseline, is to put into context the local health and socio-economic circumstance of the communities living in the study area (Newport), using the national (Wales) average as a relevant comparator. Where data for Newport is unavailable, representative data for Aneurin Bevan University Health Board (i.e. a lower spatial resolution) has been collected and compared to the national average.

## Demography

There is a relatively young population living in Newport in comparison to the national average. As shown in Figure 1, there is a larger proportion of males and females aged 0-19 years old and 25-49 years old. There is a lower proportion of males and females in the 20-24 age category and in all age categories above 55 years old.

**Figure 1: Age structure**



Source: Health Map Wales

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Between the years of 2011 and 2017, the population living in Newport has increased by nearly double the average population increase for Wales.

**Table 1: Population change**

Area	2011	2017	Percentage change
Newport	145,785	151,485	3.9%
Wales	3,063,758	3,125,165	2.0%

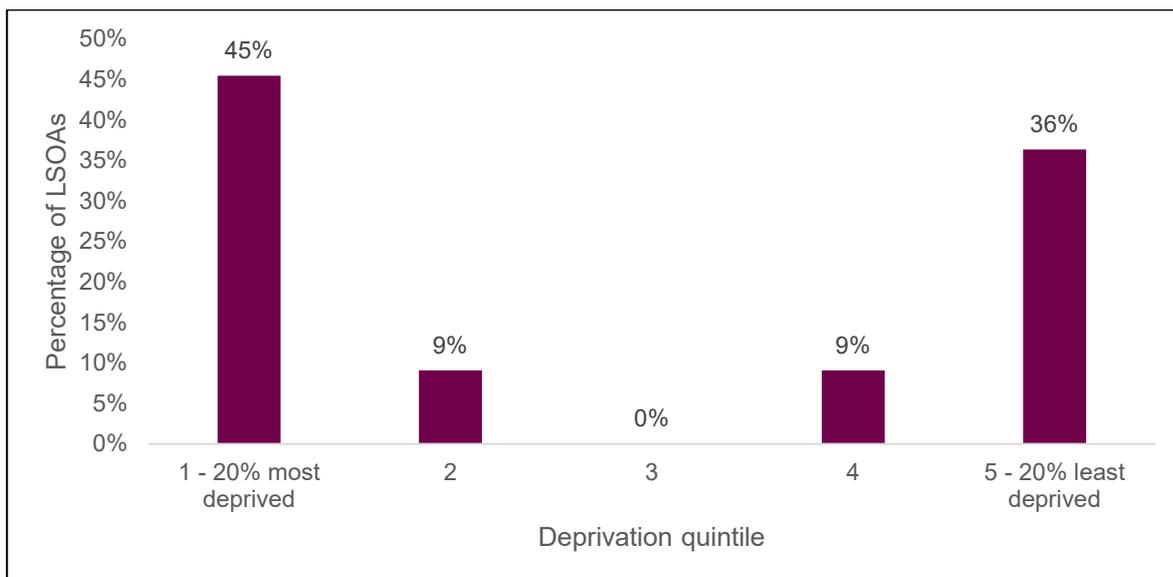
Source: Health Map Wales

## Deprivation

The Welsh Index of Multiple Deprivation (WIMD) is the Welsh Government’s official measure of relative deprivation for small areas in Wales. It identifies areas with the highest concentrations of several different types of deprivation. WIMD ranks all Lower Super Output Areas (LSOAs) in Wales from 1 (most deprived) to 1,909 (least deprived).

As shown in Figure 2, of the LSOAs which make up Newport, the majority of LSOAs are categorised within the 20% most deprived LSOAs nationally. However, a large proportion are categorised within the 20% least deprived LSOAs nationally which suggests that there is a relatively high disparity in terms of deprivation across the communities living in Newport.

