



Bath & North East
Somerset Council

Improving People's Lives

Strategic Evidence Base for Bath and North East Somerset

Mortality

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Mortality

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Bath & North East
Somerset Council

Improving People's Lives

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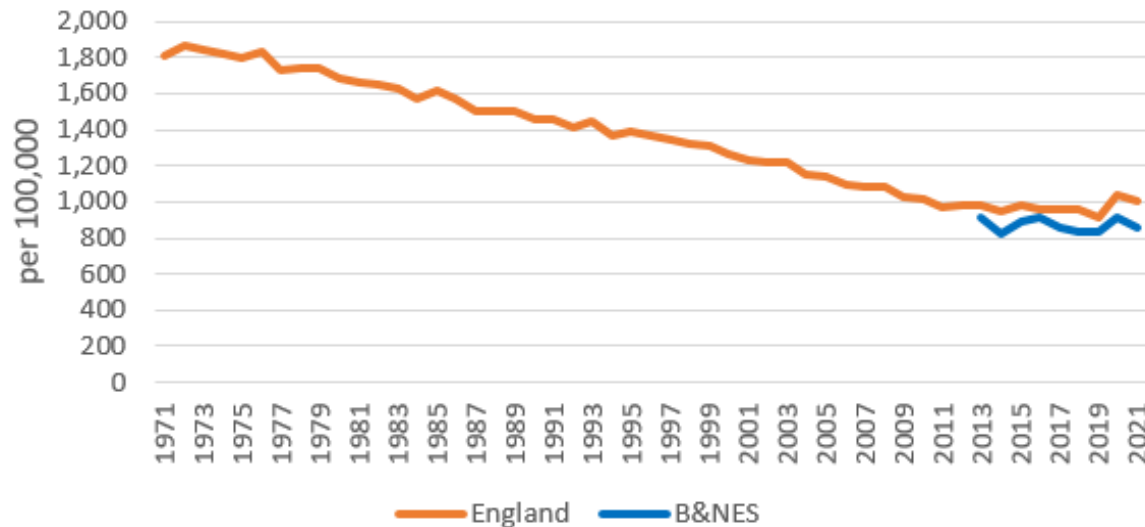
Suicide

Mortality Summary

- Historically, age-standardised mortality rates in England have been dropping, but the rate of improvement had been slowing. **Mortality rates** increased due to the pandemic and although they have since reduced, they are **still above pre-pandemic levels**.
- 2021 data shows that most **mortality rates in B&NES** (including premature and preventable) are statistically significantly **lower than the rate for England**.
- The **stillbirth** rate for B&NES is roughly two-thirds that of England (2.6 and 4.0 per 1,000 births over the period 2021-2023). More recently the **improvements seen in England and B&NES have stalled** and England appears likely to miss its target of halving the stillbirth rate by 2025.
- **Premature deaths accounted for 25% of all deaths** in B&NES between 2019 and 2021. In England, improvements in premature mortality rates are slowing the most in deprived areas. Cancer and diseases of the circulatory system are the main causes of premature death. The risk factors of these are smoking and obesity, the rates of which are higher in more deprived areas.
- Between 2018 and 2020 **avoidable deaths accounted for 17% of all deaths** in B&NES. The avoidable mortality rate in England was declining but has now increased due to Covid being classified as an avoidable death. In 2020, avoidable deaths in England were **50% higher for males** compared to females, and the increase in avoidable mortality rate was **greatest for those living in the most deprived areas**. Deaths due to Covid-19 and drugs and alcohol were notably higher in the most deprived areas.
- Suicides in B&NES stopped increasing and levelled off in the early 2010s. It is now similar to the England rate. The **male suicide rate is three times higher** than the female rate and suicides are most common in the 50-54 age band in B&NES.
- The **drug-poisoning mortality rate** for B&NES is **above the rate for England**. It has been increasing since 2012, but early indications show the rate is now starting to drop again. In both B&NES and England & Wales, the mortality rate for **drug poisoning in males is twice as high** as the female rate.

Mortality Trends

Age-standardised Mortality Rate
1971 - 2021



- Age-standardised mortality rates have been falling over time, as shown in the chart opposite. Historic improvements in mortality rates have been associated with a reduction in infant and child mortality during the first half of the 20th century, improvements in controlling infectious diseases in the 1950s and 1960s, and more recently, improvements related to [heart disease and stroke](#).
- However, improvements have slowed since 2011. This reduction in improvement is seen throughout the UK, for both males and females. In 2020 the rate for England and B&NES increased due to the pandemic and then dropped again in 2021, although remained above 2019 levels. Over the last eight years the age-standardised mortality rate for B&NES has been below the England rate.
- The slowdown in improvement seen since 2011 has no single driver. [Contributing factors](#) include the reduction in improvement of mortality due to heart disease and rising mortality from dementia. An aging population has increased vulnerability to influenza and increases in suicide and accidental poisoning, with a large proportion due to drug misuse, has affected mortality rates among younger adults.
- This trend has also been [seen in other European countries](#). Although the effect is similar for older age groups, relative to our closest comparators, **the reduction in improvement for the under 50s is greatest in the UK**.
- [Heart disease and stroke](#) are still major causes of death in the UK, so reducing the underlying risk factors such as; smoking, obesity and high blood pressure, is likely to have a [beneficial impact on mortality rates](#).
- Between 2019 and 2021 the average number of B&NES residents that died each year was [1,749](#).

Definition: age-standardised rates take into account the age distribution of a population and allow for comparisons over different areas and over time. The method of calculating age-standardised mortality rate changed in 2013 so the B&NES figures are only included back to 2013.

