Diabetes

Summary points

- The number of patients on their practice register in Bristol diagnosed with diabetes increased slightly between 2021/22 and 2022/23, from 5.7% to 5.8% of the registered population aged 17 years of age or above.
- In 2022/23 there were just over 26,400 Bristol patients (aged 17 years of age or over) on their GP practice's diabetes register.
- The prevalence of diabetes is generally highest in the most deprived areas, associated with a number of risk factors also more common in areas of higher deprivation including obesity.

Prevalence of diabetes

In 2022/23 there were 26,421 Bristol patients on their GP practice's diabetes register[1]. As a rate this is 5.8% of all adult patients (17 years of age and over), which is significantly lower than the England average of 7.5%[1].

Around 90% of people with diabetes will have Type 2 diabetes, which is typically associated with lifestyle factors, and in many cases is preventable.

Using the Public Health England modelled estimates for the adult (age 16+) population prevalence of diabetes (diagnosed and undiagnosed) for 2020 and 2025[2], to derive an estimate of prevalence in 2022/23 and comparing the diagnosed numbers from the Quality and Outcomes Framework (QOF) 2022/23[1] suggests an approximate rate of diagnosis of diabetes diagnosis of 79% in Bristol, compared to a national average of 83%.

Data derived from diagnosed patient numbers at the GP practices within each Bristol locality in 2022/23[1], show considerable variation in the prevalence of diagnosed diabetes across the city (figures 1 and 2). The south Bristol locality has a significantly higher prevalence (6.9%) than the other localities and the Bristol average, although it is lower than the England average (7.5%). The Inner City & East locality is next highest at 6.1%. Differences in population age-structure and the presence of other risk factors for diabetes, such as higher prevalence of excess weight and obesity, may well help to explain this variation across the city. Figure 2 shows that the Quality and Outcomes Framework data since 2009/10 has consistently shown this locality in the city to have the highest prevalence of diagnosed diabetes. Another Quality and Outcomes Framework measure reporting the prevalence of GP confirmed obesity confirms that this risk factor for type 2 diabetes is also most prevalent in the south locality (11.2% of population of all ages compared to a Bristol average of 8.6% in the 2022/23 data) adding some weight to the conclusion that the variation across the city may well be associated with variation in the presence of known risk factors.

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[2] Diabetes prevalence estimates for local populations (2015), Public Health England. https://www.gov.uk/government/publications/diabetes-prevalence-estimates-for-local-populations