**Figure 2: Deprivation summary (by quintiles)**



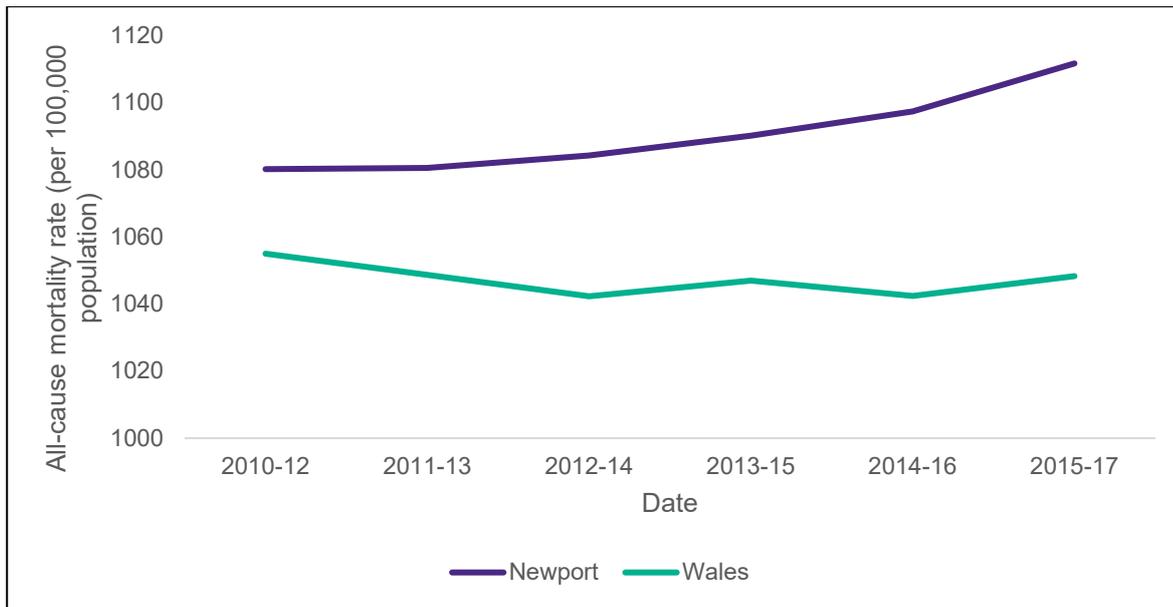
Source: Health Map Wales, using Wales Index of Multiple Deprivation (2014)

## Physical health

### Mortality

As shown in Figure 3, all-cause mortality has been increasing steadily in Newport between the years of 2010-12 and 2015-17 from 1,080 per 100,000 population to 1,112 per 100,000 population. In Wales, all-cause mortality has remained relatively static over the same time period – decreasing from 1,055 per 100,000 population to 1,048 per 100,000 population. Therefore, most recent statistics show that all-cause mortality in Newport is higher than the national average by approximately 64 people per 100,000 population.

