

JSNA Health and Wellbeing Profile 2022/23

Global Burden of Disease

Summary points

- The highest burden of disease on mortality and morbidity in Bristol is cancer and cardiovascular diseases.
- Tobacco smoke is the highest risk factor in Bristol that leads to early death and disability

Findings

Global Burden of Disease (GBD) statistics are produced by a multinational academic team to estimate the burden of disease associated with a variety of major diseases and risk factors. GBD combines years of life lost due to premature mortality and years of life lost due to time lived in states of less than full health. Disability Adjusted Life Years (DALYs) are calculated as the sum of years lived with disability (YLD) and years of life lost (YLL) (Figure 1). YLDs are years lived in less than ideal health. This includes conditions that may last for only a few days, as well as conditions that can last a lifetime. YLLs are years of life lost due to premature mortality, i.e. deaths before average life expectancy.



Fig 1: Method of calculating Disability Adjusted Life Years

The latest GBD study for 2019 includes data on mortality and morbidity in 204 countries and territories, 369 diseases and injuries, and 87 risk factors. For deaths across all age groups, estimates from the study found that cancers (neoplasms) and cardiovascular diseases (CVD) make up the highest burden of disease in Bristol – Figure 2. This is also the case for DALY's, with the addition of musculoskeletal (MSK) disorders.

Equalities data: For deaths, cancer and CVD make up the highest burden for both males and females, followed by chronic respiratory diseases for males and neurological disorders for females. For deaths in the under 20 age group the highest burden is maternal and neo-natal disorders and other non-communicable diseases.

In terms of DALYs, cancers, CVD and MSK disorders make up the highest burden for both males and females but in different orders. Although cancer is the highest burden for both sexes, MSK is the second highest for females followed by CVD and for males the second

highest is CVD followed by MSK. In the under 20 age group the highest burden is other non-communicable diseases, mental disorders and maternal and neonatal disorders.

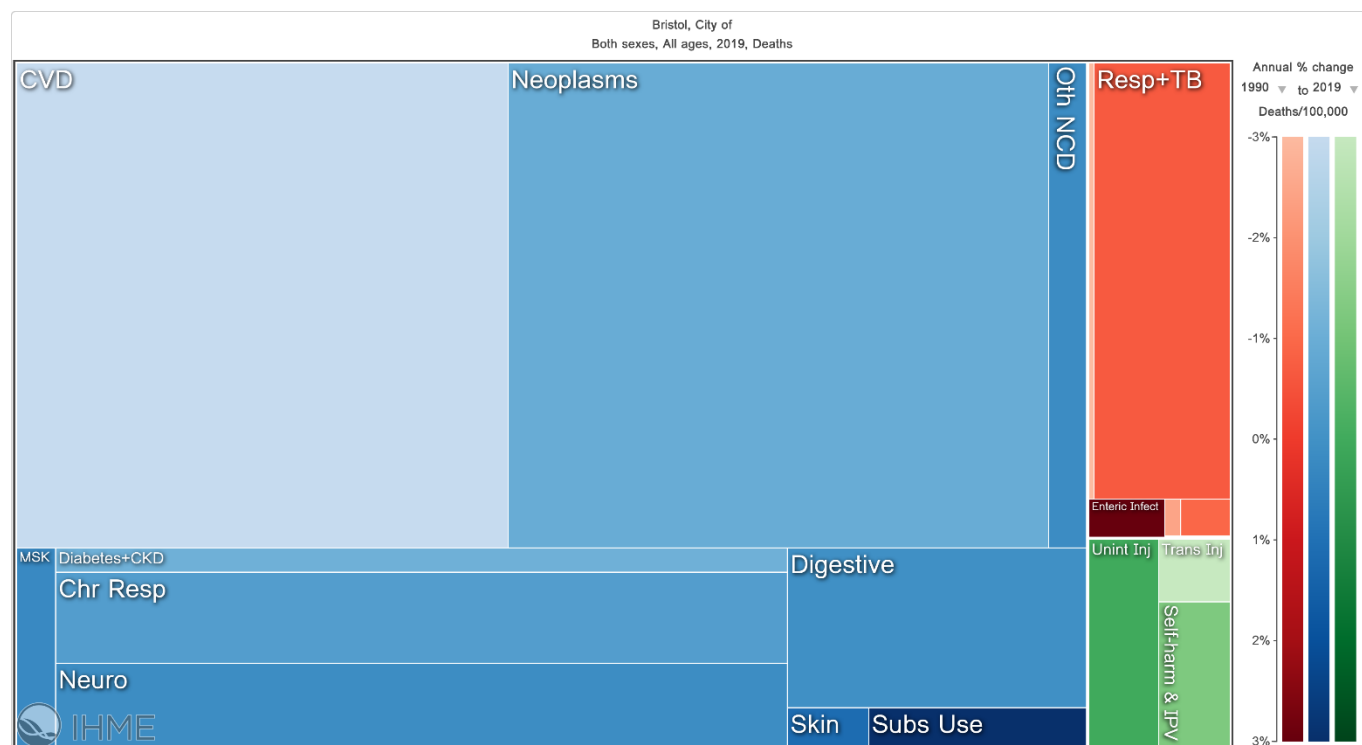


Figure 2: GBD: Cause of death in Bristol Source: Institute for Health Metrics and Evaluation