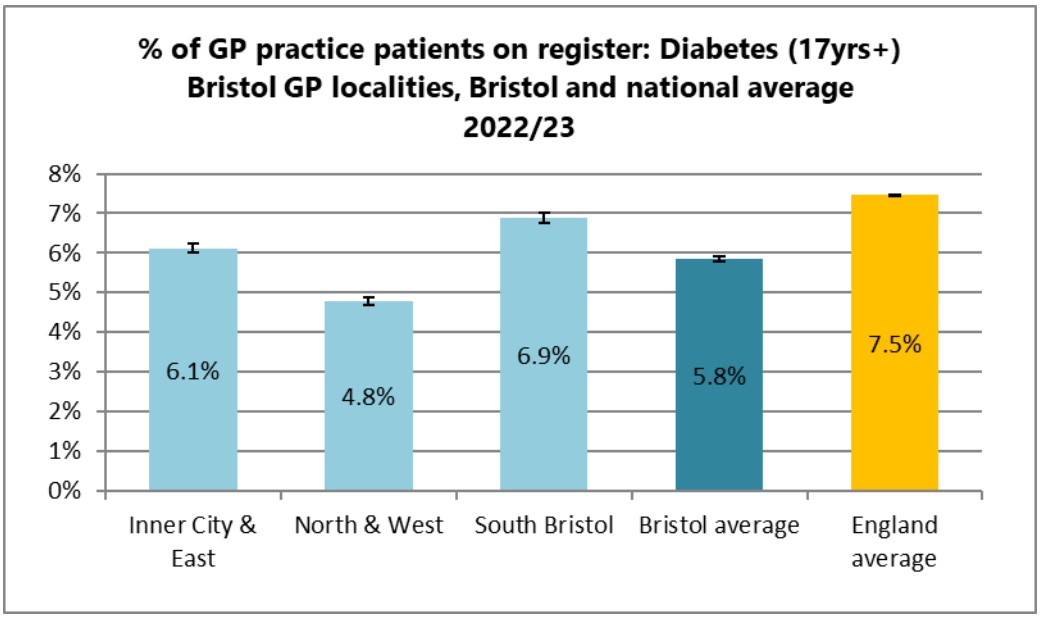

Figure 1: % of GP practice patients on register: Diabetes (17yrs+). Bristol and Bristol GP localities vs England average 2022/23. Source: NHS Quality and Outcomes Framework (QOF) 2022/23.

The prevalence of diagnosed diabetes, as shown in figure 2 below, has risen markedly over the last thirteen years, nationally, in Bristol and in each of the three Bristol GP localities. After 2016/17, the increase slowed or stopped altogether in Bristol, or even reversed a little, as appears to be the case for south Bristol, but over the last two years there has been further growth in the Bristol localities and the city average as a result. When considering what lies beneath these trends it is important to remember that they reflect differences in both the 'real' prevalence of diabetes, and in the numbers of formally made diagnoses.

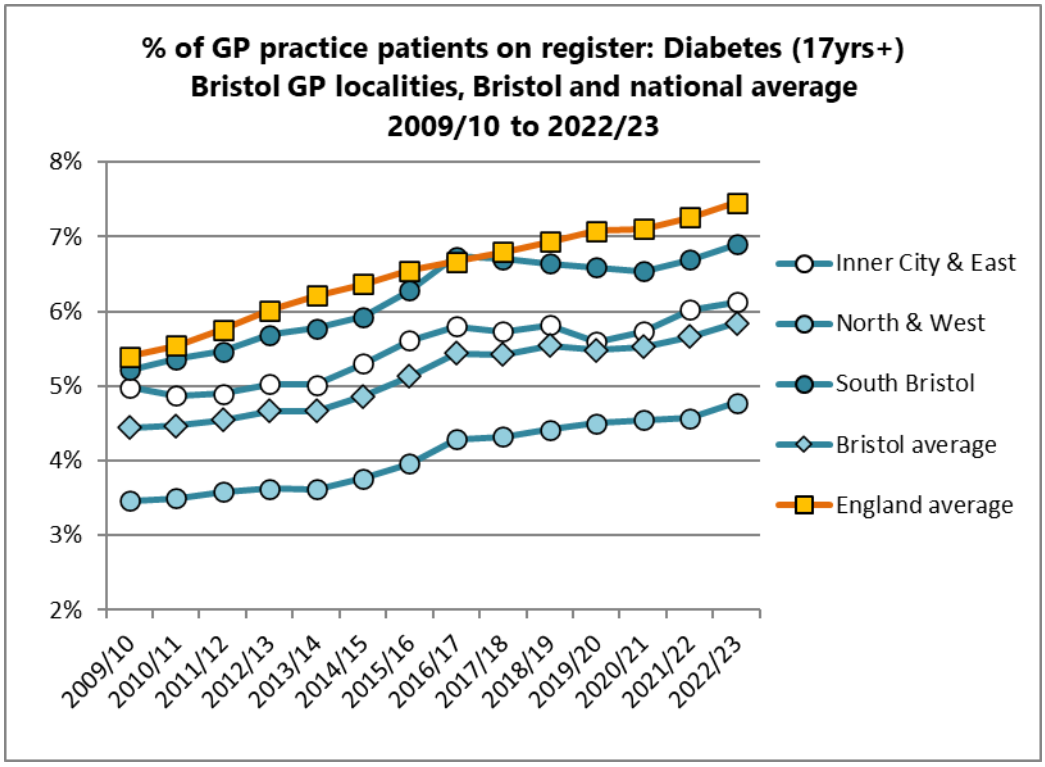

Figure 2: % of GP practice patients on register: Diabetes (17yrs+). Bristol GP localities, Bristol and England average trends 2009/10 to 2022/23. Source: NHS Quality and Outcomes Framework (QOF) 2022/23.