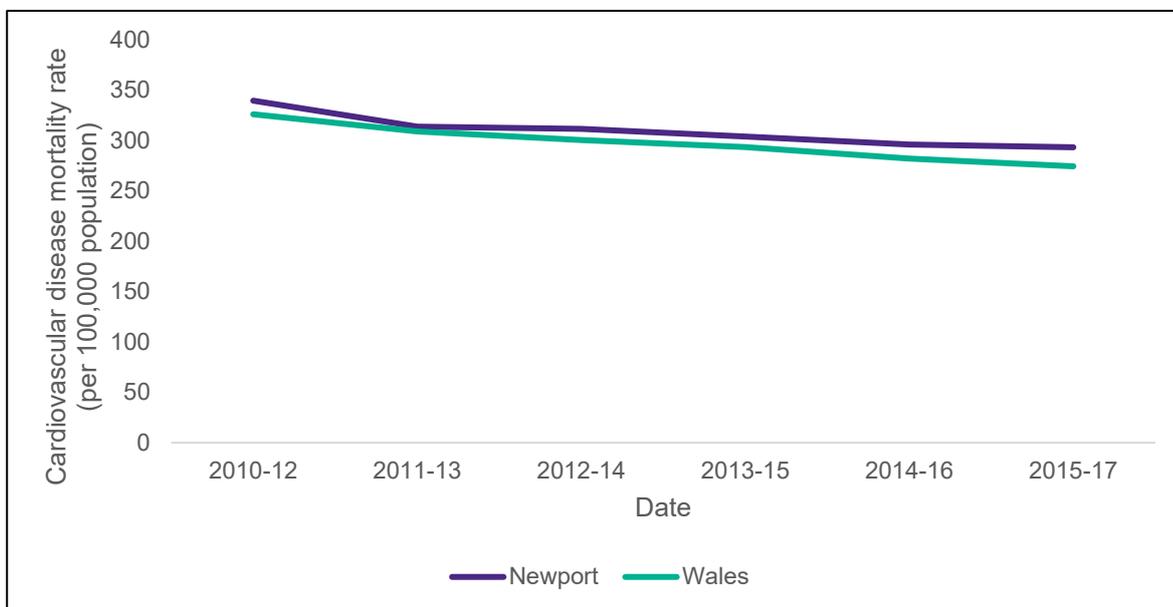
**Figure 3: All-cause mortality**



Source: Health Map Wales

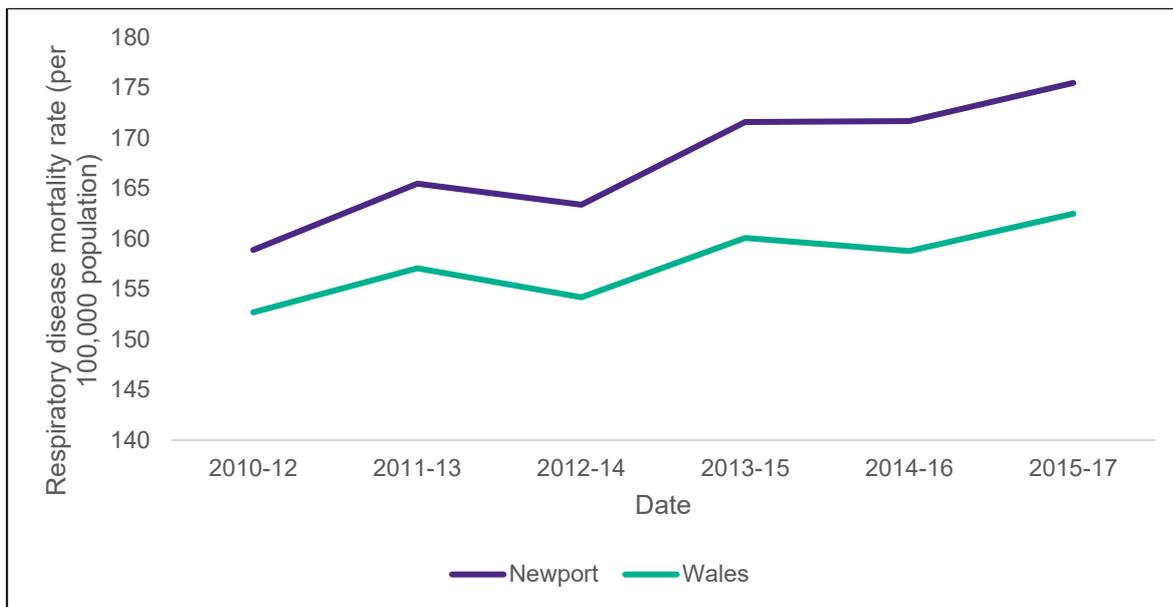
Figure 4 to Figure 6 show mortality rate (per 100,000 population) for a range of disease types, namely, cardiovascular disease, respiratory disease and cancer. Both cardiovascular disease and cancer mortality rates in Newport have shown a general decrease between 2010-12 and 2015-17. Conversely, there has been a general increase in respiratory disease mortality rate in Newport during the same time period. Mortality rate for all specific causes (i.e. cardiovascular, respiratory and cancer) is consistently higher in Newport when compared to the national average.

