

Why is this issue important?

Diabetes mellitus is a broad term used to describe conditions in which the amount of glucose in the blood is too high. This has serious effects on the body, in particular causing damage to blood vessels resulting in damage to various organs. There are two main types of diabetes, known as Type 1 and Type 2 (the latter accounting for nine in every ten cases). Action can be taken to help people reduce their risk of developing diabetes, with most cases of Type 2 diabetes linked to lifestyle and preventable.

Effective self management and healthcare improve outcomes of people with diabetes. However, if the condition is not well managed it can result in complications including kidney failure, blindness, coronary heart disease, stroke, foot ulcers and amputations, and sexual dysfunction in men. As a result, diabetes has a significant impact on people's quality and length of life.

The cost of diabetes to health and social care services is high. The prevalence of diabetes amongst hospital inpatients increases every year and it stands now at 17%.¹⁴ Diabetes is estimated to account for approximately 10% of total NHS spend¹ with £2.3 to 2.5 billion per year spent on inpatient care for people with diabetes.²

Nationally, the prevalence of diabetes is increasing because of increased levels of obesity, an ageing population and a growing number of people of South Asian ethnicity.

Key outcomes

- **Recorded diabetes (Public Health Outcomes Framework)**
- **Health-related quality of life for people with long-term conditions (NHS Outcomes Framework)**

¹ Hex, N., et al (2012). Estimating the current and future costs of Type 1 and Type 2 diabetes in the UK, including direct health costs and indirect societal and productivity costs. *Diabetic Medicine*, 29(7) 855-862.

² Kerr, M., 2011. Inpatient Care for People with Diabetes: The Economic Case for Change. [Accessed 02/09/2016]. Available at <https://www.diabetes.org.uk/upload/News/Inpatient%20Care%20for%20People%20with%20Diabetes%20The%20Economic%20Case%20for%20Change%20Nov%202011.pdf>

Impact in Brighton & Hove

Every year the number of people diagnosed with diabetes increases. In 2015, 10,594 people aged 17 years or over in Brighton & Hove were recorded as having diabetes by their GP, compared to 9,936 in 2012, and 8,642 in 2008. This is a prevalence of 4.1% compared with 2.9% in 2008. The recorded prevalence in the city is significantly lower than both the South East (5.7%) and England (6.7%) and is the fourth lowest recorded prevalence in England.³

The most recent modelled data for diabetes, published by Public Health England, estimates that there are 16,612 people aged 16 and over with diagnosed and undiagnosed diabetes in Brighton & Hove in 2016. This gives a prevalence rate of 6.9%, 1.6 times higher than our registered prevalence. Brighton & Hove has the fourth lowest modelled prevalence of diabetes of all local authorities in England.⁴

However, the gap between the estimated prevalence and recorded diabetes suggests that the rate of diagnosed diabetes is lower than expected. It should be noted that the difference between modelled estimates and figures recorded on GP disease registers may be due to local variations not captured by the model and not solely under-diagnosis or under-recording of diagnoses. The modelled data also includes an additional year group of 16 year olds.

In the three year period 2012 to 2014 there were, on average, 18 deaths per year with an underlying cause of diabetes. This is a rate of 8.2 deaths per 100,000 people, compared to 10.0 deaths per 100,000 across the South East and England (though this difference is not statistically significant)⁵

In 2015 there were 27 deaths with diabetes as the underlying cause, but 207 total deaths with diabetes recorded the underlying or a contributory cause of death. 78 of these deaths (38%) had an underlying cause of cardiovascular disease.⁶

³ Public Health England. Public Health Outcomes Framework data tool. Available at <http://www.phoutcomes.info/> [Accessed 24/08/2016]

⁴ Public Health England. Diabetes prevalence model for local authorities and CCGs. Available at

<http://www.yhpho.org.uk/resource/view.aspx?RID=154049> [Accessed 03/11/2016]

⁵ NHS Digital. Compendium of population health indicators. Available at <https://indicators.hscic.gov.uk/webview/> [Accessed 24/08/2016]

⁶ Office for National Statistics. Primary Care Mortality Database

7.5.4 Diabetes

The diabetes footcare activity profiles⁷ shows no significant difference from the England average for major and minor lower limb amputations in Brighton & Hove. There were 29 major and 58 minor amputations performed during the 2012-2015 period in Brighton & Hove Clinical Commissioning Group. This represents 0.9 major amputations per 1,000 people with diabetes annually (England CCGs 0.8) and 1.8 minor amputations per 1,000 people with diabetes (England CCGs 1.8), however all such amputations are preventable.