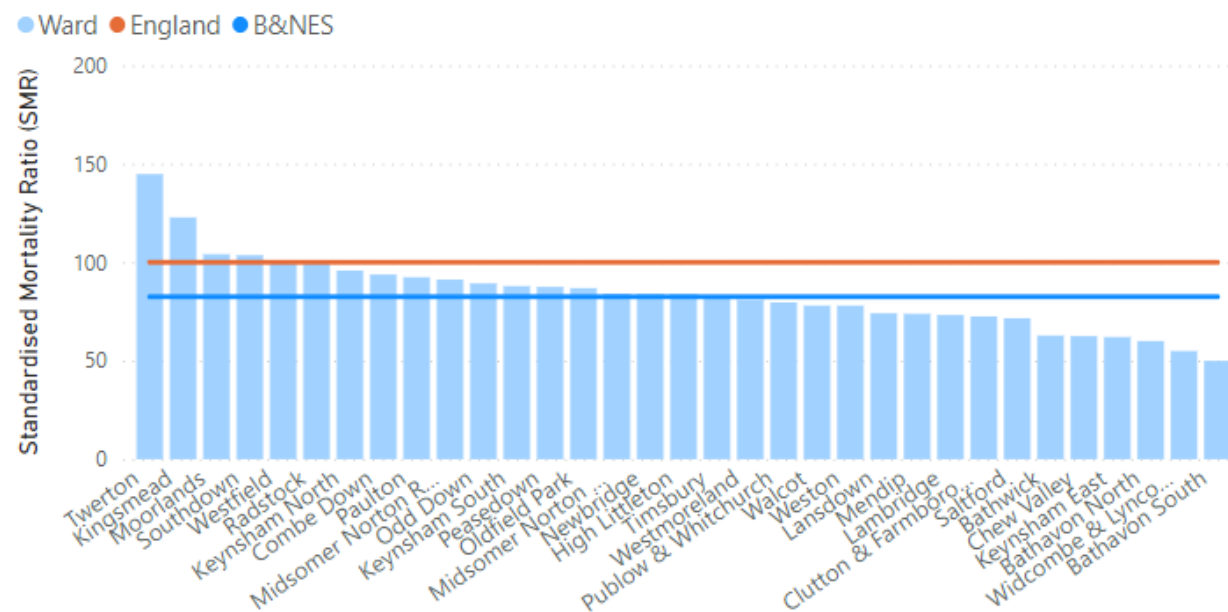
Source: (i) England 1971 to 2012: ONS (2018), [Age-standardised mortality rates standardised using the both 2013 and 1976 European Standard Populations, by sex, England, 1971 to 2016](#)

(ii) England and B&NES 2013 to 2021: ONS (2021), [Deaths registered by area of usual residence, UK](#)

	2019	2020	2021
<u>Number of B&NES residents deaths</u>	1,657	1,828	1,762

Premature deaths

Deaths all causes, under 75 years (2016 - 20)



	2019	2020	2021
Number of premature deaths of B&NES residents	441	461	432

Definition: Premature deaths are those which occur when people are under the age of 75 years. Standardised mortality ratio (SMR) is the ratio of observed deaths in a group to the expected deaths in the general population.

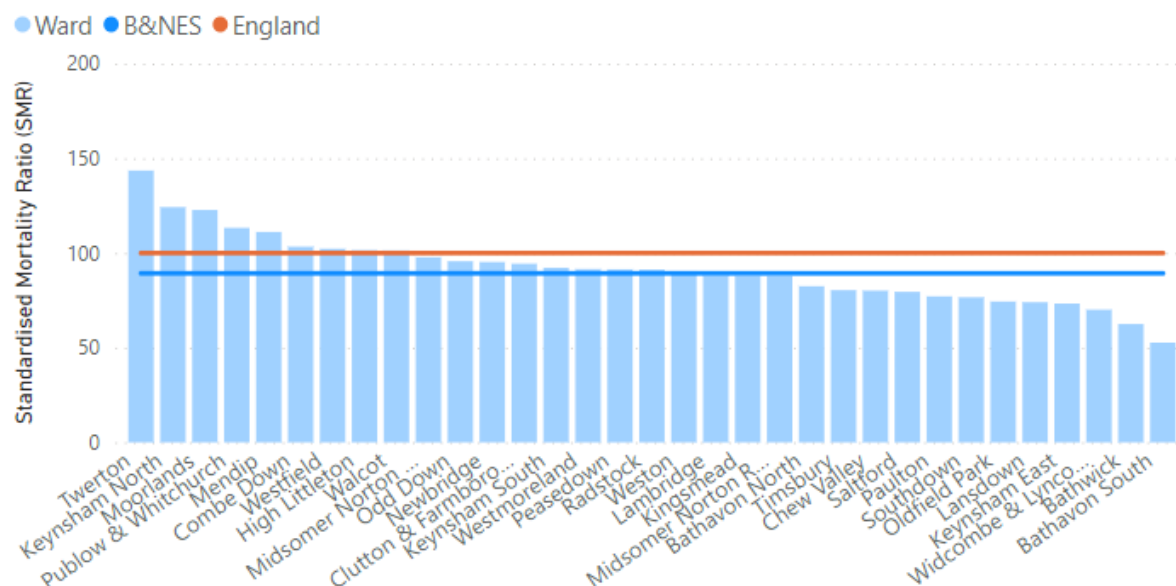
Source (broad causes for B&NES residents): Primary Care Mortality Database, as supplied by NHS Digital. Internal analysis.