**Figure 4: Cardiovascular mortality**



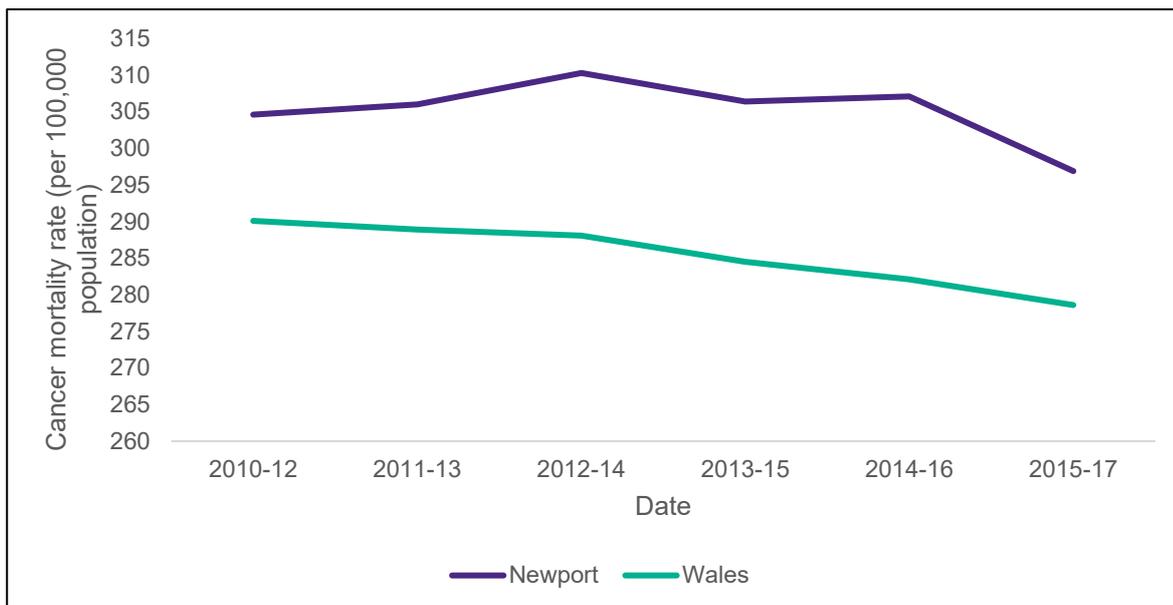
Source: Health Map Wales

**Figure 5: Respiratory mortality**



Source: Health Map Wales

**Figure 6: Cancer mortality**

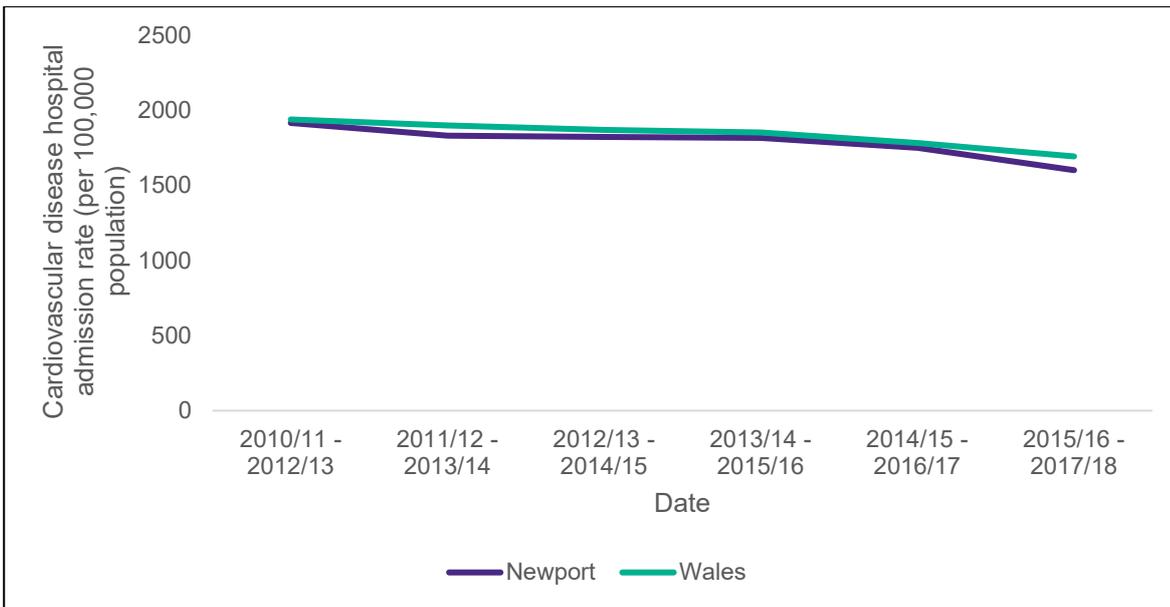


Source: Health Map Wales

## Hospital admissions

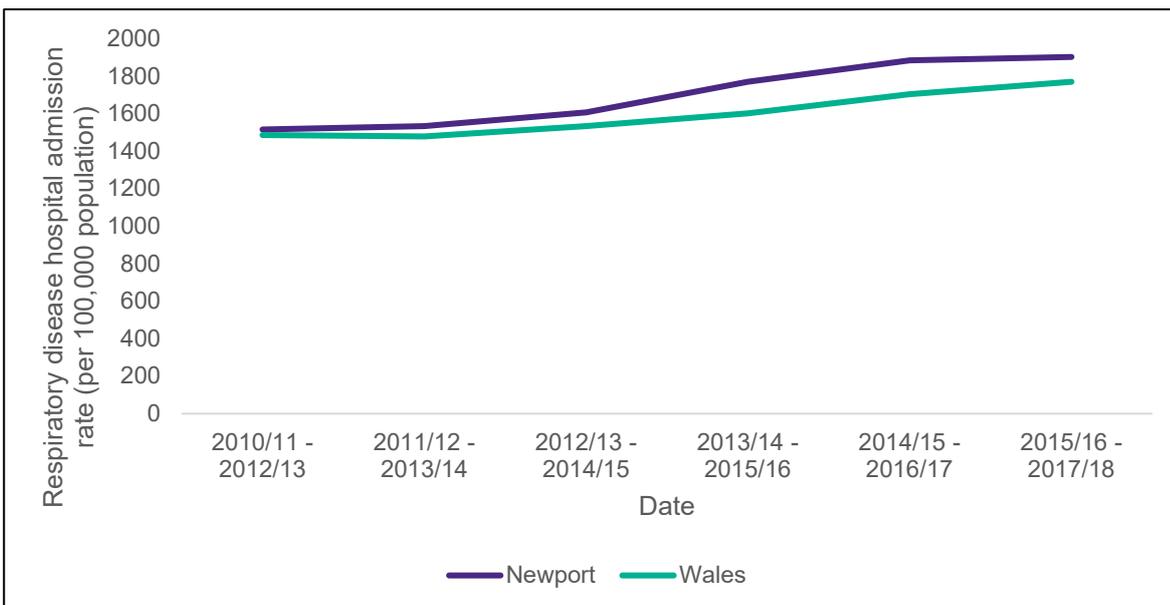
Figure 7 to Figure 9 show hospital admission rates for a range of disease types, namely, cardiovascular disease, respiratory disease and cancer. Cardiovascular disease hospital admissions in Newport have shown a general decrease over the years and are relatively similar to the national average; recent statistics show that there are 92 less people per 100,000 population in Newport admitted to hospital for cardiovascular diseases when compared to the national average. Respiratory disease hospital admissions in Newport have been increasing over the years, where recent statistics are higher than the national average by 132 people per 100,000 population. Across all years analysed, cancer hospital admission rate in Newport is lower than the national average but has shown a general increase between the years of 2012/13-2014/15 and 2015/16-2017/18.

