Swindon's Joint Strategic Needs Assessment

Bulletin 5: Diabetes V5

Key Points:

- **Diabetes mellitus, (or simply diabetes), is a group of metabolic diseases in which a person has difficulty in controlling blood sugars and fats, either because the pancreas does not produce enough insulin (Type 1), or because cells do not respond to any insulin that is produced (Type 2)**
- **At the end of 2011/12, 10,302 people aged 17 years or over, registered with Swindon Clinical Commissioning Group (CCG), (which includes both Swindon and Shrivenham residents) were living with diagnosed diabetes; at least another 1,000 people in Swindon may have diabetes that has not yet been diagnosed**
- **The diagnosed people equate to 5.9% of the CCG population; this compares to 5.5% in the South West and 5.8% in England as a whole**
- **If current trends continue in Swindon, the estimated prevalence of *all* diabetes (*whether diagnosed or undiagnosed*) will rise from an estimated 6.5% in 2012 to 7.3% by 2020 and 8.3% by 2030**
- **In 2011/12 Swindon patients with diabetes fared worse than the England averages on a number of key primary care indicators; for example, in 2011/12, a significantly lower percentage of diabetic patients in Swindon had an HbA1c ("blood sugar") level meeting the national target of 7.5% or below, than was the case in England as a whole**
- **Data produced through national audits showed the existence in Swindon of relatively high levels of diabetic complications, requiring hospital admission**
- **Swindon women (all ages considered) had a higher death rate (2008 to 2010) from diabetes, as compared with their peers in England, the South West and the New and Growing Towns Group**
- **People from Black African-Caribbean groups and people from the South Asian community have a higher risk of developing diabetes and its complications**
- **Encouraging developments in Swindon include the specialised footcare service (the "DM Foot Team") which is now active at Great Western Hospital, and the Community Diabetes Interface Service**

What is Joint Strategic Needs Assessment (JSNA)?

JSNA helps us to understand:

- What we know about the current health of local people
- How their needs are being met
- What we think their future needs are likely to be
- How their needs can best be met

The JSNA process involves many different partners and is overseen by Swindon's Health and Well-Being Board. Understanding Swindon's changing population, the factors that affect health and well-being, the town's assets and the implications for future services are vital in setting priorities and planning future services. This JSNA Bulletin examines the topic of diabetes.

Background

"Diabetes Mellitus" is caused by the body's inability to process carbohydrates and fats. This results in high levels of glucose in the blood which the body cannot utilise properly. There are two main types of diabetes, namely Type 1 and Type 2.

Type 1 diabetes is caused by an autoimmune destruction of those cells in the pancreas that produce the hormone insulin. Insulin helps glucose enter the body's cells where the glucose is used as fuel. People with Type 1 diabetes must take daily injections of insulin for survival. Type 1 diabetes usually appears before the age of 40, often in childhood. It is the less common of the two types and accounts for around 10 per cent of all people with diabetes.

Type 2 diabetes tends to occur in adulthood and accounts for about 90% of all diabetes. It develops when the body can still make some insulin, but not enough, or when the insulin that is produced does not work properly (known as "insulin resistance"). In many people this is a result of being overweight.

People with Type 2 diabetes are usually advised to adopt a healthier lifestyle, (with exercise, good diet and weight-reduction) and subsequently, if necessary, are treated with glucose-lowering medication and often with insulin.

Numbers of People with Diagnosed Diabetes in Swindon CCG

General Practitioners in Primary Care have disease registers for various conditions. The numbers of patients on these registers are published annually in the Quality and Outcomes Framework (QOF). The QOF registers probably under-represent the true prevalence of diabetes, as some people with the disease may not have been identified.

At the end of 2011/12, Swindon CCG had 175,308 people aged 17+ years on their practice registers, and of these 10,302 had been diagnosed with diabetes.