In 2014-2015 the rate of sight loss due to diabetic eye disease in Brighton & Hove was 2.8 per 100,000 people; lower than the average for England (3.2) and the South East (3.3) although this difference is not statistically significant.⁸

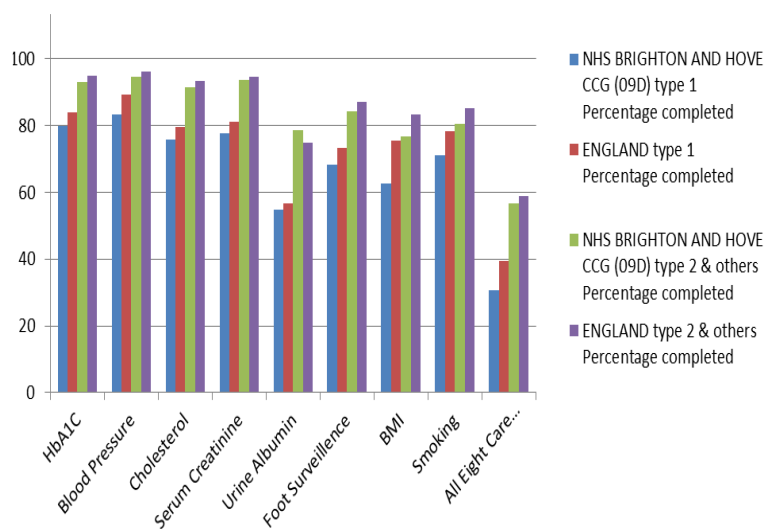
Between 2013 and 2016, prescribing costs related to diabetes in Brighton & Hove increased by £488,090 totalling £3,322,626.⁹

Care for people with diabetes

Figures from the National Diabetes Audit show that the percentage of people with diabetes receiving all eight care processes recommended by National Institute for Health and Care and Excellence (NICE)¹⁰ in Brighton & Hove is lower compared to the England average (Figure 1) and that people with Type 1 diabetes are less likely to receive all eight care processes than people with Type 2 diabetes (Table 1).¹¹

In 2014-15, 30.8% of people with Type 1 and 56.7% of Type 2 diabetes in Brighton & Hove received all eight care process compared to 39.6% and 59.0% respectively in England. Compared to 2013-14, a lower percentage of people with diabetes in England as well as Brighton & Hove received all recommended care processes (Table 1).

Figure 1: Proportion of patients receiving NICE recommended care processes 2014-15



Source: NHS Digital. National Diabetes Audit

Table 1: Proportion of patients with diabetes receiving all eight NICE recommended care processes, 2013-2015.

Audit period	Brighton and Hove		England	
	2013-14	2014-15	2013-14	2014-15
Type 1	37.9%	30.8%	45.2%	39.6%
Type 2 and other	66.6%	56.7%	67.9%	59.0%

Source: National Diabetes Audit, 2015

These figures however hide significant variations across GP practices in Brighton & Hove, where the percentage of people with diabetes receiving all eight care processes ranged from 10.7% to 75.8% in 2014/15.¹²

An important factor explaining this is a high level of 'exception reporting'¹³. The distinct socio-economic and demographic make-up of Brighton & Hove (e.g. high number of students, homeless people) may also explain lower achievements rates of care processes in this setting.

⁷ National cardiovascular intelligence network. Diabetes footcare activity profiles. 2016. Available at: <http://www.yhpho.org.uk/default.aspx?RID=116836> [Accessed 08/11/2016]

⁸ PHE, Public health outcomes framework. Available at <http://www.phoutcomes.info/search/sight#page/0/gid/1/pat/6/par/E12000008/ati/102/are/E06000043> [Accessed 08/11/2016]

⁹ Brighton and Hove CCG, 2016. Prescribing spend on diabetes.