**Figure 7: Cardiovascular hospital admissions**



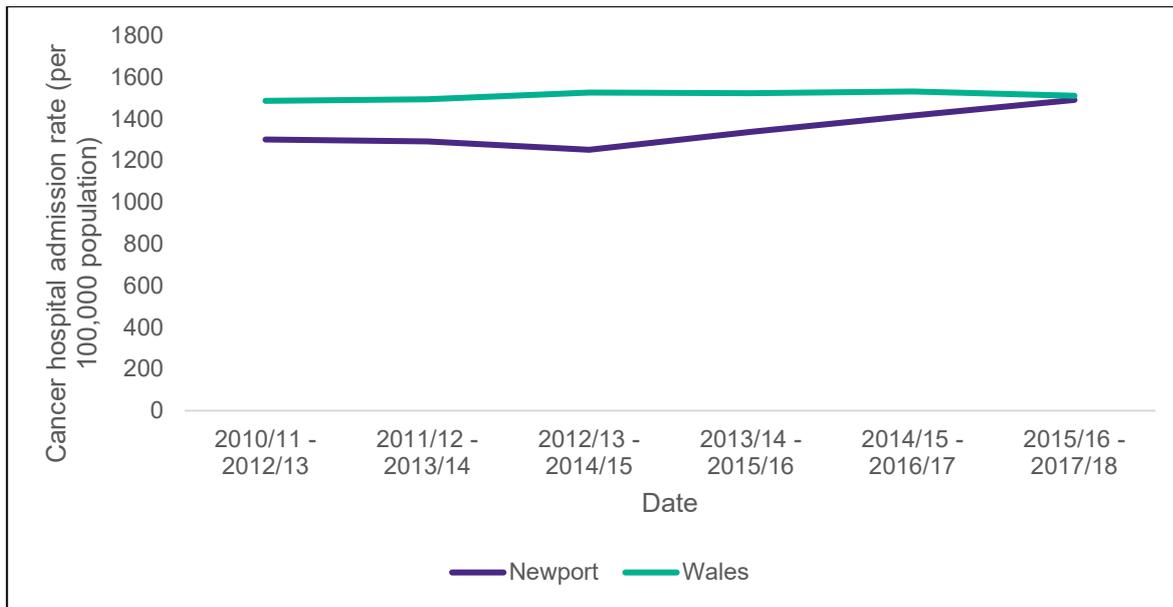
Source: Health Map Wales

**Figure 8: Respiratory hospital admissions**



Source: Health Map Wales

**Figure 9: Cancer hospital admissions**

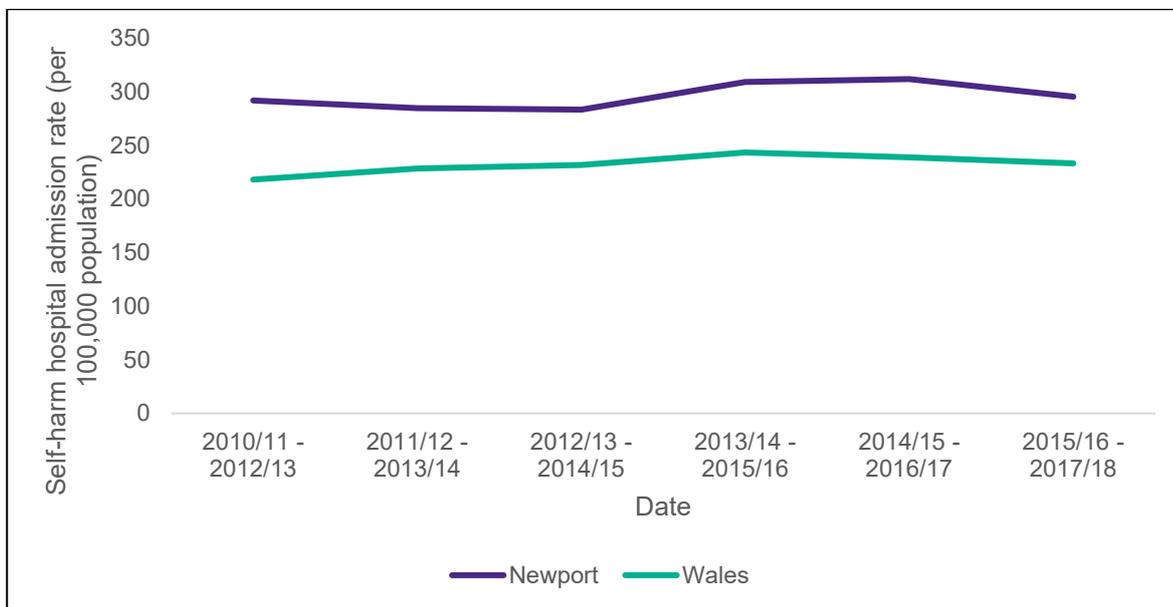


Source: Health Map Wales

## Mental health

Figure 10 shows hospital admission rate for self-harm, which is used as a proxy indicator for mental health. Hospital admissions for self-harm in Newport have been consistently above the national average in all years analysed and has remained relatively static over the years.