This equates to 5.9% of the Swindon CCG registered population and compares to 5.5% in the South West and 5.8% in England as a whole. There was variation in the prevalence recorded between individual practices in Swindon, ranging from 2.0% to 8.0%.

Levels of cardiovascular disease on the QOF register, namely Coronary Heart Disease and stroke, were, respectively, 2.8% and 1.5% in Swindon and so were at similar levels, in fact, slightly below the levels prevailing in England, respectively 3.4% and 1.7%.

Risk Factors for Type 2 Diabetes

- **Being overweight or obese**
- **Being physically inactive**
- **Having a close relative with Type 2 diabetes**
- **Being over the age of 40**
- **Being of South Asian or Black African Caribbean origin**

Modelled Prevalence of Diabetes

In the APHO (Association of Public Health Observatories) statistical model of diabetes, it was estimated that in 2012, 6.5% of people aged 16 years or older in Swindon UA would have diabetes (*diagnosed patients plus undiagnosed patients*). The figure for England as a whole would be 7.3%. This suggests that there are at least 1,000 adults registered with a Swindon CCG GP, who have undiagnosed diabetes and so do not have the opportunity to benefit from advice or treatment.

Future Prevalence of Diabetes

Obesity levels in adults in Swindon have never been measured systematically for the population as a whole. However, the APHO model (making inferences based on age, sex, ethnicity and deprivation structure) estimates that the prevalence of adult obesity may be significantly higher in Swindon UA than the England average (27% compared to 24.2%). If current trends in obesity continue, the APHO model projects that in Swindon UA an estimated 13,422 people will be living with diabetes (*whether diagnosed or undiagnosed*) in 2020 (a prevalence of 7.3%) and this will rise to 16,993 people by 2030 (a prevalence of 8.3%).

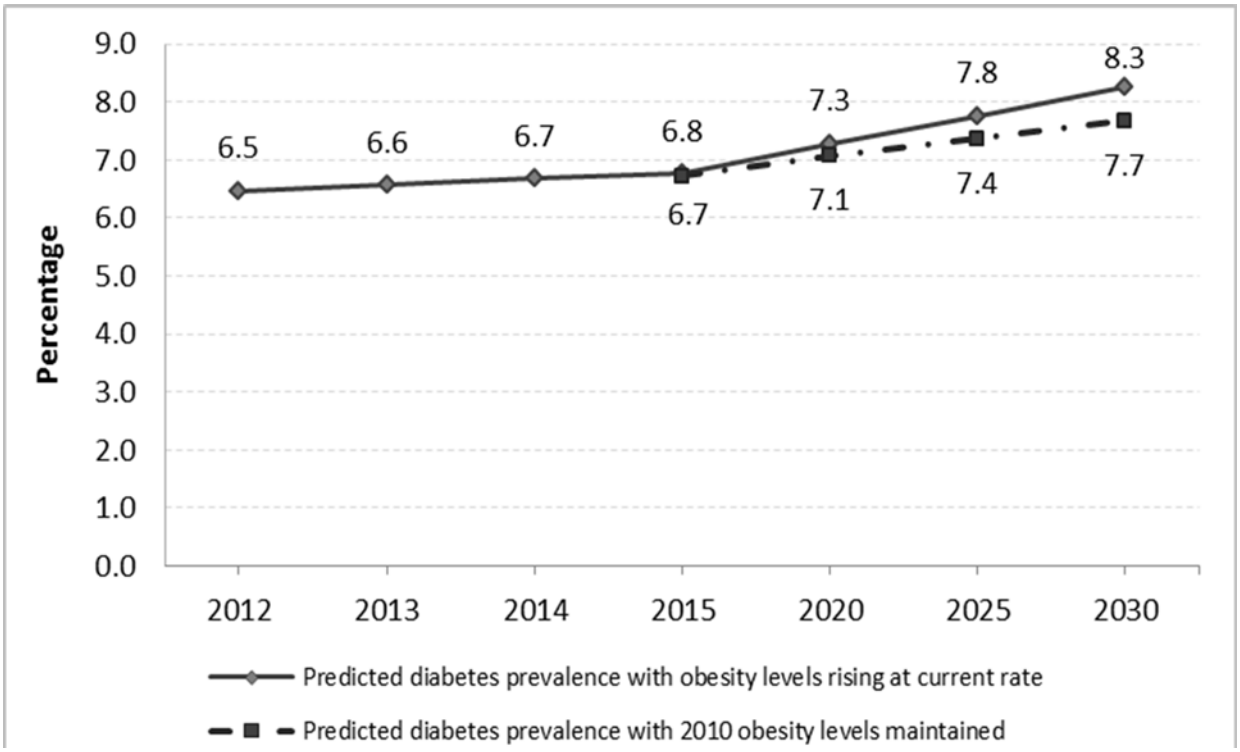
The projected trend is depicted in the graph below. However, if obesity levels in Swindon UA population could be kept at the rates found in 2010, there would be 400 fewer people with diabetes in 2020 than estimated in the initial projection. By 2030 this would mean an estimated 1,200 fewer people with diabetes, compared with the initial projection.

