

JSNA Health and Wellbeing Profile 2024/25

Chronic Childhood Illnesses

Summary points

- There were 100 emergency admissions for asthma in under 19-year-olds in 2022/23 in Bristol. That is the rate of 103.0 per 100,000 population – similar to England rate of 122.2 per 100,000.
- There were 60 emergency admissions for epilepsy in under 19-year-olds in 2022/23 in Bristol. That is the rate of 61.8 per 100,000 population – similar to England rate of 74.1 per 100,000.
- There were 40 emergency admissions for diabetes in under 19-year-olds in 2022/23 in Bristol. That is the rate of 41.2 per 100,000 population – similar to England rate of 52.4 per 100,000.

Asthma

Asthma is the most common chronic disease of childhood. The strongest risk factors for developing asthma are genetics and exposure to inhaled particles that may provoke allergic reactions or irritate the airways. These can include pollens, moulds, tobacco smoke and air pollution.¹

In 2022/23, there were 100 child (aged 0-18 years) emergency admissions to hospital due to asthma, a rate of 103.0 per 100,000 children.² The Bristol rate is similar to England's rate of 122.2 per 100,000 (fig 1).

Within Bristol the highest rate of emergency admissions due to asthma among children has been observed in the North West (outer) locality (162.9 per 100,000) and the lowest in the North & West (inner) locality at 43.7 per 100,000 in 2022/23 (fig 2).

¹ World Health Organisation, Fact sheet on Asthma (No.307), May 2024: <https://www.who.int/news-room/fact-sheets/detail/asthma>

² Admissions directly due to asthma, 0-18 yrs. Source: OHID Child and Maternal Health Profiles, September 2024

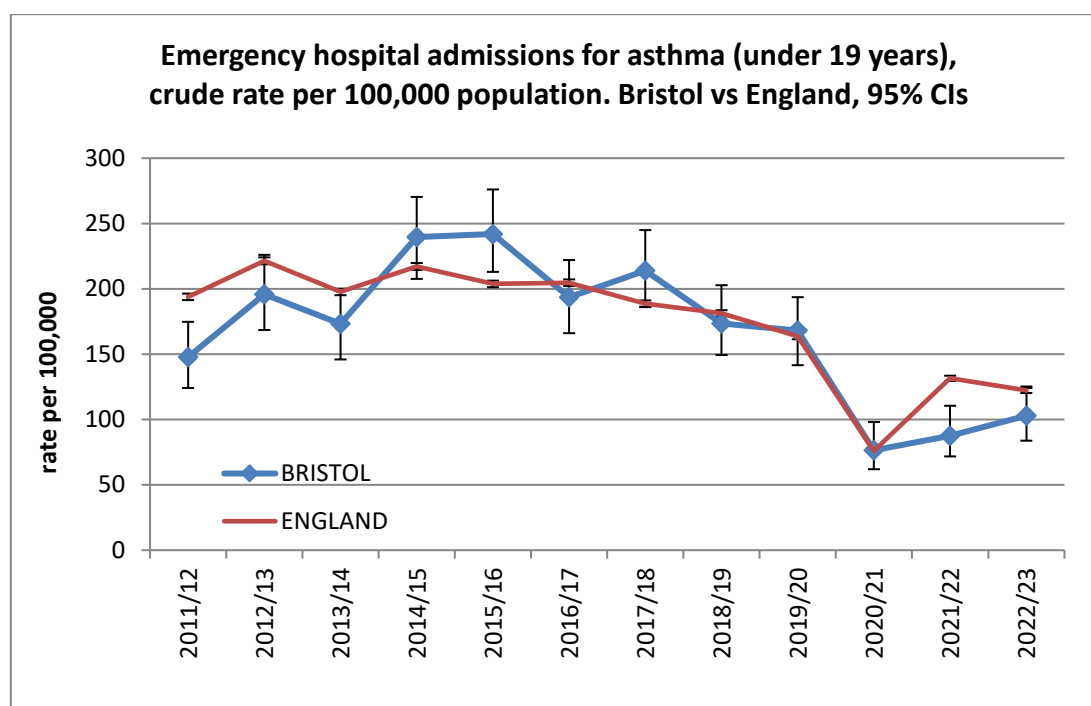


Fig 1: Child emergency hospital admissions for asthma, crude rate per 100,000 population. Source: OHID Child and Maternal Health Profiles, September 2024

