



**Northamptonshire
Health & Wellbeing Board**

JSNA Summary 2013

Diabetes

Delivering meaningful, healthier, longer lives for the people of Northamptonshire

Introduction

- There are two main types of diabetes, type 1 and type 2. Type 2 diabetes is much more common. It can be preceded by a pre-diabetic state in which levels of sugar in the blood are raised, but are not yet high enough to diagnose diabetes. People with type 2 diabetes have high rates of coronary heart disease and stroke. Other complications of diabetes include kidney failure, eye disease and circulatory and neurological problems in the foot and leg.
- Diabetes is more common in socio-economically deprived communities and in Black and Asian people.
- In Everyone's Interest, Northamptonshire's Health and Wellbeing Strategy 2013-16, does not mention diabetes specifically, though one of the document's three strategic outcomes is that "people have healthier lifestyles and exert greater control over their health and wellbeing". Of the strategy's five priorities, reducing levels of childhood obesity will contribute to a reduction in diabetes. Neither Corby Clinical Commissioning Group (CCG)'s document Shaping Healthcare Services in Corby 2013/14 nor Nene CCG's Top Priorities mentions diabetes.

Key Points

- 31,917 people in Northamptonshire have been recorded with a diagnosis of diabetes on a primary health care disease register, a prevalence of 5.6%. This is slightly less than the average diagnosed diabetes prevalence of 5.8% for [England](#).
- There are an estimated 6,800 Northamptonshire residents with undiagnosed diabetes. Finding and treating them is a priority.
- There are substantial differences in the recorded prevalence of diabetes between practices in Northamptonshire, suggesting more widespread under-diagnosis in some practices. The highest recorded prevalence is one patient in eleven, the lowest is one in eighty-three. Undiagnosed diabetes increases the risk of serious complications from the disease.
- The prevalence of diabetes in Northamptonshire is set to rise. Between 2013 and 2030, it will have risen from 6.9% to 8.8%.
- Over this period, increases in the number of people living in the County, along with aging of the population, mean that the number of people with diabetes in Northamptonshire will rise by more than 50%, from about 41,000 in 2013 to about 64,000 in 2030. Half of this increase, to 7.8%, will occur before 2020, and most of the extra people with diabetes will be elderly.
- If obesity levels in Northamptonshire could be maintained at the 2010 prevalence, there would be 1400 fewer people with diabetes in 2020, equivalent to 2.9% of people projected to have diabetes. By 2030, a constant prevalence of obesity would mean an estimated 4200 fewer people with diabetes, equivalent to 7% of people projected to have diabetes by that time. This underlines the importance of obesity prevention to the future of health and social services in Northamptonshire.
- There is comprehensive guidance from the National Institute for Health and Clinical Excellence on the prevention and management of diabetes.
- There are no documents available which describe how physical activity and healthy eating are promoted in Northamptonshire.