Obesity

As implied above, adult obesity is not routinely measured in local populations in England. In contrast to the adults, childhood obesity is systematically measured in primary schools across the nation in the National Childhood Measurement Programme (NCMP).

The obesity percentage for children in Year 6 (aged 10/11) in Swindon UA in 2011/12 was at the same level, 19.2%, as in England as a whole. The figure for Swindon varies somewhat year-by-year, however. For example, in 2010/2011, it was 17.3% and was significantly better than the figure for England as a whole, which was 19.0%.

Projected trend of diabetes prevalence in Swindon UA (aged 16+ years- diagnosed & undiagnosed)



Management of Type 2 diabetes in Primary Care

Patients with Type 2 diabetes usually receive their care in a Primary Care setting. A number of Quality and Outcomes Framework (QOF) indicators are in place under the General Medical Services contract established with GPs. These data can be used to review the levels of clinical control of diabetes in General Practices and in Swindon as a whole.

In the diabetes QOF indicators for 2011/12, Swindon fared worse than England on a number of indicators, most notably on the key indicator of HbA1c level. HbA1c level is a guide to the amount of glucose attached to haemoglobin molecules in the blood (colloquially called “blood sugar” level) The percentage of people with diabetes achieving the target of an HbA1c level of 7.5% or less was 64.2% in Swindon compared to 69.9%, the average for England.

GPs can “except” a patient from the QOF indicators, if, for example, the patient refuses treatment. However, in 2011/12 the level of exceptions in Swindon (9.2%) was somewhat higher than the England average (6.9%), so this means data on a proportion of Swindon patients with diabetes does not contribute to the overall population figures.

National Diabetes Audit (NDA) in Swindon

NICE Clinical Guidelines stipulate that patients aged 12 years or more with diabetes should receive all of nine recommended “checks”. This annual review “bundle” has been identified as having the greatest impact on reducing complications and hospital admissions. The care processes that should be reviewed include: Body Mass Index, Blood Pressure, HbA1c, blood cholesterol, eyes, feet, smoking, and measures of kidney function (serum creatinine level, urinary albumin level).

The National Diabetes Audit reports the percentage of people registered with diabetes who receive all nine care processes. Almost all Swindon GP Practices (96.3%) participated in the 2010/11 National Diabetes Audit.

There was a slight improvement in the proportion of people with diabetes in Swindon who were recorded by this audit as having had all nine care processes (21.5%), compared to the previous audit result (18% in the 2009/10 report).

This was, however, still the lowest proportion in the South West region and compared very unfavourably with the median for all PCTs (55.5%). Also, there was much variation across GP Practices in Swindon, with a range from 2% to 68%.