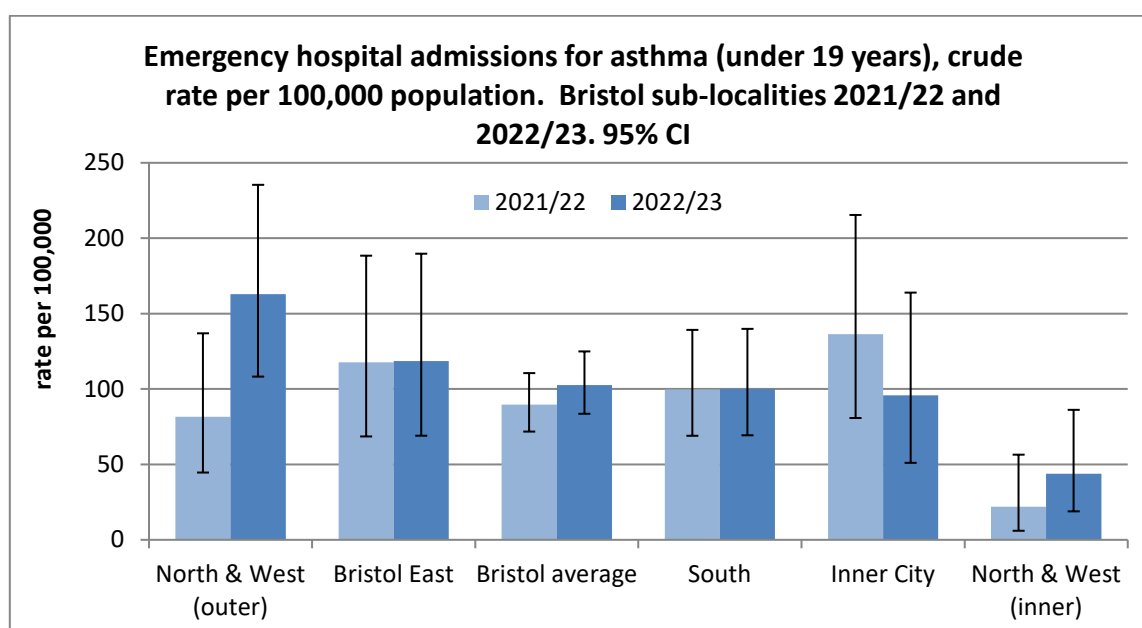


Fig 2: Child emergency hospital admissions for asthma, crude rates per 100,000 by Bristol sub-locality; Source: Hospital Episodes Statistics via NHS England, ONS population estimates, September 2024

By ward, 3-year (2020/21 to 2022/23) average rates for hospital admissions were highest in Hillfields (150.6 per 100,000 population per year), Windmill Hill (143.8 per 100,000) and St George Central (135.9 per 100,000) wards (fig 3).³ However, there is wide uncertainty around these figures, and all the rates are statistically similar to the Bristol average for the same period:

³ Local ward data is a pooled rate for the 3 years 2020/21 – 2022/23. Bristol average is 90.0 per 100,000 for this time period.

90.3 per 100,000 per year. The lowest rate was in Stoke Bishop (24.8 per 100,000) while Clifton, Clifton Down and Cotham wards had no emergency asthma admissions among children in 2020/21 – 2022/23 period.