**Figure 10: Self-harm hospital admissions**

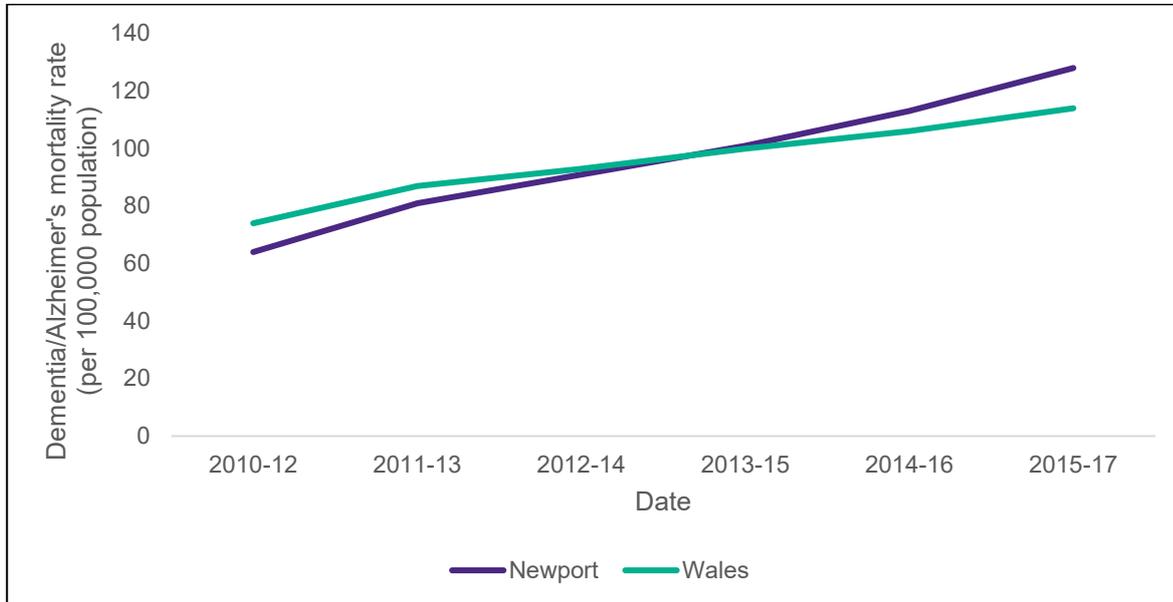


Source: Health Map Wales

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Figure 11 shows dementia/Alzheimer’s mortality rate, which has been increasing in Newport over the years, consistent with the national average. In 2010-12, mortality rate from dementia/Alzheimer’s was lower in Newport compared to the national average. However, mortality rate from dementia/Alzheimer’s has been increasing at a faster rate in Newport compared to the national average on the basis that since 2013-15, mortality rate from dementia/Alzheimer’s has been higher than the national average.