National Diabetes Inpatient Audit. (NaDiA) in Swindon

NaDiA is a snapshot survey of inpatient diabetes care in England and Wales. The Great Western Hospital in Swindon (GWH) participates in the audit, although the numbers involved are relatively small, with 59 patients at the GWH captured in the 2012 audit.

Emergency admission rates: At the time of the audit in 2012, 96.4% of patients with diabetes on admission at GWH had been admitted as an emergency. Of these 11.9% were admitted specifically for the management of diabetes, compared to a median value of 7.1% for England and Wales hospitals.

Footcare: In 2012, 11.9% of inpatients with diabetes were admitted with foot disease. This was down from a notably high figure of 18.4% reported in 2011, but was still higher than the median value for England and Wales in 2012, which was 8.3% for that year.

Diabetic Ketoacidosis: Patients with this serious condition, in which vomiting, dehydration and sometimes coma can occur, usually require hospital admission. Between 2002/03 and 2010/11 hospital admission rates for diabetic ketoacidosis and coma in the Swindon CCG population have been higher than rates in the South West and in England as a whole. Complementary data from the National Diabetes Audit (NDA) indicate 55 admissions for diabetic ketoacidosis and coma in the year 2010/11. This is 46% higher than we would expect from a comparison with England and Wales.

Overall Patient Satisfaction: Patients with diabetes were asked to state, as part of NaDiA, whether they were satisfied overall with their inpatient treatment. In 2011 76.8% of patients reported overall satisfaction at the GWH, while the median value for England and Wales was higher, at 86.5%. By 2012, the GWH percentage had risen to 89.7%, and had thus overtaken the national median value for that year, 86.5%.

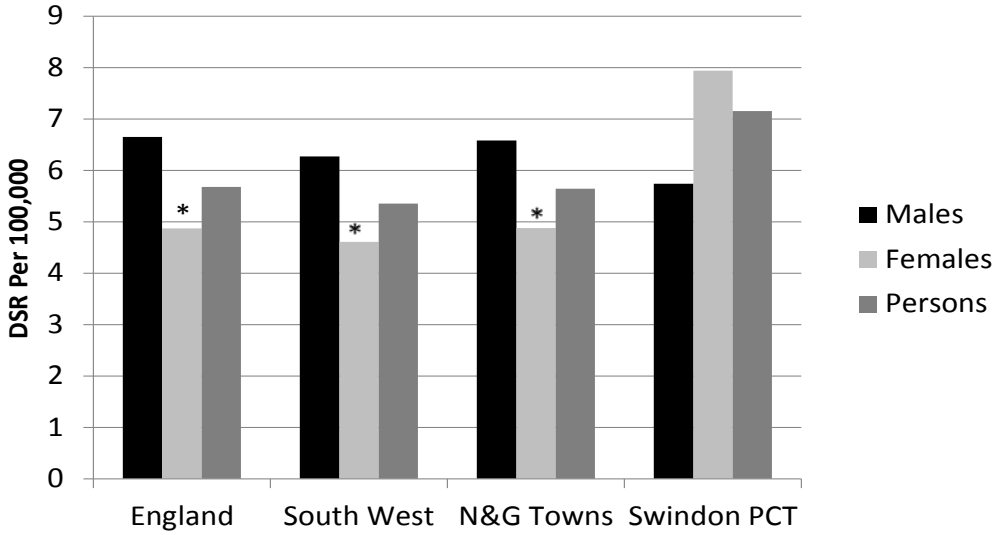
Mortality from Diabetes

Diabetes that is poorly managed can not only lead to complications, but also to premature death. Data from the Compendium of Population Health Indicators show that the mortality rate from diabetes in Swindon CCG residents has declined from 9.41 per 100,000 in 2002 to 6.77 per 100,000 in 2010 (directly standardised rates). This has also been the case for persons in the South West and England as a whole. The graph below shows the mortality rates for males, females and persons, (of all ages) for Swindon CCG/PCT (in the period 2008 to 2010) and compares them with rates for England, the South West and the New and Growing Towns group. Swindon rates for females were higher than all these comparator groups at a statistically significant level.