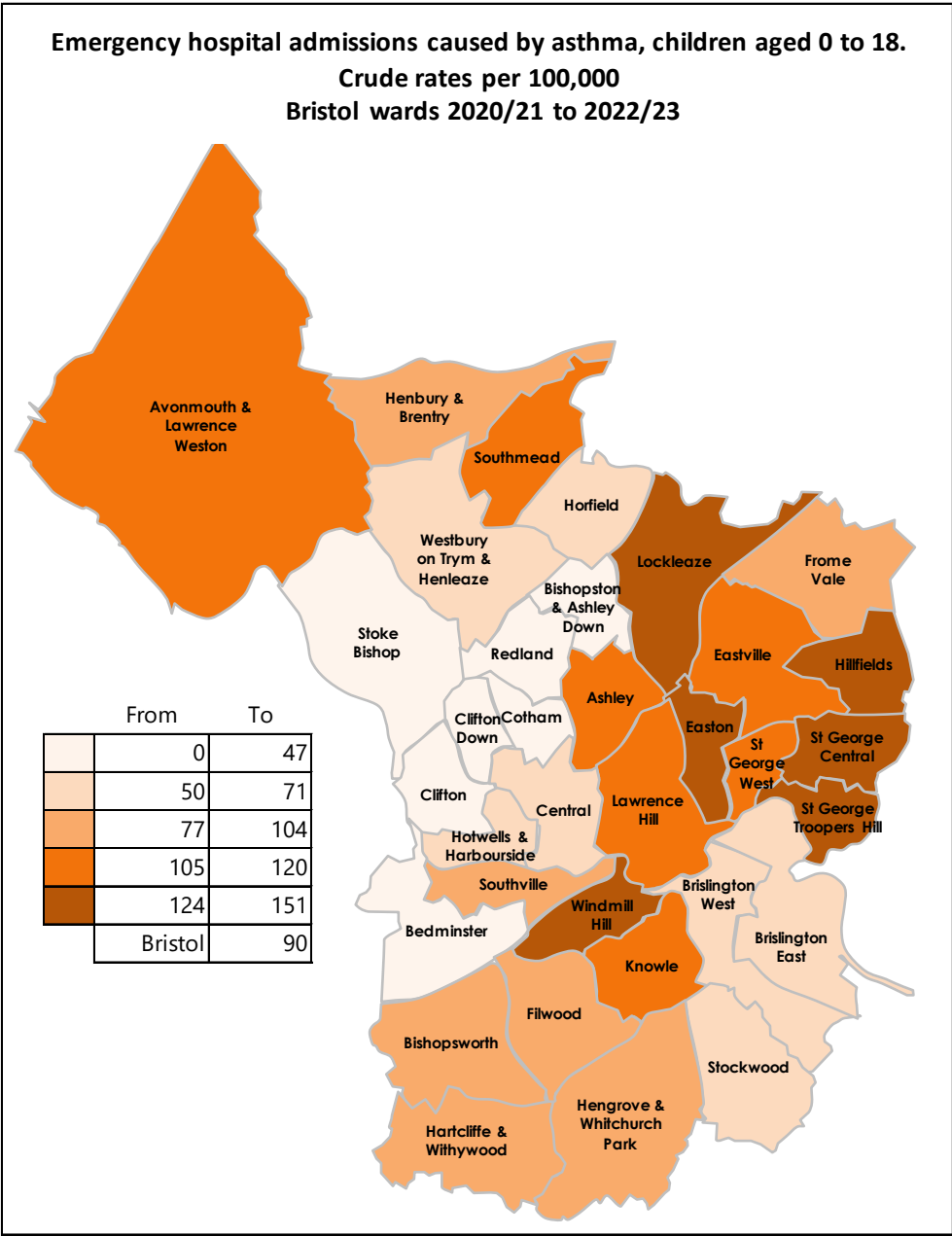


Fig 3: Child emergency hospital admissions for asthma, 3-year pooled crude rate per 100,000 per year by ward. Darker areas refer to higher rates. Source: Hospital Episodes Statistics via NHS England, September 2024

Asthma and second-hand smoke

Asthma attacks can be triggered by second hand smoke, and the main source of exposure for children inside the home.⁴ The Bristol Quality of Life survey 2023/24 notes 3.1% of people live

⁴ Action on Smoking and Health (ASH), Research report - Asthma & Smoking, 2015

in houses where someone smokes regularly inside the home - highest in Ashley (8.1%) and Hillfields (8.0%).⁵

Equalities

Of the 264 childhood asthma admissions in the 3-year period between 2020/21 to 2022/23, 152 were boys (57.6%) and 112 girls (42.4%). The male admission rate of 101.9 per 100,000 was statistically similar to the female rate of 78.2 per 100,000 population.