- Northamptonshire has pre-diabetes patient education programmes linked to NHS Health Check. The programme includes people over 40 years old with a body mass index above 27 and risk indicators for coronary heart disease.
- In 2011/12, only 60% of Corby patients, and 56% of those in Nene, received all care processes recommended by NICE. Corby is in the third quartile for England and Nene in the fourth for this [measure](#), indicating that most practices elsewhere do better. Both CCGs saw a deterioration in the proportion of patients who had their diabetes control measured, and both show substantial variation between practices on measures of the quality of care for people with diabetes. This increases the risk of complications.
- In Corby, only 51% of patients have adequately controlled diabetes, while in Nene it is 57%; this also places the patients at increased risk of complications. Overall, fewer than one in five patients with diabetes in each CCG meets treatment targets for diabetic control, blood pressure and cholesterol. Nene is in the bottom quartile of CCGs on this measure too, with Corby in the third [one](#).
- In April 2012, Northamptonshire put in place a community-based multi-disciplinary team to reduce unnecessary referrals and admissions for people with diabetes. During a pilot phase in 2011/12, there were improvements in the cost-effectiveness of prescribing, and a 48% reduction in the number of admissions of people with diabetes. Outpatient appointments for first attenders have however continued to rise, and cost £1.36m per year.
- Rates of complications of diabetes in Northamptonshire are higher than average for England. People with diabetes in the County are 64% more likely to suffer a heart attack, 61% more likely to be admitted to hospital with heart failure and 30% more likely to have a stroke than local people without [diabetes](#). These outcomes reflect the quality of management of diabetes and would be better if diabetic control and management in primary care was improved.
- Deaths among patients with diabetes admitted to Northampton General Hospital were higher than expected and higher compared to comparable hospitals in England. In 2010/11 to 2011/12, 244 patients (of 6,130) with diabetes died at the hospital, 26% more than would have occurred in national mortality rates had prevailed. If the hospital's death rate for people with diabetes had been average for England, 62 deaths would have been [avoided](#). There could be a number of reasons for this which need further investigation.
- Furthermore, inpatients with diabetes at Northampton are 29% more likely to die in hospital than those without diabetes, whereas this difference is only 7% over all hospitals; this difference is also statistically [significant](#). This comparison leads to an estimate of 71 excess deaths at Northampton. These findings need further investigation, including of the quality of the underlying data.
- Corby CCG has been recorded as having the highest rate of major amputations for diabetes in [England](#), though inaccurate coding was found to explain this.
- [Commissioning for Value](#), a programme designed to help CCGs improve value and outcomes, showed that in 2011/12, Nene CCG spending on endocrine services, mostly diabetes, included £5.48 per head for secondary care; this comprised £2.16 per head for elective and day-case admissions and £3.30 per head on emergency admissions. Admission rates in these categories were respectively 4.8, 3.0 and 1.8 per thousand. Rates and costs for elective admissions are relatively high, in the highest quartile for England, while emergency admissions and costs are in the second-highest quartile.
- Comparison with similar CCGs suggests that £769,000 could be saved from Nene CCG's spending on elective endocrine services, and £392,000 from emergency endocrine services; these potential savings were among the smallest of the clinical

areas considered. Prescribing costs could be reduced by £1.3m. However, Nene's relatively higher rates of admission, prescribing and expenditure are partly attributable to the deprivation of Nene relative to its peer group; once this is taken into account, the amounts available for saving may not be material.

- Corby CCG's spending in 2011/12 on the endocrine category was £5.14 per head for secondary care; this comprised £2.26 per head for elective and day-case admissions and £2.83 per head for emergency admissions. In comparison to all CCGs, Corby shows a similar pattern to Nene: rates of and spend on elective and day-case admissions are high, in the top quartile, while rates of emergency admissions are in the third quartile and the associated expenditure is in the fourth quartile. Savings of £60,000 may be available.
- The validity of the *Commissioning for Value* approach needs further assessment. In any case, the results for both Nene and Corby CCGs point to only small reductions in costs from implementing change in endocrine, nutritional and metabolic commissioning. There are likely to be larger benefits from concentrating use of the approach on other clinical programmes.
- It would be worth investigating the following questions:
 - Why do some practices in Northamptonshire achieve much better results in finding and treating people with diabetes than others? How can we promote the transfer of skills and experiences to those practices performing less successfully?
 - What underlies the apparently high rates of inpatient mortality in people with diabetes at Northampton General Hospital? Have there been national or local enquiries? Are there any common features to the patients who died, such as surgery, myocardial infarction or renal failure?
 - Are the apparently high rates of amputations in Corby entirely attributable to inaccurate coding?
 - The introduction of the new diabetes multi-disciplinary team appears not to have affected the annual rate of increase in outpatient referrals to diabetic clinics. Are NICE guidelines on referral being followed? What further steps could be taken to ensure the team achieves its goals?
 - To what extent are the results of costing analysis in Nene due to the allocation of the CCG to a group made up of more affluent CCGs? To what extent are there opportunities for activity and cost reductions, given the scale of need in Northamptonshire?

Conclusions

- In common with many other places, Northamptonshire is facing a large increase in the number of people with diabetes. Reducing the size of this increase, particularly by preventing obesity, is of great strategic importance. However, there is as yet no strategy being fully implemented to promote healthy eating and physical activity and to prevent obesity in Northamptonshire.
- Primary care services are central to meeting the needs of people at risk of and already affected by diabetes. However, there are about 6,800 people with undiagnosed diabetes in Northamptonshire, whose risk of complications would be reduced by earlier diagnosis. People with diagnosed diabetes in the County usually do not receive all the care recommended by NICE to prevent progression of the disease. As a result, preventable complications of diabetes occur more often than elsewhere in England.