The degree of control of diabetes in a population is likely to have an impact on the level of mortality from cardiovascular disease (CVD). It is reassuring that levels of CVD mortality in Swindon do not currently exceed those in the comparison areas. However, as the second graph below indicates, Swindon women aged under 75 years had a higher rate than South West women in the same age-group, in the period 2008 to 2010, at a statistically significant level. (The same is also true of “persons” for this comparison, but not for men on their own).

Thus, this set of mortality data suggests that, in some respects, Swindon women with diabetes may be faring less well in comparison with their peers in England, the South West and New and Growing Towns, than we might have expected, given the fact that Swindon men seem to have mortality levels closer to those in our comparators.

Diabetes Mortality in People of All Ages in 2008-2010 combined. Directly Standardised Rate per 100,000 per annum (ICD 10 E10-E14)

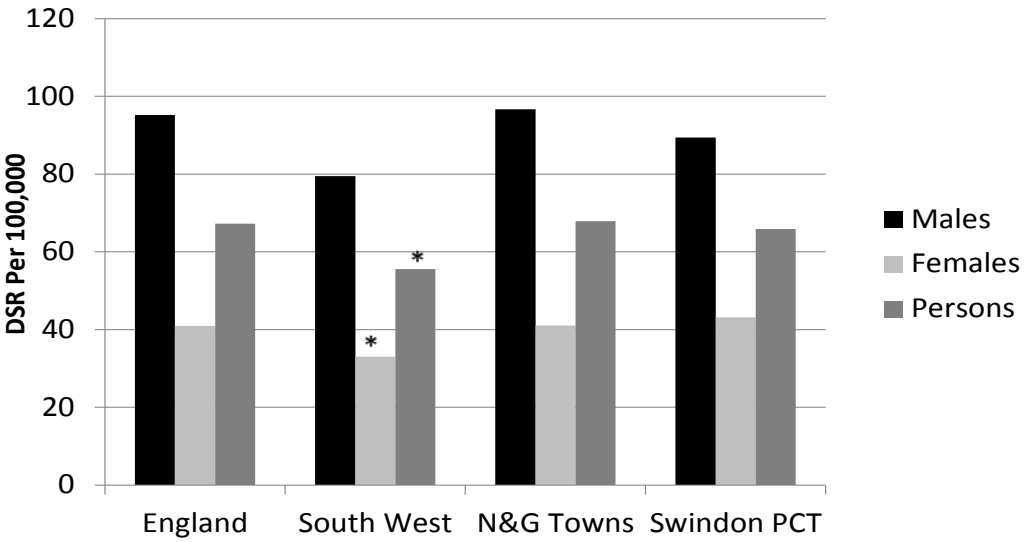


Numbers: 21 males and 43 females in Swindon PCT.

Differences between Swindon PCT and other areas reaching statistical significance denoted *

Source: Compendium of Population Health Indicators

Cardiovascular Mortality in People aged < 75 years in 2008-2010 combined. Directly Standardised Rate per 100,000 per annum (ICD 10 I00-I99)



Numbers: 267 males and 135 females in Swindon PCT.

Differences between Swindon PCT and other areas reaching statistical significance denoted *

Source: Compendium of Population Health Indicators

Current Initiatives

DESMOND (Diabetes Education and Self-Management for Ongoing and Newly Diagnosed): This is currently running in Swindon, commissioned by Swindon CCG and delivered by Great Western Hospital, partly in community settings. The course covers what Type 2 diabetes actually is, and offers support for patients on how to manage their life with Type 2 diabetes. It also provides the opportunity for patients to meet and share experiences with others.

Pacesetters: Swindon professionals and local people were involved in developing programmes related to diabetes as part of this Department of Health inequalities programme. The national Pacesetters programme is no longer running, but resources and material developed from this initiative are still being used and developed to benefit Swindon people.