The highest rate of childhood admissions for asthma in the 3-year period were in children residing in the most deprived parts of Bristol. The rate of admissions from the most deprived quintile was over 2 times higher than from the least deprived quintile (fig 4). A nationwide cohort study provides evidence that persistent asthma is associated with socio-economic disadvantage early in life.⁶

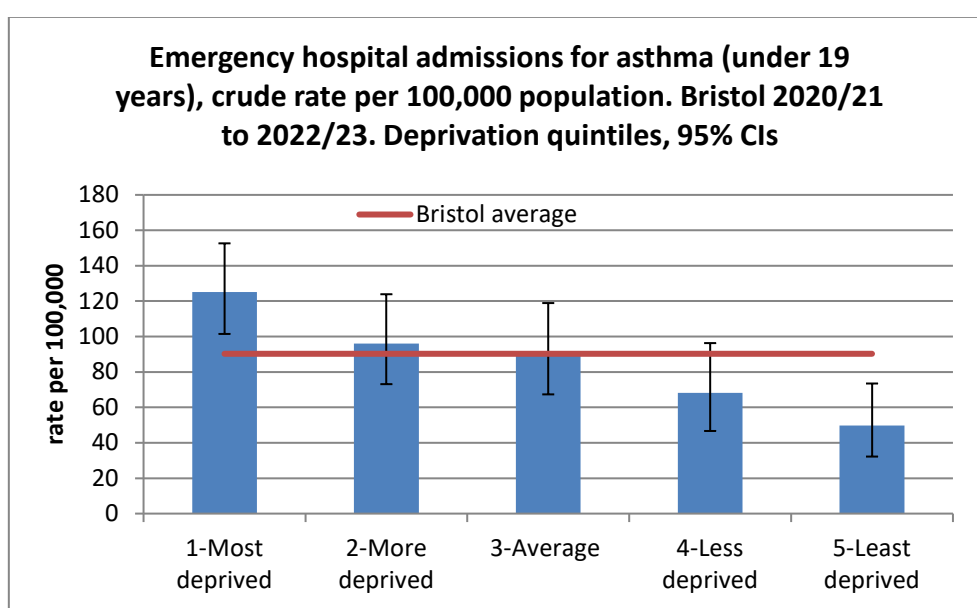


Fig 4: Child emergency hospital admissions for asthma, 3-year pooled crude rate per 100,000 per year by deprivation quintile of residence. Source: Hospital Episodes Statistics via NHS England, September 2024

Epilepsy

Epilepsy is the most common neurological disorder in children affecting around 1 in 220 children nationally.⁷ It is characterised by a tendency to have seizures. Diagnosis is challenging and misdiagnosis rates are high.

Epilepsy can occur in isolation or be associated with other conditions, such as learning difficulties or cerebral palsy. Two thirds of epilepsy cases have no identifiable cause (idiopathic

⁵ Bristol Quality Of Life Survey 2023/24, [Dashboards — Open Data Bristol](#)

⁶ Creese H, Lai E, Mason K, et al Disadvantage in early-life and persistent asthma in adolescents: a UK cohort study. Thorax 2022;77:854-864

⁷ Epilepsy incidence and prevalence from Joint Epilepsy Council, 2011; via the Childhood Epilepsy JSNA Chapter 2017: [Childhood Epilepsy in Bristol, North Somerset and South Gloucestershire \(2017\)](#)

epilepsy), while a cause can be identified in a third (secondary epilepsy). The causes include brain injuries, congenital abnormalities or genetic conditions.

Epilepsy is associated with a risk of premature death (as seizures can be potentially life threatening), poor educational and social outcomes and mental health issues. Seizure