Deprivation: The prevalence of many of the lifestyle risk factors for the development of Type 2 diabetes (excess weight, physical inactivity, poor diet) are associated with deprivation, and therefore the prevalence of diabetes is generally highest in the most deprived areas. The data available to the public health team in Bristol City Council from the Quality and Outcomes Framework (QOF) does not permit an analysis by deprivation, ethnicity or other equality dimensions within Bristol, however statistics for England derived from this source show such an association exists at a larger scale. In the most deprived 10% of the population in England the prevalence of diagnosed diabetes in 2021/22 was over 8%, in the least deprived 10% of the population it was around 6%[1].

An analysis of emergency hospital admissions related to diabetes (all types including type 1 and type 2) in Bristol in 2020/21 to 2022/23 showed that 32% of these admissions were for residents living in the most deprived 20% of the city[3]. Conversely, those living in the least deprived 20% were responsible for just 10% of admissions. Figure 3 shows that the risk of hospital admission for diabetes is positively associated with deprivation in Bristol. Those living in the most deprived 20% of the city were three times more likely to be admitted to hospital than those living in the least deprived 20%. This will result from variation in the underlying prevalence of diabetes and its risk factors, as well as the efficacy of disease management of patients with diabetes, as common diabetes complications may also lead to admission.

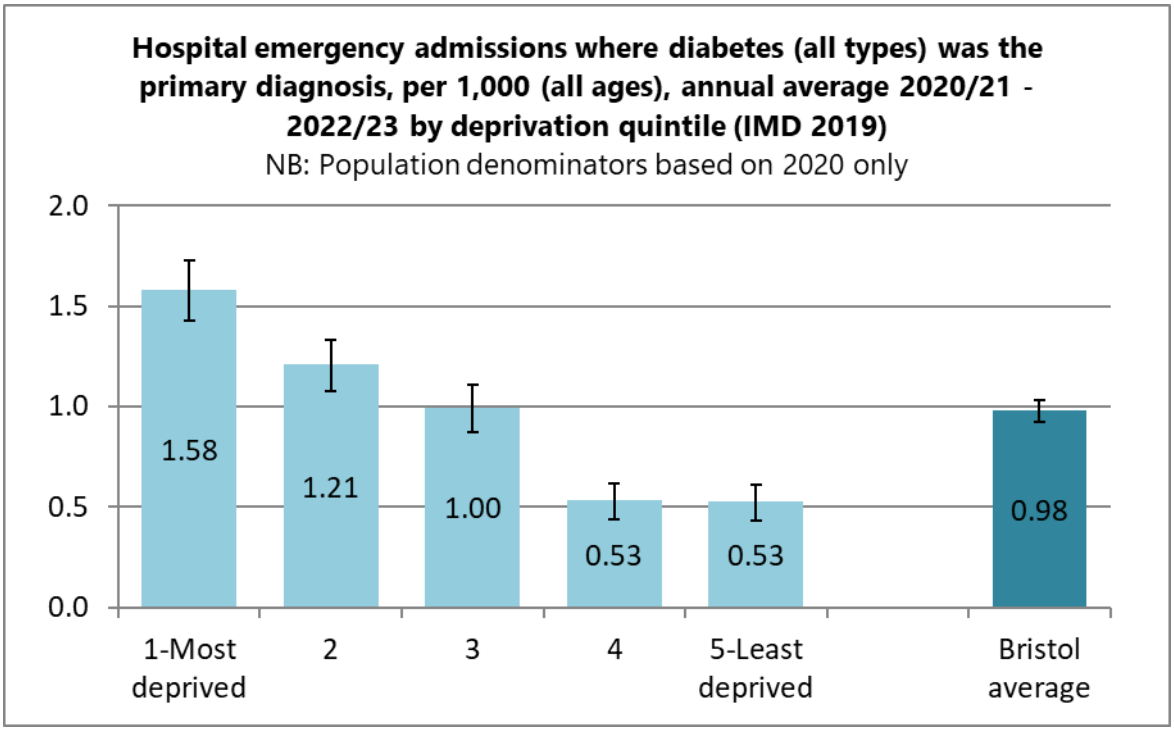

Figure 3: Rate of emergency hospital admission for diabetes (all types), per 1,000 residents (all-ages), 2020/21 - 2022/23, by deprivation quintile (IMD 2019). Source: Hospital Episode Statistics (NHS Digital) collated by Public Health, Bristol City Council.