¹⁰ National Institute for Health and Care and Excellence (NICE). NICE pathways – Diabetes. Available at: <http://pathways.nice.org.uk/pathways/diabetes> [Accessed 09/11/2016]

¹¹ NHS Digital. National Diabetes Audit - 2013-2014 and 2014-2015: Report 1, Care Processes and Treatment Targets. 2016. Available at <http://digital.nhs.uk/searchcatalogue?productid=20155&q=%22National+diabetes+audit%22&sort=Relevance&size=10&page=1#top> [Accessed 08/11/2016]

¹² National Cardiovascular Intelligence Network. Available at http://www.yhpho.org.uk/ncvncvdf/pdf/Diabetes/09D_Diabetes.pdf [Accessed on 03/11/2016]

¹³ Exception reporting relates to registered patients who are on the relevant disease register or in the target population group and would ordinarily be included in the indicator denominator, but who are excepted by the contractor on the basis of one or more of the exception criteria (NHS, BMA, 2016)

Inpatient diabetic care:

Each year a sample of hospital inpatients with diabetes is surveyed as part of the National Diabetes Inpatient Audit. Findings are reported by hospital rather than area of residence. In 2015, 92 inpatients with diabetes at Royal Sussex County Hospital (RSCH) were included in the audit. As these are relatively small numbers and the case-mix of the population may impact on the indicators the findings should be treated with caution. People with diabetes took up 18% of the beds audited. Of these patients, 7% had Type 1 diabetes and 93% Type 2 and other. These figures are similar to the national average.¹⁴

In 2015, patients with diabetes at the RSCH were more likely to be admitted to hospital to manage their diabetes (16% vs 9%), to receive renal replacement therapy (15% vs 4%) and to have active foot disease (23% vs 9%)¹⁴ compared to the national average. We do not know the reasons for these differences but they are worthy of further investigation.

From 2010 to 2015 there has been a downward trend in the number of medication errors that people with diabetes experience during their hospital stay. Nonetheless, 39% of people with diabetes in RSCH experienced a medication error, 23% a prescription error, and 20% a management error, which are similar to the national averages.¹⁴ In 2015, patients had on average 4 out of 7 “good diabetes days” (compared to 4.5 nationally) when the frequency of blood glucose monitoring was appropriate and no measurement was >11mmol/L and <4mmol/L.¹⁴

Patients also answered questions on patient experience in the national audit. These results should be interpreted with caution as only 55% of all patients returned the patient experience questionnaire and could therefore be subjected to participation bias. The proportion of patients reporting they could take control of their diabetes while in hospital is lower than the national average (50% vs 60%) and has decreased steadily since 2010 when it was 62%.¹⁴

Where we are doing well

People with diabetes in Brighton & Hove are less likely to die as a direct result of their diabetes than the national average (35% vs 39%).¹⁵ However this might be partly explained by the younger age distribution of the Brighton & Hove population.

The new ‘Diabetes Care for You’ Community Service opened in July 2016. ‘Diabetes Care for You’ offers local patients with Type 1 and Type 2 diabetes consultant-led care for the first time in community settings. The service includes Diabetes Specialist Nurses, Dieticians, Podiatrists and Psychologists all working together under the leadership of Consultant Diabetologists to offer care and support to help people manage their diabetes.

The new Diabetes Community Service is designed to have close links with hospital based diabetes services to ensure that if needed, patients will have access to all of the services and further specialist clinicians for individual conditions. The new diabetes care model will offer patients the opportunity to move seamlessly through their care pathway being seen by the right professional in the right location in accordance to their need.

According to CCG data, all local GP practices have signed up to participate in the next National Diabetes Audit.

In November 2016, a training session is being provided for nurses to raise awareness and improve the care of people with diabetes, including annual reviews and care processes.

There are a range of local services available to support people at increased risk of diabetes with weight loss and healthy lifestyle: Active for Life, Shape up, Weight Management Clinics, MEND, ZestERS, Health Walks.¹⁶

The NHS Diabetes Prevention Programme will be rolled out in Brighton & Hove in autumn 2016. This programme will identify those at high risk of developing diabetes and refer them onto a behaviour change programme. The programme is

¹⁵ Public Health England. Cardiovascular disease profile. Diabetes. NHS Brighton and Hove CCG. 2016. Available at http://www.yhpho.org.uk/ncvincvd/pdf/Diabetes/09D_Diabetes.pdf [Accessed on 20/10/2016]

¹⁶ NHS Brighton & Hove and Brighton & Hove City Council. Directory of Health and Wellbeing services www.brighton-hove.gov.uk/healthy-living-directory