Source (deaths all causes, under 75 years): [ONS \(2021\), Mortality Profile](#)

- Between 2019 and 2021 the average number of B&NES residents that died each year was [1,749](#). Over this same period, the average number of **premature deaths** per year was **445**, making up a **quarter** of all deaths.
- When looking at deaths by all causes, B&NES has a lower premature mortality rate than England, but there are wards within B&NES where the mortality rate for the under 75s is substantially higher, as shown in the chart opposite.
- For males, improvements in premature mortality rates in England since 2011 have slowed down the most for males living in the most deprived areas. For females living in the most deprived areas, [premature mortality rates have actually increased](#).
- Although B&NES has a lower premature mortality rate than England when looking at deaths by all causes, B&NES has a statistically significant higher mortality rate from [injuries in males](#) (65 deaths between 2018-20). This is largely driven by an increase in accidental drug poisoning and early data suggests that drug related deaths are now dropping again after a period of increase.
- The two main broad causes of premature death for B&NES residents is neoplasms, which includes cancer and benign growths (167 deaths in 2021), and diseases of the circulatory system, such as heart attacks and stroke (88 deaths in 2021).
- Looking at the broad causes of premature death by gender between 2019 and 2021 shows that neoplasms account for 37% of deaths in males, whilst they are responsible for 45% of deaths in females, with breast cancer being the most common type. Diseases of the circulatory system account for 24% of deaths in males and 14% of deaths in females. This difference is influenced by [higher rates of smoking](#) and [excessive alcohol consumption among males](#) and a tendency for more men to be [overweight](#), which are all risk factors for cardiovascular disease.

Cancer Mortality

Deaths from all cancers, under 75 years (2016 - 20)



Definition: Neoplasm is an abnormal growth of tissue. The growth can be benign (noncancerous) or malignant (cancerous). Benign growths are usually slow growing and do not spread. Malignant growths often grow quickly and can invade other body parts.

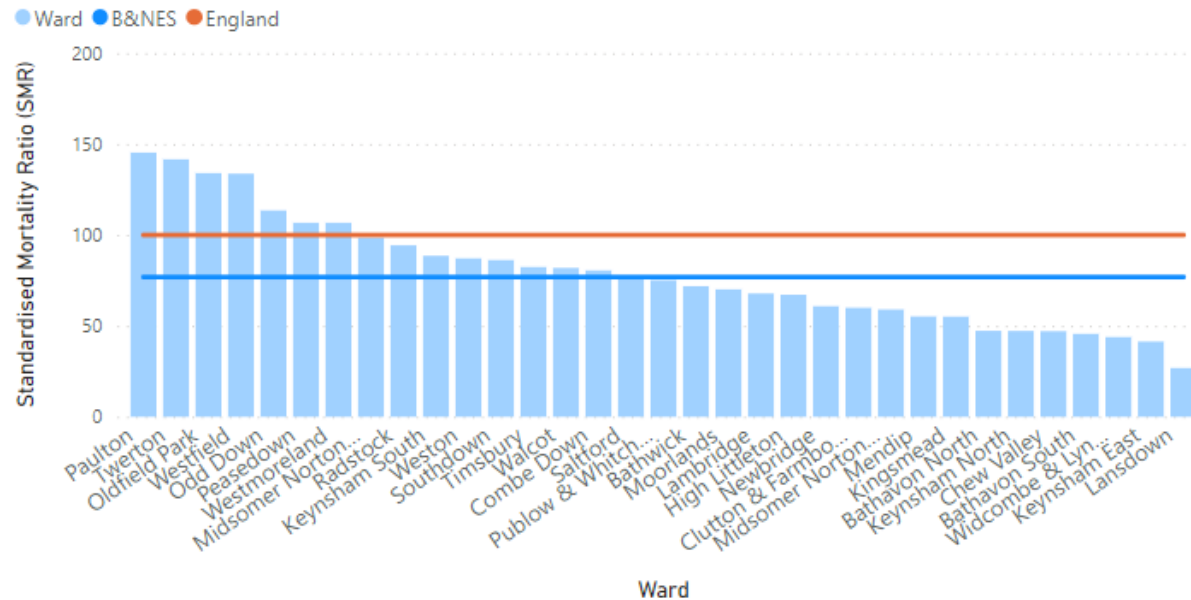
Source (broad causes for B&NES residents): Primary Care Mortality Database, as supplied by NHS Digital. Internal analysis.

Source: [OHID \(2021\), Local Health](#)

- In a typical year, cancer is responsible for just over a [quarter of all deaths](#) in England. Between 2019 and 2021, **26% of all deaths in B&NES (1,343)** had a broad cause of death given as neoplasm.
- Since the early 1990s, [mortality rates for all cancers combined have decreased](#) for both males and females. The most common forms of cancer, and responsible for almost half of all [cancer deaths](#) in the UK in 2018, were lung, colorectal, breast and prostate. Lung cancer on its own accounted for one fifth of all cancer deaths and smoking is the [biggest cause of lung cancer](#) in the UK. Of the 20 most common forms of cancer, liver cancer has shown the fastest increase in mortality over the last decade in the UK for males and females.
- In 2021, the [male mortality rate from cancer in England was 40% higher](#) than the female rate, but this gap has been decreasing since 2001. [Age-standardised mortality rates](#) were similar for males and females up to the age of 60. Over the age of 60 it was higher for males than for females.
- In England, [5-year survival](#) is above 85% for breast, prostate and skin cancers, but below 20% for oesophageal, lung, liver and pancreatic cancer. This correlates with the tendency for breast, prostate and skin cancers to be identified at an earlier stage, whilst pancreatic, lung and colorectal cancers are often identified when the cancer is more advanced.
- The chart opposite shows the standardised mortality ratio for deaths from all cancers in people under 75 for each ward in B&NES during the period 2016 to 2020. The SMR for Twerton is the highest in B&NES and research has shown that the under 75 age-standardised mortality rates from cancer are [higher for the most socio-economically deprived groups](#). In 2020, the age-standardised mortality rates for all malignant cancers in the most deprived quintile of England, were more than [50% higher](#) than in the least deprived quintile.
- Data from 2007-2011 shows the differences in mortality rates between the most and least deprived groups in England are [greatest for smoking-related cancers](#), such as lung and oropharynx, which reflect the high prevalence of smoking in more deprived areas. More recent research has also highlighted that [individual socio-economic status](#), such as education and occupation, can also impact cancer outcomes and should be considered alongside area level deprivation when developing interventions.