People with Learning Disabilities: The Swindon Public Health Team has recently led a project to improve services for adults with learning disabilities and diabetes, working with the adult Learning Disabilities Service and the local Nutrition and Dietetic Department. Training packs have been developed for these courses by the specialist diabetes dietitian, which are still being used to run local courses. These packs can be used by diabetes specialist nurses and/or dietitians in other areas and are available from the Public Health Team. The course is being run in 2013 for carers of anyone with mental capacity issues.

Adult Weight Control: The Public Health Team in Swindon commissions a choice of free weight management programmes for obese adults who meet one or more of these criteria: they have Type 2 diabetes, are eligible for free prescriptions, have a mild learning disability, are on the mental health register (and are able to attend groups), are booked for knee or hip surgery.

Child and Family Weight Management programme: SBC leisure services deliver the national MEND programme.

Community Physical Activity: A range of community programmes continues to be offered, including “Exercise on Referral”, “Health Walks”, and “Pulmonary/heart failure rehab”. “Tri-active project” a new project for 2013, promotes activity in deprived areas, mainly amongst women.

Healthy Eating for Mums to be: this is delivered through the maternity services.

Early Diagnosis through Health Checks: An NHS Health Check can identify those at risk and facilitate early diagnosis. NHS Health Checks are available from GP practices, local pharmacies and other community venues.

The Community Diabetes Interface Service: This is headed by a Consultant Diabetologist, and two Diabetes Specialist Nurses. The interface service involves extending the role of the nurses in the community and increasing the consultant sessions to include working with GP practices.

The Diabetes Clinical Network: This includes a range of health professionals who work with people with diabetes in Swindon, as well as other stakeholders.

“DM Foot Team”: Building on the successful appointment of the Diabetic Foot Co-ordinator in August 2010, GWH has now added further outpatient and inpatient support to the acute, high-risk podiatric service. This complements the existing outpatient service which offered clinics on 2 days a week. The appointment of an additional podiatrist, has enabled acute high-risk clinics to run on 4 days per week

Key Recommendations

The Health Community in Swindon should:

1. Continue local campaigns which promote a healthy lifestyle. The full range of relevant health promotion leaflets should be used to help people with diabetes and also people who need to develop a healthier lifestyle

2. Identify and support people in Swindon who have diabetes that has not been diagnosed; this identification could take place through the existing programme of NHS Health Checks, although other methods might also be adopted

3. Conduct a confidential audit of the records of people with diagnosed diabetes in Swindon who are "excepted" from the GPs' Quality Outcomes Framework (QOF) Register (i.e. deliberately left out of the assessment of key indicators)

4. Review the services being provided for people from Black African-Caribbean groups and people from the South Asian community in Swindon, as these people are at higher risk of diabetes and its complications; the NHS Health Check programme might be of particular benefit to them

5. Conduct an audit to see that women in Swindon are benefiting as fully as men from diabetes services in Primary Care; this should include a comparison of the achievement of the HbA1c targets in men and women

6. Fully support the work of the Community Diabetes Interface Service and of the DM Foot Team at GWH

Where to find more information

Swindon Diabetes Website

Swindon Diabetes website can be found at:
Swindon Diabetes | Supporting people with Diabetes in Swindon

This Bulletin is an abbreviated version of the JSNA Diabetes Profile 2013. The full Profile provides more information on the issues covered by this bulletin, and includes a full set of references, a select technical glossary and acknowledgement of contributors. It can be found on Swindon's JSNA website:
Joint Strategic Needs Assessment - Health and Wellbeing - Swindon Borough Council

This website includes a range of other documents about health and wellbeing in Swindon.

If you have any queries, please contact Chris Bartlett (CBartlett@Swindon.gov.uk)

This bulletin was published in October 2013 and will be reviewed in June 2014