- Hospital diabetic services have recently been augmented by a new multi-disciplinary team. However, outpatient referrals continue to increase and both CCGs have higher rates of elective and day-case admissions for diabetes than their peer-groups.
- The limited information available on the quality of hospital services appears satisfactory. There are however indications of higher than expected inpatient mortality at Northampton General Hospital and higher than expected mortality rates for Corby CCG residents with diabetes.

Recommendations

- Prevention of diabetes should receive more strategic attention in Northamptonshire. Northamptonshire Health and Well-being Board should oversee a programme of work to prevent type 2 diabetes. This should comprise
 - An obesity strategy (see obesity JSNA section)
 - Strategies on healthy eating and physical activity (see cardiovascular disease JSNA section)
 - A programme to find and reduce risk in those at higher-risk of diabetes. This should include:
 - Action to raise awareness of the risks of type 2 diabetes
 - A proactive approach to identifying people at high risk (and those with undiagnosed type 2 diabetes)
 - Evidence-based, quality-assured intensive lifestyle-change programmes
 - Clear organisational responsibilities for local type 2 diabetes risk assessments. These could take place in primary care or community pharmacies as part of, or as a local addition to, the NHS Health Check programme, or as a self-assessment in community venues and workplaces.
 - Arrangements to invite people of South Asian, Chinese, African-Caribbean and black African descent aged 25 and over for a risk assessment at least once every five years
 - Encouragement for employers in public and private sector organisations to include risk assessments in their occupational health service contracts.
 - Coordinated referral pathways for evidence-based and quality-assured intensive lifestyle-change programmes that cover physical activity, weight management and diet, and which teach behaviour-change techniques.
 - Guidance is available [here](#).
 - *The pre-diabetes education programme* should be developed, evaluated and rolled-out. This programme is an innovative and responsive way to prevent diabetes in those at high-risk. Its impact would be maximised by an acceleration of the NHS Health Check programme in primary care, by further evaluation to ensure the programme is working as intended and development work to tailor it more closely to identified needs.
- Primary care services for people with diabetes in Northamptonshire should be developed:

- Further work is needed to identify the approximately 6,800 people with undiagnosed diabetes in the County. The best approach to achieving this would be to accelerate the NHS Health Check programme, which will lead to both diagnosis of diabetes and identification of those at higher risk in whom preventive interventions are appropriate.
- Practices should be supported to improve the completeness of the care that they provide to people with diabetes. An important element of this is an annual review for everyone with diabetes, with close attention to monitoring of all relevant measures of risk, and prompt and effective action to reduce risk. One approach to service improvement would be to develop mentoring relationships between local practices with high performance in this field and those who are as yet less successful. CCGs should also consider the role of local diabetes coordinators in helping practices ensure that all their patients with diabetes have an annual review which lead to successful mitigation of risk of progression and complications.
- *Commissioners should review are three aspects of community and inpatient services:*
 - The apparent high levels of spending on elective and day-case treatment. These findings, from *Commissioning for Value*, need further consideration in order to assess their meaning, and their priority alongside *Commissioning for Value* findings for other programmes.
 - The wider value of a programme budgeting approach to diabetes and other long-term conditions. If Northamptonshire commissioners could see the overall shape of their investment in diabetes, including prevention, primary care, community and hospital services, they would be able to consider how to re-allocate funds in order to maximise impact.
 - The apparently high mortality rate at Northampton General Hospital. This is an important signal of service quality and needs review. The detail of the review of high amputation rates in Corby is not clear and it would be worth confirming that it fully dealt with all concerns.
- *The community-based multi-disciplinary team* is an important innovation. Its impact and outcomes should be monitored to ensure it progresses as expected.

Key early priorities are:

- Improving the diagnosis and management of diabetes in primary care
- Investigating the apparent high mortality at Northampton General Hospital.

This needs assessment should be read in conjunction with the reports on obesity and cardiovascular disease.