Cardiovascular Disease (CVD) Mortality

Deaths from circulatory disease, under 75 years (2016 - 20)



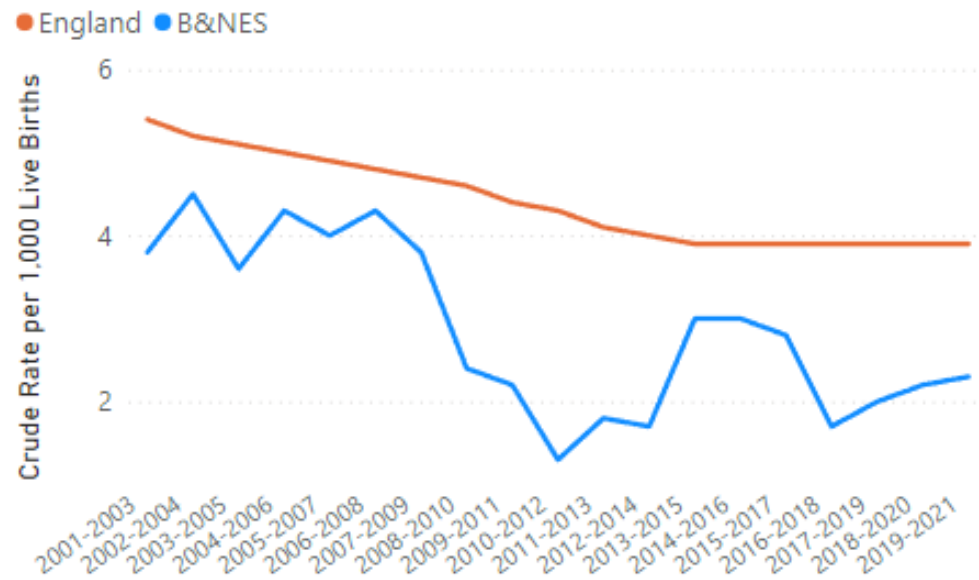
Definition: Cardiovascular disease (CVD) is a term which covers diseases of the heart and the blood vessels. Ischaemic heart disease (IHD), also known as coronary heart disease (CHD), refers to heart problems caused by narrowed arteries. It is the most common type of heart and circulatory disease.

Source: [OHID \(2021\)](#), [Local Health](#)

- [Mortality rates](#) from Cardiovascular Disease (CVD) in the UK have been declining since 1961 but the rate of decline has slowed since 2010.
- In 2022, Ischaemic Heart Disease (IHD) was the [2nd most common](#) leading cause of death in England & Wales, accounting for 10.3% of all deaths (Dementia & Alzheimer's disease accounted for 11.4%). It was also the [leading cause of death for men](#) (13.3% of male deaths).
- Mortality rates from ischaemic heart diseases in England and Wales are significantly higher for males than females and in 2022 [males accounted for 65% of deaths](#) from IHDs.
- IHD can be largely prevented by leading a [healthy lifestyle](#). Risk factors include high blood pressure, smoking, high cholesterol, diabetes and being overweight. Behavioural risk factors, such as [smoking](#) and excessive [alcohol consumption](#), may explain some of the [gender difference](#), along with the tendency for men to be less likely to follow a healthy diet and to be [overweight](#).
- The chart opposite shows the standard mortality ratio (SMR) for premature deaths from circulatory disease during the period 2016 to 2020, for each ward in B&NES. Paulton and Twerton have the highest SMRs in B&NES.
- During the period 2014 to 2016 people in England were four times more likely to die prematurely from CVD in the most deprived areas [than those in the least deprived](#). This is influenced by the higher prevalence of behavioural risk factors in the more deprived areas, such as smoking and obesity.

Infant Mortality

Infant Mortality Rate



	2017-2019	2018-2020	2019-2021
Number of infant deaths in B&NES	10	11	12

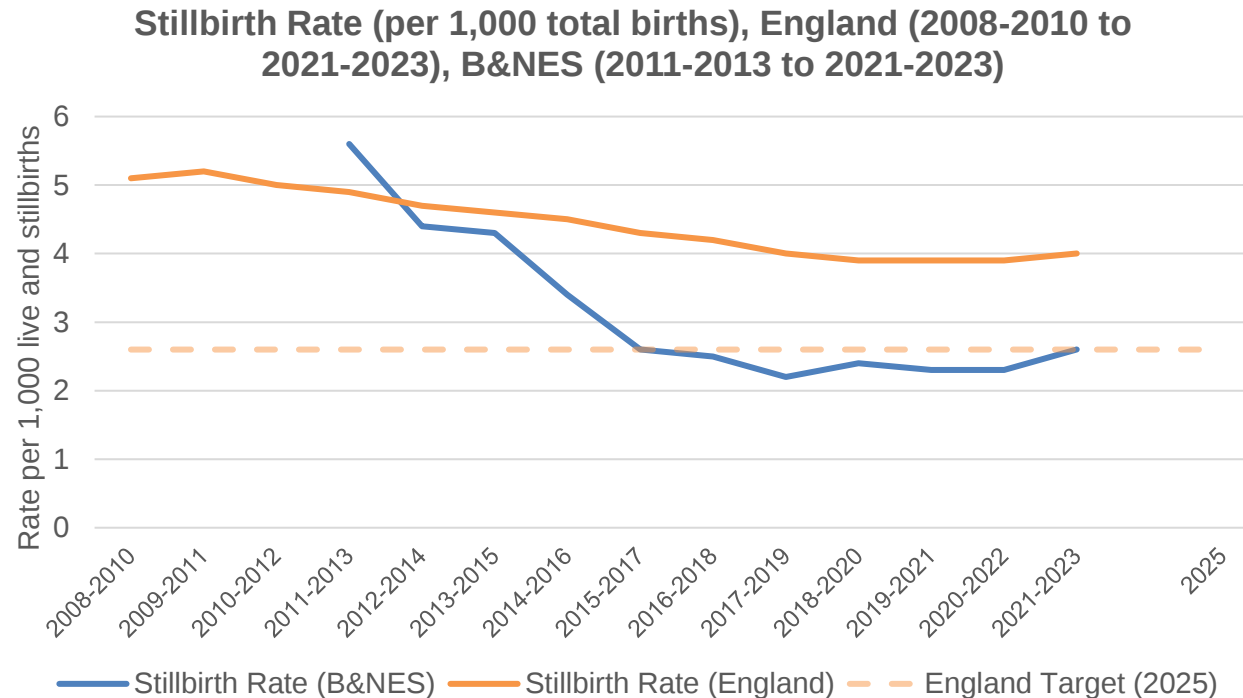
Definitions: Infant mortality is the death of a child under the age of one year.