[3] Hospital Episode Statistics (NHS Digital) collated by Public Health, Bristol City Council.

Ethnicity: People of South Asian ethnicity, are subject to a much higher risk of developing Type 2 diabetes, around 6 times higher than those of white European ethnicity. People of black African or black Caribbean ethnicity have an elevated risk around 3 times higher than those of white European ethnicity[4]. Bristol has a large and diverse population, estimates from the 2021 Census indicated that at least 10% of the population of Bristol (more than 45,000 people) were likely to be of South Asian, black African or black Caribbean ethnicity.

Age: Age is a key risk factor in the development of diabetes, with diabetes being more common in people aged 40 or over than in people aged under 40. Bristol's relatively young age profile in comparison to the country as a whole may partly explain why our overall rates of diabetes are lower. Differences in the prevalence of the other risk factors for diabetes, which in themselves are related to age as well, will also influence this comparison. For example, the risk of developing Type 2 diabetes increases with excess weight; in Bristol we have fewer obese adults than the average for England overall (based on the Quality and Outcomes Framework (QOF) 2022/23, the estimated prevalence of adult obesity in Bristol was 8.6% which is significantly lower than the national average of 11.4%)[2]

Prevalence of non-diabetic hyperglycemia

Non-diabetic hyperglycemia (also known as pre-diabetes or impaired glucose regulation) refers to blood glucose levels that are high, but not diabetic. People with non-diabetic hyperglycemia are at high risk of developing diabetes, as well as other cardiovascular conditions. Estimates from the National Cardiovascular Intelligence Network (NCVIN) in 2015 as part of the NHS Diabetes Prevention Programme, suggested that almost 10% of those over 16 years old in Bristol at that time had non–diabetic hyperglycemia and were therefore at increased risk of diabetes[5] - this was almost 35,000 people across Bristol.

Lifestyle changes to reduce body weight, increase physical activity and improve diet can significantly reduce the risk of developing Type 2 diabetes in those at high risk.

Covid-19 impact:

The data within this report includes data collected during the Covid-19 pandemic. It is possible that Covid 19 may have impacted on apparent trends since 2019/20. Access to healthcare for diagnosis and management of chronic health conditions may have been hampered by the pandemic, and lifestyle factors with a known relationship to the conditions described in this section may have become more or less prevalent over the period of the pandemic. Direct evidence linking the pandemic to the prevalence of long term conditions locally is not available as yet, but there are indications that some conditions (such as diabetes) have seen an increase over the course of the last 2 years that may in part at least have been accelerated by factors related to the pandemic as the two have happened concurrently.

[4] Department of Health (2001) Modern standards and service models – diabetes: national service framework standards. London: Department of Health

[5] NHS Diabetes Prevention Programme (NHS DPP) Non-diabetic hyperglycaemia (Aug 2015), National Cardiovascular Intelligence Network (NCVIN), Public Health England. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/456149/Non_diabetic_hyperglycaemia.pdf

Whilst it is too early to identify the full impact of the pandemic on diabetes prevalence it is possible that the impact of Covid upon GP capacity and associated support services will have an impact upon both patient management of diabetes and the ability to identify and record new cases of diabetes.

Further data / links / consultations:

- PHE Diabetes Profiles - provides information on the distribution and determinants of diabetes, measures of patient treatment and care and diabetes-related complications. https://fingertips.phe.org.uk/profile/diabetes-ft
- Public Health Outcomes Framework: https://fingertips.phe.org.uk/profile/public-health-outcomes-framework
- Quality Outcomes Framework: https://digital.nhs.uk/data-and-information/data-tools-and-services/data-services/general-practice-data-hub/quality-outcomes-framework-qof
- Other relevant JSNA profiles can be found on this link: JSNA Data Profiles (bristol.gov.uk)
    - JSNA Adult Healthy Weight in Bristol
    - JSNA Healthy Eating
    - JSNA Food Poverty
    - JSNA Physical Activity
    - JSNA Healthy Weight (Children)

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