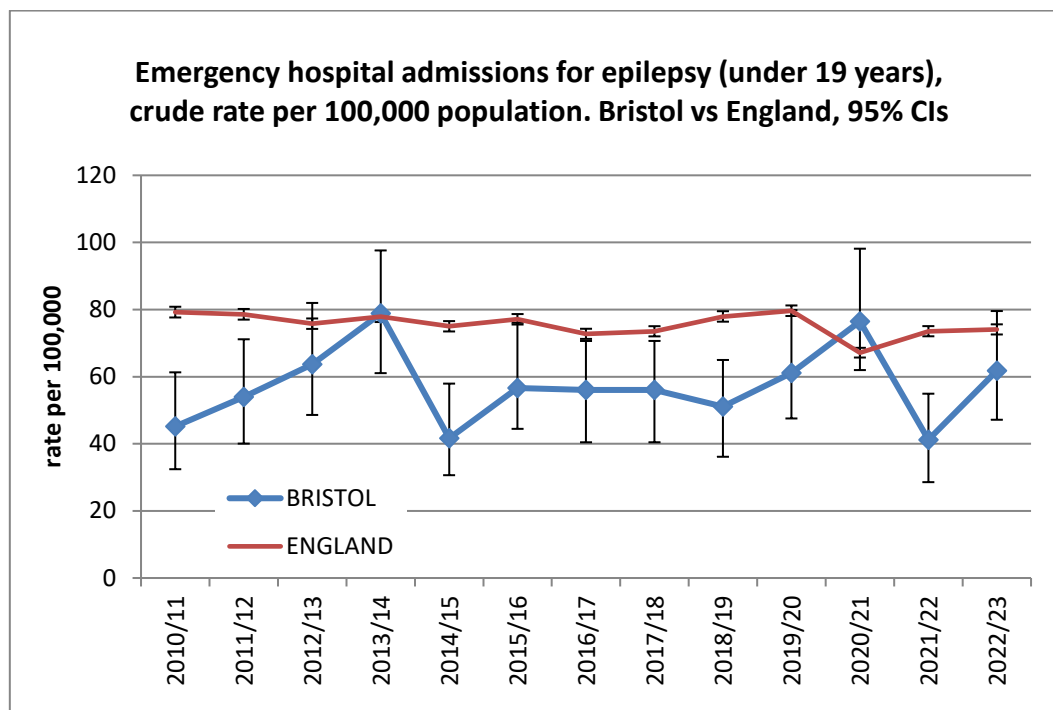


Fig 5: Child emergency hospital admissions for epilepsy. Source: OHID Child and Maternal Health Profiles, September 2024

prevention and management is important as a significant number of people could become seizure free with good control and reduce the risk of adverse consequences.

Based on national estimates and local GP data, there are around 500 children with a diagnosis of epilepsy in the Bristol and around 120 new cases per year.⁸

In 2022/23, 60 Bristol children under 19 were admitted as an emergency to hospital. Bristol's admission rate of 61.8 per 100,000 is similar to the national average of 74.1 per 100,000 (fig 5).

Equalities

Of the 176 childhood epilepsy admissions in the 3-year period between 2020/21 to 2022/23, 60.2% were boys and 39.9% were girls.

Figure 6 shows rates of childhood admissions for epilepsy by deprivation quintile of residence and shows that the rate in most deprived quintile is significantly higher than the Bristol average, and the rate in the least deprived quintile is significantly lower than the Bristol average.

⁸ Childhood Epilepsy JSNA Chapter 2017: [Childhood Epilepsy in Bristol, North Somerset and South Gloucestershire \(2017\)](#)