Neonatal mortality: death of a child under 28 days old.

Infant mortality rate: infant deaths under 1 year of age per 1,000 live births.

Source: [OHID \(2021\), Public Health Outcomes Framework](#), E01 - Infant mortality rate

- Infant mortality rates in England & Wales have been [declining over recent decades](#) due to improvements in healthcare, midwifery and neonatal intensive care. A factor contributing to the reduction in improvement over recent years is an increase in live births under 24 weeks gestation. Most extremely premature babies only live a short time and this has led to an [increase in neonatal mortality rates](#). [Infant mortality risk factors](#) include; maternal age, with women under 20 in the high risk group; low birth weight; black ethnicity; and maternal health factors such as smoking and alcohol consumption.
- The 2019-2021 data shows the **infant mortality rate for B&NES is one of the lowest in the South West** and just over half the rate of England, but the increase in 2019-2021 is no longer statistically significantly lower than the rate for England.
- There is an [association between the risk of death and the level of deprivation](#) for children who died in England between April 2019 and March 2020. The risk of death increases with the increase in deprivation. Lower parental income, educational attainment and poor housing are some of the factors which have been shown to influence [child health outcomes](#).
- The 2021-22 [West of England Child Death Overview Panel](#) has identified several themes that need to be addressed. These include: unsafe sleep environments, parental literacy, provision of interpreters and the revised guidance on the resuscitation of extremely preterm infants.



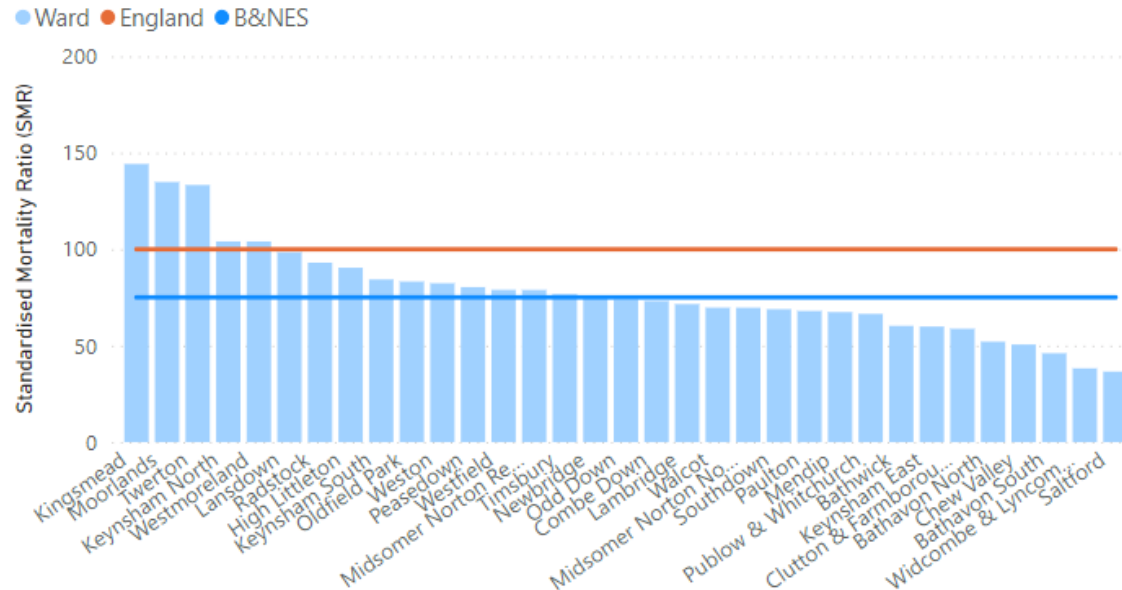
Definition: "A stillbirth is a baby born after 24 or more weeks completed gestation and which did not, at any time, breathe or show signs of life", ONS. Note: the definition changed in 1992.

Sources: (1) PCMD internal analysis for stillbirths in B&NES 2011 and 2014. (2) ONS for stillbirths and live births, B&NES 2015 to 2023; as well as all stillbirths and live births for England: <https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/livebirths>; supplemented for the period 2008 to 2014 for England from ONS Child Mortality statistics: <https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/deaths/bulletins/childhoodinfantandperinatalmortalityinenglandandwales/previousReleases>

- The **stillbirth rate** reflects a population's quality of maternity care and women's health. In November 2014, the then Secretary of State for Health announced a new ambition to reduce the rate of stillbirths by 50% in England by 2030. Under the 2016 to 2019 Conservative government the [NHS Long Term Plan](#) (2019) accelerated this ambition, bringing the target year forward from 2030 to 2025 (*target rate of 2.6 per 1,000 live births and stillbirths by 2025*).
- In **England** the stillbirth rate has fallen steadily between 2009-2011 and 2018-2020, from a rate of around 5.0 to around 4.0 per 1,000 total births. However, improvements have since stalled and it would appear that England **is currently not on course to meet the 2.6 target rate by 2025**.
- During the three years **2021 to 2023** there were **13** stillbirths registered in **B&NES**, equating to a stillbirth rate of **2.6** per 1,000 live births and stillbirths (**roughly two-thirds the comparable rate for England**). However, **stillbirth rates in B&NES have remained largely unchanged since 2015-2017**.
- In a landmark [study](#) of more than 1 million births in England, **24% of stillbirths would not have occurred** if all women had the same risk of adverse pregnancy outcomes as women in the least deprived socioeconomic group.