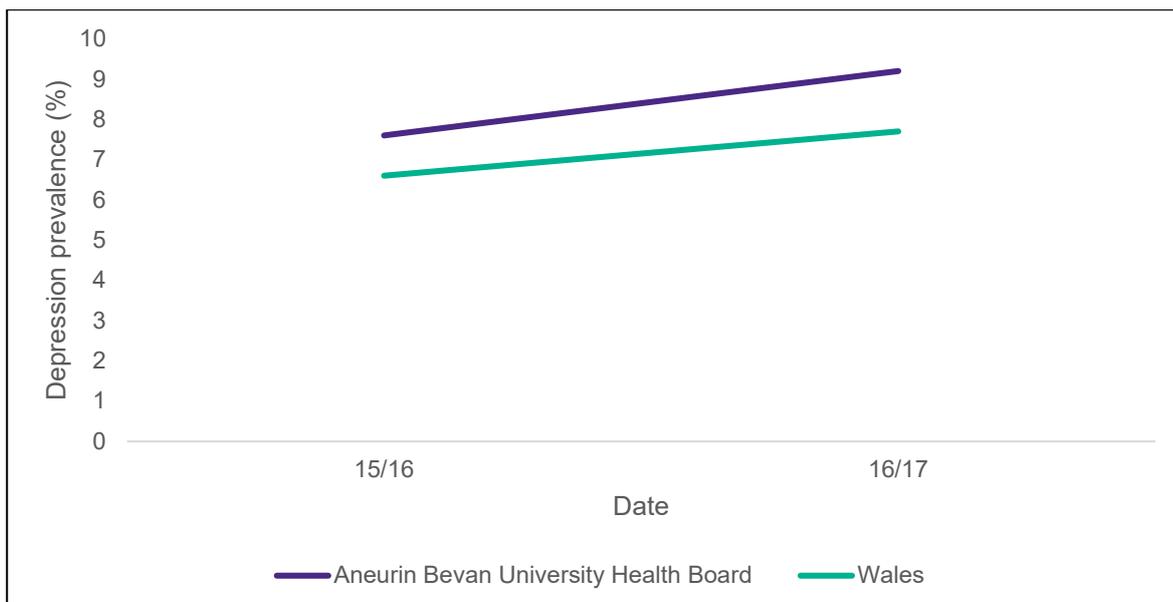
**Figure 11: Dementia/Alzheimer’s mortality rate**



Source: Health Map Wales

Figure 12 shows depression prevalence which increased in Newport between 2015/16 to 2016/17, consistent with the national average. Most recent statistics show that depression prevalence in Newport is 1.5% higher than the national average. It should be noted that due to better awareness of mental health issues, increases in prevalence is likely to be associated with better diagnosis rates.