¹⁴ NHS Digital. National Diabetes Inpatient Audit 2015. Available at: <http://digital.nhs.uk/searchcatalogue?productid=20443&q=%22National+diabetes+audit%22&sort=Relevance&size=10&page=1#top> [Accessed 20/10/2016]

designed to support people to maintain a healthy weight and be more active, thus significantly reducing the risk of developing diabetes.¹⁷

Local inequalities

There are significant health inequalities related to diabetes. Although local data are not available, national figures show that it is more common in people living in more socially deprived areas.¹⁸

The main fixed risk factors for diabetes relate to age, gender and ethnic group. The rate of onset of Type 2 diabetes increases with age; diabetes is more common in men and in certain ethnic groups: up to six times more common in people of South Asian descent and up to three times more common in those of African and African-Caribbean descent.¹⁸

In the Health Counts Survey 2012, slightly less Black and Minority Ethnic (BME) respondents ate five or more portions of fruit or vegetables a day (47%) compared to White British respondents (54%) and a higher proportion of BME respondents classified themselves as a healthy weight (59%) compared to White British respondents (52%).¹⁹

Predicted future need

From 2015 to 2030, the number of people with diabetes (diagnosed and undiagnosed) is expected to increase in Brighton & Hove by 26% for two reasons:

- As a result of improved identification; currently modelled estimates suggest that one in three people who have diabetes are not diagnosed but this may improve as new programmes, such as the NHS Diabetes Prevention Programme, are rolled out.
- The number of people with diabetes is also expected to increase as a result of changes in risk factors (in particular overweight and obesity) and the population age structure. For example, if obesity continues to rise at the

same rate in the population it is estimated by 2030 that 17,842 or (7.4%) of the 16 or over population will have diabetes; compared to 16,588 (6.9%) if obesity remains at 2010 levels.²⁰

Diabetes will put a significant strain in the NHS budget; it is projected to account for 17% of total NHS expenditure by 2037 compared to an estimated 10% in 2012.¹

What we don't know

Why the level of undiagnosed diabetes is greater than average.

We do not have data on diabetes in relation to some equalities groups e.g. by disability, religion, gender identity and carers.

Key evidence & policy

All relevant guidance is collated at <https://pathways.nice.org.uk/pathways/diabetes>

Recommended future local priorities

1. Uptake of prevention initiatives (such as NHS Health Checks) by the groups most at risk of diabetes (e.g. Black and Minority Ethnic groups) should be reviewed.
2. Roll out of the 'Healthier You' National Diabetes Prevention Programme across all 6 GP clusters in Brighton and Hove.
3. Utilise data from the National Diabetes Audit to review performance of local practices and support practices to understand the actions they need to take to secure improvement.
4. Improve the achievement of the NICE recommended treatment targets
5. The uptake (and completion rate) of patient education programmes should be reviewed.
6. The reasons for high exception reporting should be explored and action taken to tackle the issue.
7. Continue with current initiatives to improve coordination between hospital, community & primary to ensure care pathways work effectively.

¹⁷ NHS England. National Diabetes Prevention Programme. Available at <https://www.england.nhs.uk/ourwork/qual-clin-lead/diabetes-prevention/> [Accessed 02/09/2016]

¹⁸ Department of Health. Who gets diabetes - Health Inequalities http://www.dh.gov.uk/en/publicationsandstatistics/publications/publication/policyandguidance/browsable/DH_4899972

¹⁹ NHS Brighton & Hove and Brighton & Hove City Council. Health Counts. 2012. Available at: <http://www.bhconnected.org.uk/content/surveys> [Accessed 31/10/2016]

²⁰ Diabetes prevalence model for local authorities in England <http://www.yhpho.org.uk/DEFAULT.ASPX?RID=154049>

8. The results of the National Inpatient Diabetes Audit should be investigated e.g. reported higher rate of diabetic foot disease in admitted patients.

Key links to other sections

- Healthy weight
- Smoking
- Physical activity
- Sensory impairment
- Coronary heart disease
- Primary care

Further information

Diabetes Community Health profiles

<http://www.yhpho.org.uk/default.aspx?RID=182342>

JSNA for adults with diabetes in Brighton & Hove

<http://www.bhconnected.org.uk/content/needs-assessments>

NHS Choices

<http://www.nhs.uk/Conditions/Diabetes/Pages/Diabetes.aspx>

Public Health England. Cardiovascular disease profile-Diabetes 2016

<http://www.yhpho.org.uk/ncvincvd/pdf/Diabetes/09D-Diabetes.pdf>

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