Avoidable deaths

Deaths from causes considered preventable, under 75 years (2016 - 20)

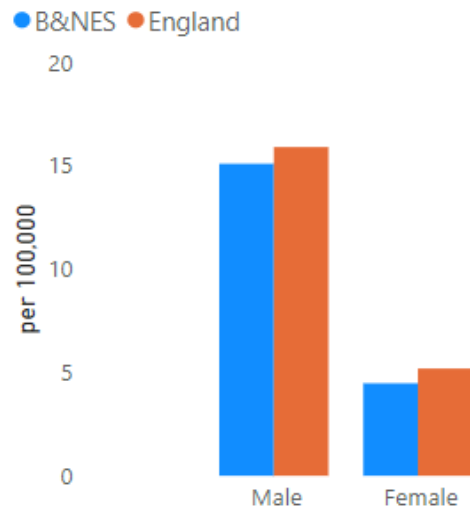


Definitions: (i) **Avoidable** mortality refers to causes of death that are preventable or treatable; (ii) **Preventable** mortality is defined as causes of death that can be mainly avoided through effective public health and primary prevention interventions; and (iii) **Treatable** mortality refers to causes of death that can mainly be avoided through timely and effective healthcare interventions. [Coronavirus](#) (COVID-19) has been assigned as a preventable cause of death.

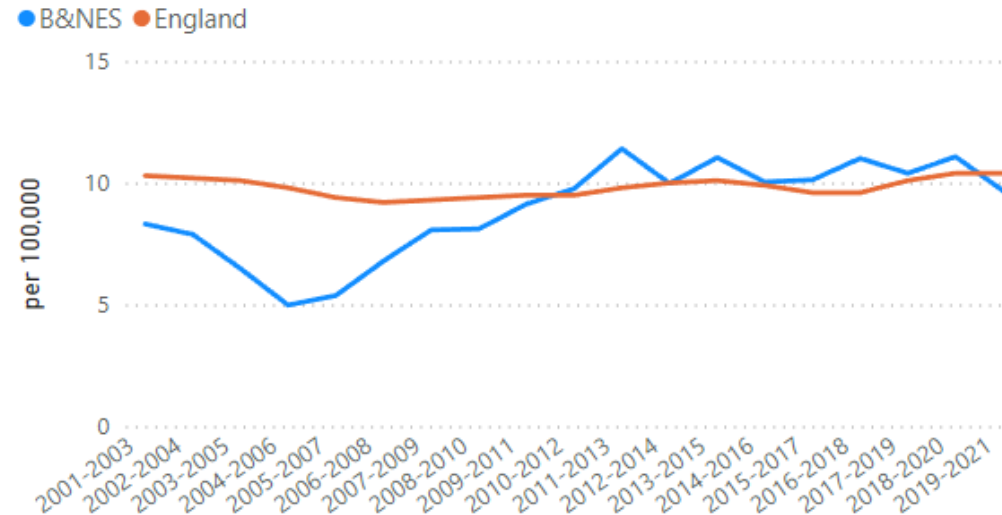
Source: [OHID \(2022\), Local Health](#)

- Avoidable mortality rates in B&NES have been consistently [below the rate for England](#) for many years. Between 2018 and 2020, there were 854 deaths in B&NES due to avoidable causes (17% of all deaths).
- In 2020, [22.8%](#) of all deaths in Great Britain (153,008 deaths) were considered avoidable. This was a statistically significant increase on all years since 2010 and the long-term decline in avoidable mortality in England was [reversed](#). This is in part due to Covid-19 being assigned as a preventable cause of death.
- Avoidable deaths account for a [greater proportion](#) of all deaths in males in England compared to females (~50% higher for males).
- In 2020 the increase in avoidable mortality rate in England was greatest for those living in the most deprived areas and inequalities between the most and least deprived areas have [widened](#). Deaths due to Covid-19 and drugs and alcohol were notably higher in the most deprived areas and they are increasing over time for drug and alcohol related disorders.
- The chart opposite shows the standardised mortality ratio (SMR) for deaths from causes considered preventable, in people under 75, for each ward in B&NES. The SMRs for Kingsmead, Moorlands and Twerton are the highest in B&NES. The level of deprivation in these areas is likely to be a factor in the higher SMR.
- [Preventable illnesses](#) have an impact on life expectancy in England and contribute to the observed reduction in improvement.

Suicide Rate (2019 - 21)



Suicide Rate (directly standardised rate per 100,000)



Definition: Suicide is [defined](#) as deaths where the underlying cause was intentional self-harm, for those aged 10 years and over (ICD-10 codes X60-X84), and deaths where the underlying cause was event of undetermined intent for those aged 15 years and over (ICD-10 codes Y10-Y34).