**Figure 12: Depression prevalence**

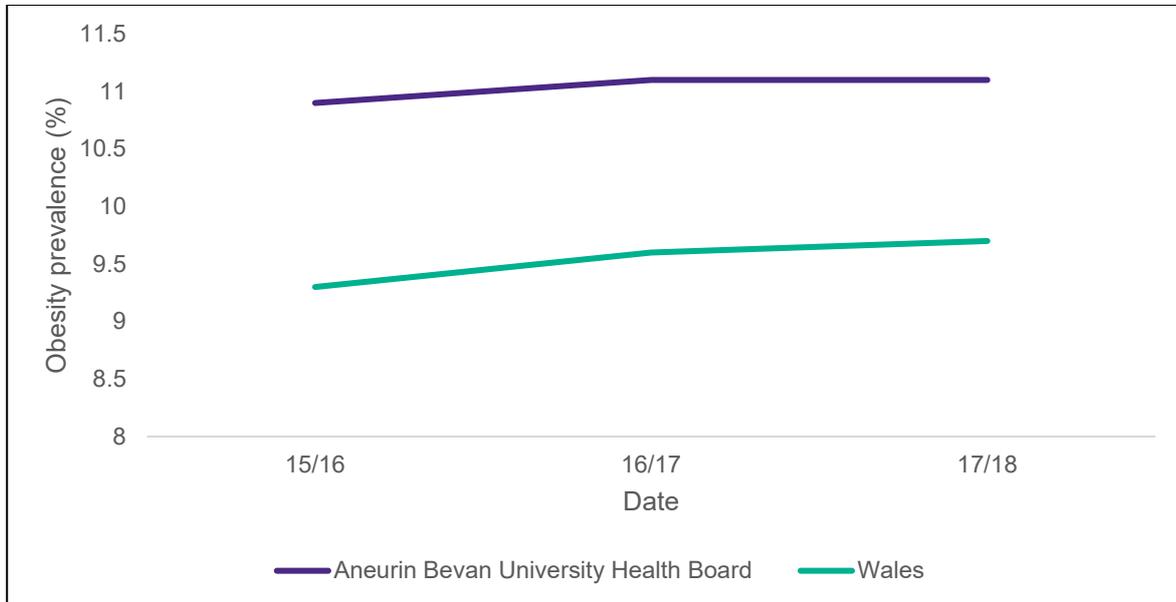


Source: Health Map Wales

## Lifestyle

Figure 13 shows that obesity across Aneurin Bevan University Health Board (of which Newport is located within) is consistently higher than the national average and has increased since 2015/16. Most recent statistics show that obesity across Aneurin Bevan University Health Board is 1.4% higher than the national average.

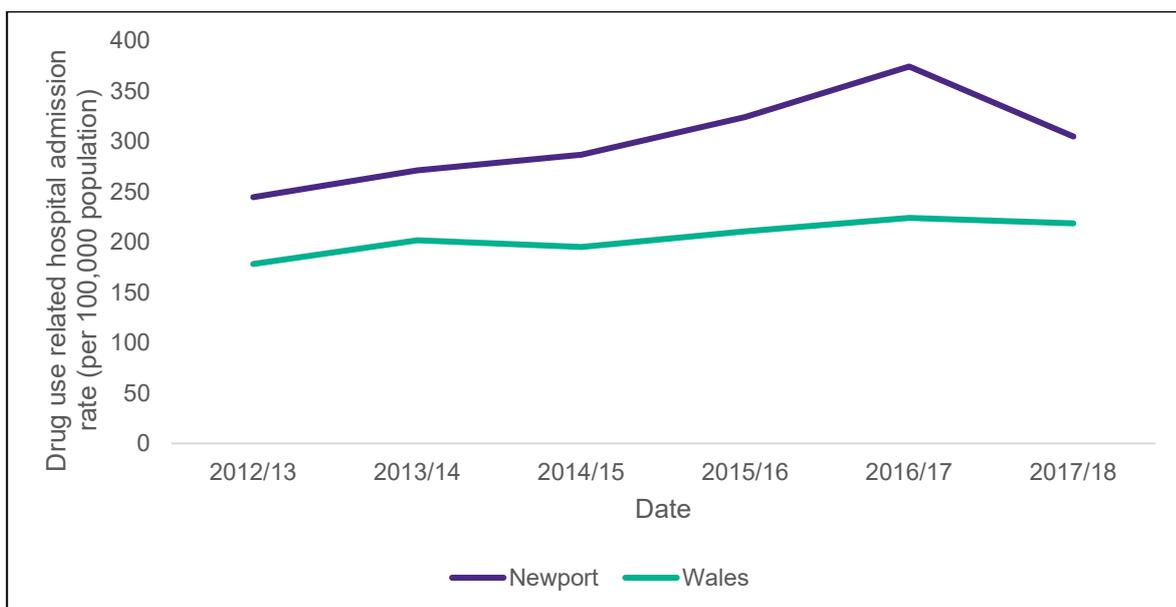
**Figure 13: Obesity prevalence**



Source: Health Map Wales

Figure 14 shows that drug related hospital admission rate in Newport is consistently higher than the national average. Between the years of 2012/13 and 2016/17, hospital admission rate within Newport increased. However, between 2016/17 and 2017/18, drug related hospital admission rate in Newport decreased by 69 people per 100,000 population. Most recent statistics show that drug related hospital admission rate in Newport is higher than the national average by approximately 87 people per 100,000 population.

**Figure 14: Drug use related hospital admissions**



Source: Health Map Wales

## Conclusion

Overall, the majority of indicators show that local health circumstance in Newport is considered worse than the national average. However, the relative difference between the two geographies is minimal and as such, health status in Newport is comparable to the national average. While this is the case, analysis of baseline data does not exclude the probability that there will be individuals within a defined population who are particularly sensitive and could experience disproportionate effects.