Risk factors

Figure 3 overleaf shows the risk factors split by related cause of death and disability. This is calculated by applying the UK results of the Global Burden of Disease project to Bristol's population. Tobacco smoke, high body mass index and high fasting plasma glucose are the three highest risk factors that lead to early death and disability. In addition, dietary risks (eg diets low in fruit, veg & fibre and diets high in sodium, processed meat and trans-fatty acids), high systolic blood pressure and alcohol misuse are also key lifestyle risk factors. Tobacco is the lead risk factor in both 2019 and 2016, previously rating at a similar risk as dietary issues in 2013. One factor that could be behind this change may be that Cancer is behind an increasingly large proportion of premature mortality in comparison to Cardiovascular disease.

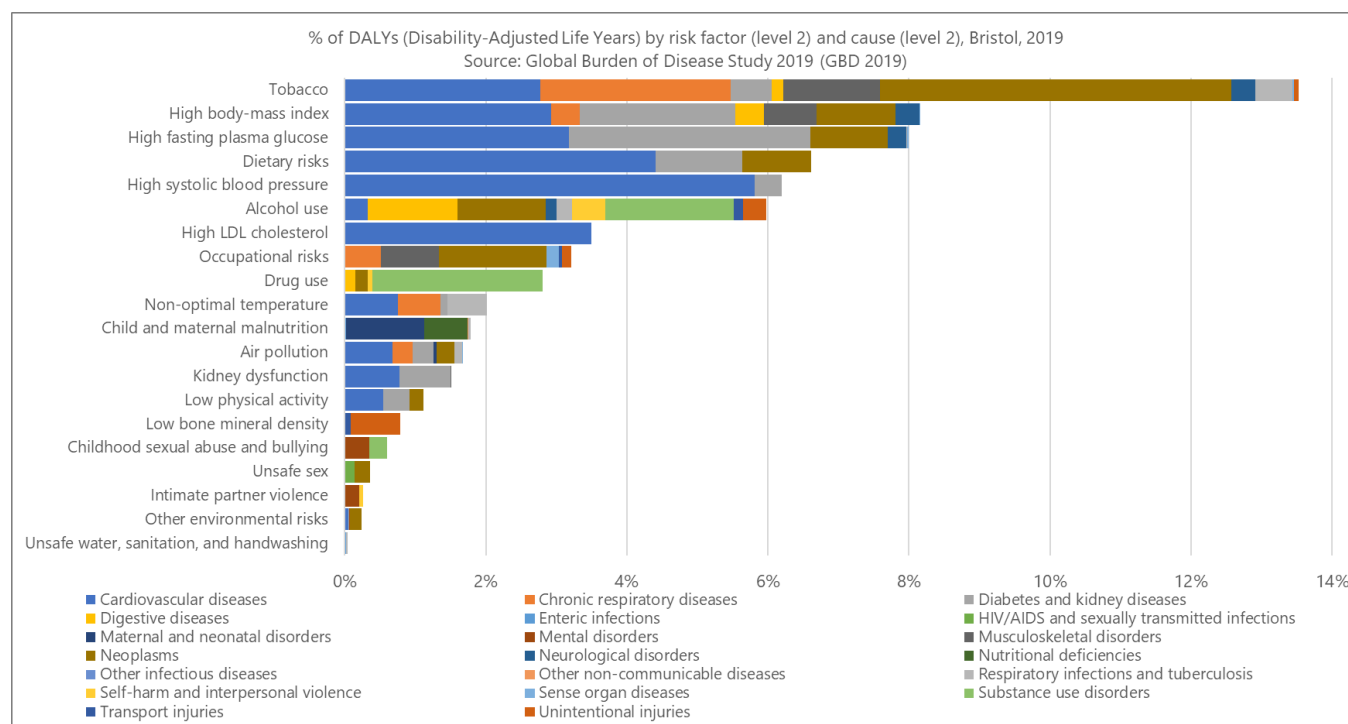


Figure 3: GBD: Risk factors leading to early death or disability in Bristol Source: Institute for Health Metrics and Evaluation

Covid-19 impact:

Data in this section precedes the pandemic.

Further data / links / consultations:

- Global Burden of Disease: [Global Burden of Disease \(GBD 2019\) | Institute for Health Metrics and Evaluation \(healthdata.org\)](https://www.healthdata.org/global-burden-of-disease)

Date updated: November 2022

Next update due: tbc