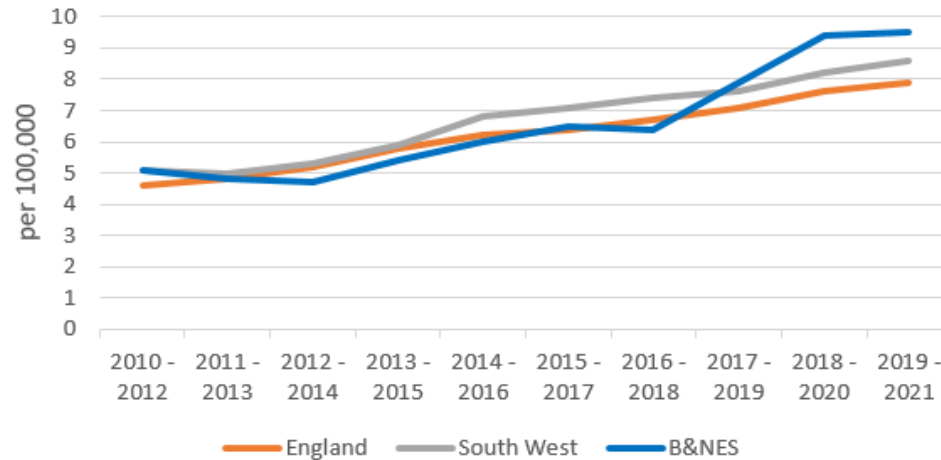
Primary Source: [ONS \(2021\), Suicides in England and Wales by local authority](#), 7 September 2021

Secondary source: [OHID \(2023\), Public Health Outcomes Framework](#), indicator E10

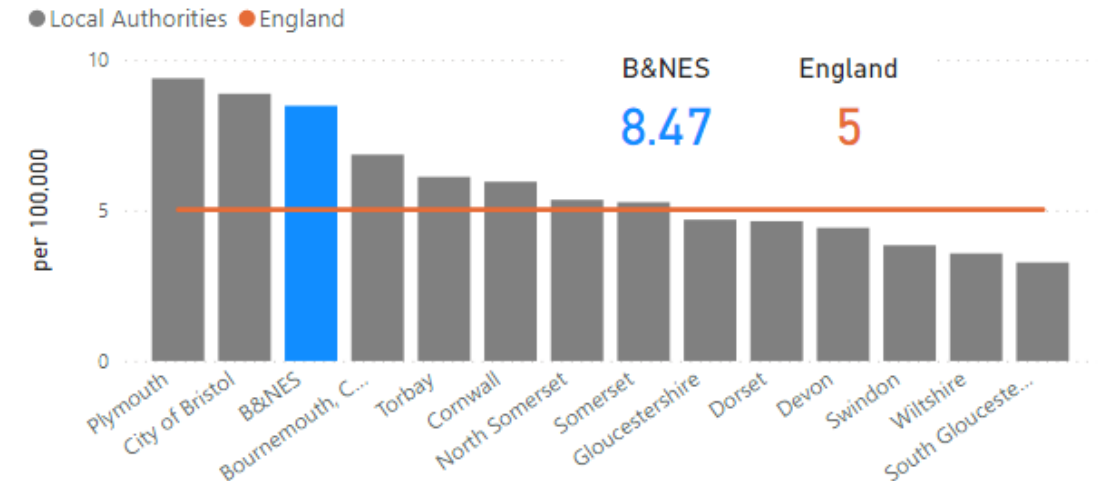
- After a gradual decline from the beginning of the 1980s, the suicide rate in England has [levelled off since ~2005](#). The suicide rate in B&NES was increasing after a dip in 2004-2006, but the latest figures in the chart above show it is now following the England trend, since levelling off in the early 2010s.
- Although there were [concerns](#) that suicide rates would increase during the pandemic, **early** data currently available from ONS for April to December 2020 shows there was a statistically significant [decrease](#) in the age-standardised suicide rate for England and Wales, compared to the same period in 2019 and 2018. During this period there was a statistically significant **decrease in the suicide rate for males** and the **30-39 age group**.
- The average number of suicides per year for B&NES's residents in the pre-pandemic years 2017-2019 was 17. This dropped to 16 between 2019 and 2021.
- **Suicide rates for males are approximately three times higher** than those for females.
- In England & Wales during 2021, females in the [45-49 age group](#) had the highest age-specific suicide rate, and for males it was the 50-54 age group.
- Since 2001 the [main method of suicide](#) in England & Wales has been hanging, strangulation and suffocation. This has continued to increase over time and was used in nearly 60% of cases in 2021. Poisoning is the second most frequently used method and was used in 21% of cases in 2021.
- The [Suicide Prevention Action Plan 2020-2023 for B&NES](#) identifies, amongst other things: the continuing need to raise public awareness of mental health issues to reduce stigma; the availability and adequate signposting of support available for stress factors such as debt, unemployment and relationship advice; and suicide prevention training for professionals. There is also a focus on supporting people with a history of self-harm.

Drug Poisoning Deaths

Age-standardised mortality rate for deaths by drug poisoning (Persons)



Deaths from drug misuse (Persons), directly standardised rate per 100,000 (2018 - 20)



- The rate of drug poisoning deaths in England and Wales has increased every year since 2012 and the **rate in B&NES has been higher** than the rates for England and the South West since approximately 2018. Possible [reasons for this increase](#) could be the aging cohort of drug takers who are more susceptible to overdose; new trends in combining other drugs with heroin or morphine, which may increase the risk of overdose; and the increased availability of drugs in recent years. However, early indications from the Primary Care Mortality Data suggest this mortality rate may now be reducing in B&NES.
- In 2021, there were [twice as many drug poisoning deaths among males](#) compared to females in England & Wales. This can also be seen in B&NES where there were [twice as many](#) drug poisoning deaths among males (33) compared to females (15) between 2019 and 2021.
- [Nearly two-thirds of drug poisoning deaths](#) in England & Wales in 2021 were from drug misuse. Out of **48** deaths in B&NES due to **drug-poisoning** between 2019 and 2021, 41 of these were from drug misuse (85%).
- [Nearly half of all drug poisoning deaths](#) registered in 2021 in England involved an opiate and there was a statistically significant increase in rates of deaths due to methadone and new psychoactive substances.
- The 2021 B&NES Drug Related Death, Homeless and Suicide report draws a connection between drug related deaths and poor mental health. A paper released in December 2021 outlines the [government's approach to reducing drug misuse deaths](#) by reducing supply and demand for drugs and improving treatment. This is also reflected at a local level in the [B&NES Drug and Alcohol Strategy 2022-27](#).