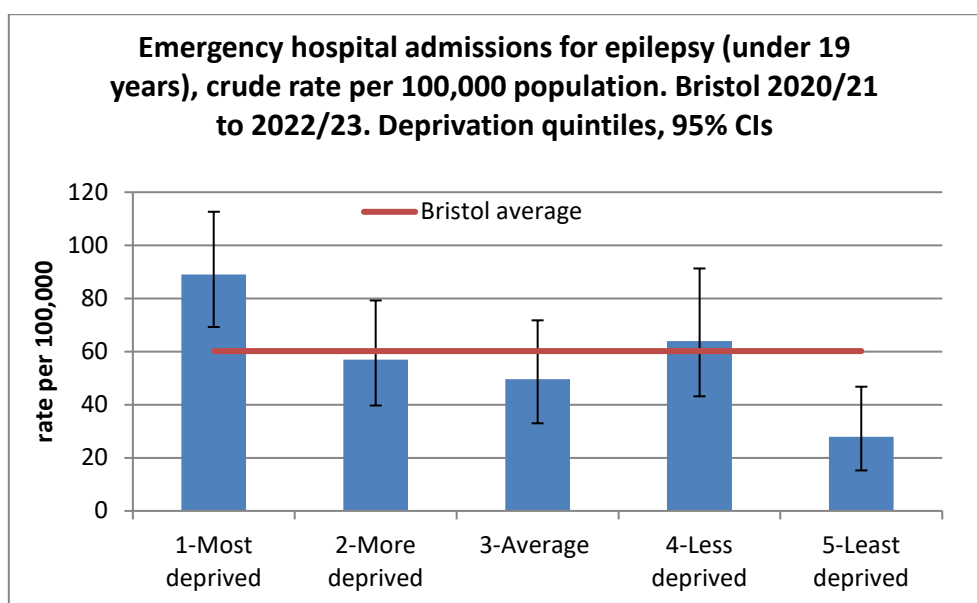


Fig 6: Child emergency hospital admissions for epilepsy, 3-year pooled crude rate per 100,000 per year by deprivation quintile of residence. Source: Hospital Episodes Statistics via NHS England, September 2024

Diabetes

Most children and young people with diabetes have Type 1, which is an autoimmune condition where the body stops making insulin. It usually starts in childhood and needs insulin treatment. Type 2 diabetes is much rarer in children and is linked to lifestyle factors like weight. It can often be managed with diet, exercise, and medication.⁹

Type 2 Diabetes

The National Paediatric Diabetes Audit Report 2022/23 by the Royal College of Paediatrics and Child Health states that there were 60 children and young people under the age of 20 with Type 2 diabetes in the South West region were receiving care from a PDU (Paediatric Diabetes Units) in 2022/23.¹⁰ In England and Wales the numbers of children and young people with Type 2 diabetes being managed within a PDU increased from 1,144 in 2020/21 to 1,245 in 2022/23, of these 268 being diagnosed within the audit year - similar to 281 in 2021/22. There were proportionally more girls, those of non-White ethnicity, and those living in the most deprived areas amongst the cohort with Type 2 diabetes. In Bristol Royal Hospital for Children PDU, 3.7% of children and young people under 25 treated for diabetes had Type 2 in 2022/23.

Type 1 Diabetes

National Paediatric Diabetes Audit Report 2022/23 by the Royal College of Paediatrics and Child Health states that the prevalence of type 1 diabetes in children and young people aged 0 to 15 years old in England and Wales was 290.1 per 100,000 of the general population.¹⁰ Applying that figure to the Bristol population of 0 to 15-year-olds gives an estimated number of 238 children with a diagnosis of type 1 diabetes.

⁹ For a definition of type 1 and type 2 see: <https://www.diabetes.org.uk/diabetes-the-basics/types-of-diabetes/diabetes-mellitus>

¹⁰ [National Paediatric Diabetes Audit \(NPDA\) annual reports | RCPCH](#)

There were 40 child (0-18 years old) emergency admissions due to diabetes in 2022/23 in Bristol, a rate of 41.2 per 100,000 population, similar to the national average 52.4 per 100,000 (fig 7).