Definitions:

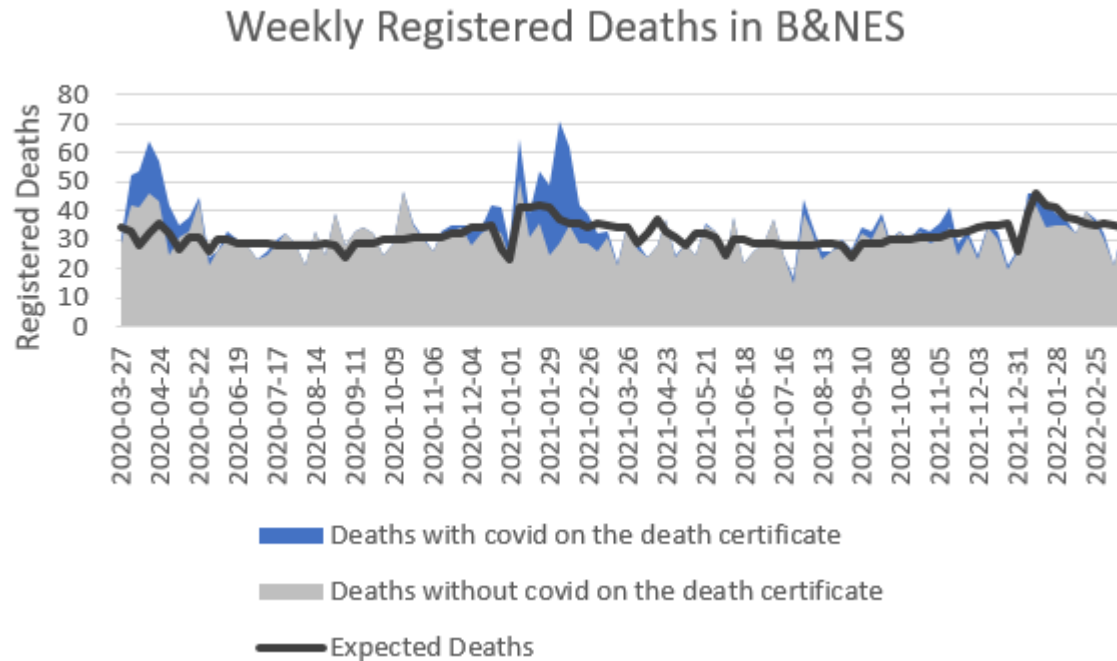
(i) [Drug poisoning deaths](#) include accidents, suicides and assaults involving drug poisoning, as well as deaths from drug abuse and drug dependence

(ii) **Drug misuse deaths** must either have an underlying cause of drug abuse or drug dependence, or any of the substances involved are controlled under the Misuse of Drugs Act 1971.

Sources:

- (i) [ONS \(2021\), Drug-related deaths by local authority](#), England and Wales
- (ii) [OHID \(2021\), Mortality Profile](#)

Excess Deaths Since the Start of the Pandemic



Definition: Excess deaths are the difference between the observed number of deaths from all causes in a given period and the expected number of deaths for that period based on historic trends.

Source: GOV.UK, available from: <https://www.gov.uk/government/statistics/excess-mortality-in-england-weekly-reports>

- The chart opposite shows the weekly registered deaths in B&NES during the pandemic, starting from March 2020 through to February 2022. The black line shows the [expected number of deaths](#) which is based on previous mortality rates between 2015 and 2019. It shows two large peaks, the first in April 2020 and the second over winter 2020/21. On both occasions there were a large number of deaths where Covid was recorded on the death certificate (shown in blue).
- Excess deaths is the preferred measure for understanding the true impact of the pandemic because it avoids issues where covid deaths may be recorded differently and also captures deaths which occurred due to indirect issues associated with the pandemic such as shortages in healthcare. The large peaks in April 2020 and winter 2020/21 can be seen but there are also periods where there are fewer deaths than expected, particularly from March 2021 onwards. Some of this may be explained by [mortality displacement](#), where vulnerable people died earlier than expected because of the pandemic, and not in the following weeks and months as would have been expected, but this is not sufficient to offset the large number of deaths seen earlier in the pandemic.
- Calculating cumulative excess deaths show that there were **289 excess deaths in B&NES between March 2020 and February 2022**. The expected number of deaths over this period was 3,303, so there was an increase of nearly 9% (the comparable figure for England is 11%).

Excess Deaths Since the Start of the Pandemic – International Comparison

	Estimated excess mortality rate (per 100,000)
UK	126.8
High income countries	125.8
Western Europe	140.0
USA	179.3
Australia	-37.6
New Zealand	-9.3

- Excess deaths can be used to compare the impact of the pandemic across different countries which may have different ways of recording covid related deaths. The chart opposite shows the total number of excess deaths in England between March 2020 and December 2021. The high number of excess deaths due to the first wave of the pandemic can be clearly seen in April 2020.
- Despite the UK having a high mortality rate early on in the pandemic, by mid-2021 countries in [central Europe had overtaken western European countries](#), including the UK, by having the highest relative cumulative excess mortality since the start of the pandemic.
- [Further analysis](#) looking at deaths recorded between 1 January 2020 and 31 December 2021, found the number of excess deaths per 100,000 population was **127** for the UK, which was very similar to the value for other high income countries which had an average of 126 per 100,000. The average for western Europe was 140 per 100,000 and for USA it was nearly 180. Some countries, such as Australia and New Zealand, had fewer deaths than expected.
- It is important to note that at the time of writing this content deaths from Covid-19 are still being [reported](#) across the world, as well as some countries experiencing their first serious outbreak, e.g., media [reports](#) coming out of North Korea.