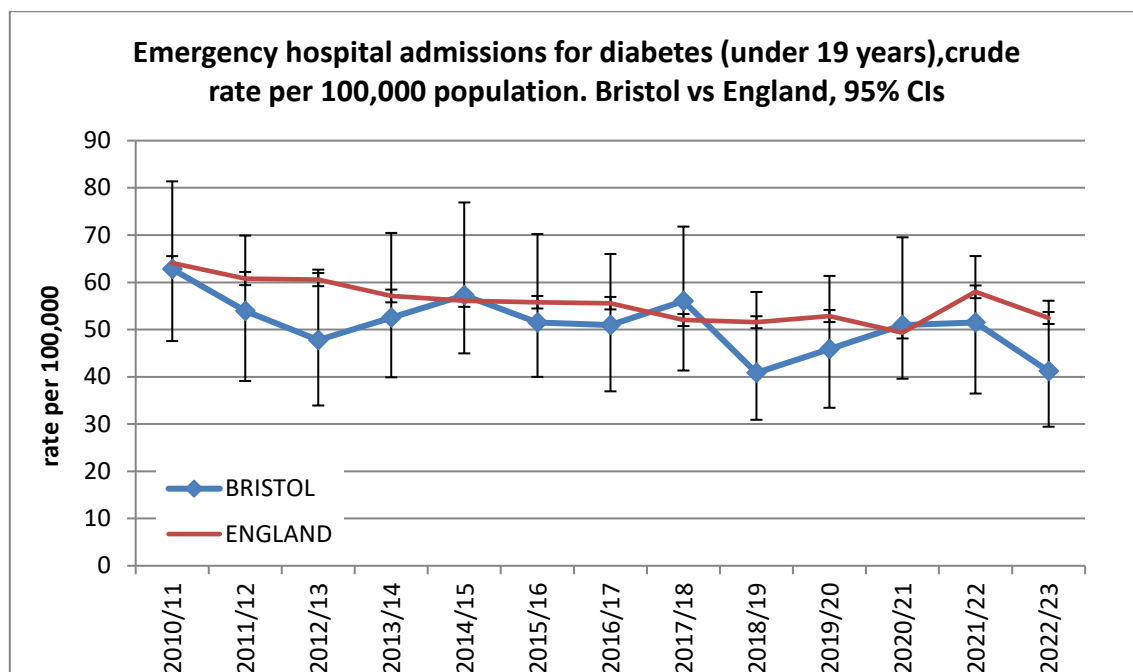


Fig 7: Child emergency hospital admissions for diabetes. OHID Child and Maternal Health Profiles, September 2024.

Equalities

Of the 140 child admissions for diabetes in the 3year period between 2020/21 to 2022/23, 44.3% were boys and 55.0% were girls.

Figure 8 shows the breakdown of child admissions for diabetes by deprivation quintile of residence. This indicates that the proportion of admissions from the most deprived quintile is significantly above the Bristol average.

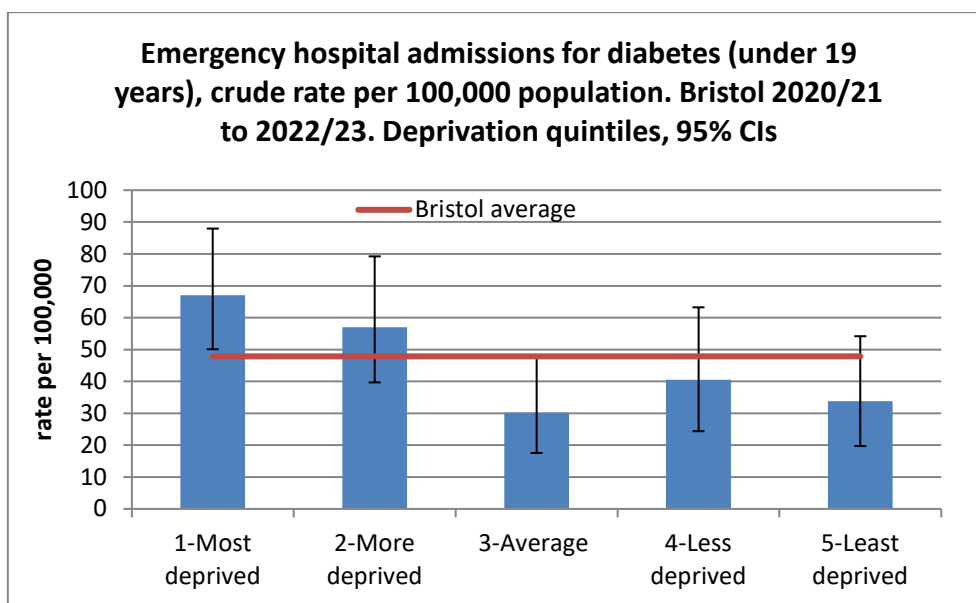


Fig 8: Child emergency hospital admissions for diabetes, 3-year pooled crude rate per 100,000 by deprivation quintile. Source: Hospital Episodes Statistics via NHS England, September 2024

Further data / links:

- Department of Health & Social Care Child and Maternal Health Profiles: <https://fingertips.phe.org.uk/profile/child-health-profiles/>
- ASH Research Report: Asthma and smoking: <https://ash.org.uk/resources/view/ash-research-report-asthma-and-smoking>
- Epilepsy Action: <https://www.epilepsy.org.uk/>
- National Paediatric Diabetes Audit: <https://www.rcpch.ac.uk/work-we-do/clinical-audits/npda>

Date updated: December 2024

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