National Audit Office

Report
by the Comptroller
and Auditor General

Department of Health and NHS England

The management of adult diabetes services in the NHS: progress review

HC 489 SESSION 2015-16 21 OCTOBER 2015

Key facts

£5.6bn

estimated cost to the NHS of diabetes in England, in 2010-11

3.2m

people in England were estimated to have diabetes in 2013-14, with 2.8 million diagnosed

22,000

people in England estimated to be dying each year from diabetes-related causes that could potentially be avoided

59%	of registered diabetes patients received all eight key care processes, monitored through the National Diabetes Audit, in 2012-13
36%	of registered diabetes patients were achieving all three diabetes-related treatment standards for blood glucose, blood pressure and cholesterol levels, in 2012-13
Fewer than 4%	of newly diagnosed diabetes patients were recorded as having taken up a structured education programme, in 2012-13
10% to 65%	variation in the additional risk of death among people with diabetes, within a one-year follow-up period, compared with the general population
55%	of patients reported that they were able to take control of their own diabetes care while in hospital to the extent they would have liked, in 2012-13

Summary

1 Diabetes is a chronic condition where the body does not produce enough insulin to regulate blood glucose levels. The percentage of the adult population in England with diabetes has more than doubled between 1996-97 and 2013-14. In 2013-14, there were an estimated 3.2 million people aged 16 years or older with diabetes in England, of whom 2.8 million (6.2% of the adult population) were diagnosed and 400,000 (1.2% of the adult population) were undiagnosed. Since we last reported on diabetes services in 2012, the number of people aged 16 years or older with diagnosed diabetes has, on average, increased by 4.8% a year.

2 There are two main types of diabetes (**Figure 1** overleaf). Around 10% of people diagnosed with diabetes have type 1 diabetes, which occurs when the body produces no insulin. The remaining 90% have type 2 diabetes, which occurs when the body cannot produce enough insulin to function properly, or when the body's cells do not react to insulin.

3 The percentage of the population with type 2 diabetes is strongly associated with social deprivation. Being overweight is the main modifiable risk factor for type 2 diabetes. Obesity is rising and this has led to an increase in the percentage of the adult population with diabetes. About 90% of adults with type 2 diabetes are overweight or obese.

4 With structured education and appropriate support, most people with diabetes can manage their condition themselves by, for example, eating a healthy diet, monitoring their blood glucose level and taking insulin or glucose-lowering medication as needed. They also need regular checks to monitor treatable risks for diabetic tissue damage and to detect the early damage itself, so that treatment can be given to prevent deterioration. In 2001, the Department of Health (the Department) set out nine care processes that people with diabetes should receive each year to detect the early signs of complications. The National Institute for Health and Care Excellence (NICE) has also set treatment standards for blood glucose, blood pressure and cholesterol which, when achieved, reduce the risk of a person with diabetes developing complications (**Figure 2** on page 7).

5 The estimated cost of diabetes to the NHS in England was £5.6 billion in 2010-11. The cost of complications (such as amputation, blindness, kidney failure and stroke) accounted for 69% of these costs.

Figure 1
Main types of diabetes[1]

Type of diabetes	Type 1	Type 2
Approximate percentage of diagnosed diabetes patients	10%	90%
Description	Occurs when the body produces no insulin. People usually develop type 1 diabetes before the age of 40, often during their teenage years.	Occurs when the body cannot produce enough insulin to function properly, or when the body's cells do not react to insulin. It may remain undetected for many years.
Action needed to manage the condition	People with type 1 diabetes need daily injections of insulin to survive.	People with type 2 diabetes need to adjust their diet and their lifestyle. The condition is progressive and over time most people with type 2 diabetes will also need to take tablets or insulin to control their blood glucose level.
Main risk factors	Family history	Being overweight or obese
		Deprivation
	Genetics	Ethnicity
		Age
		Family history

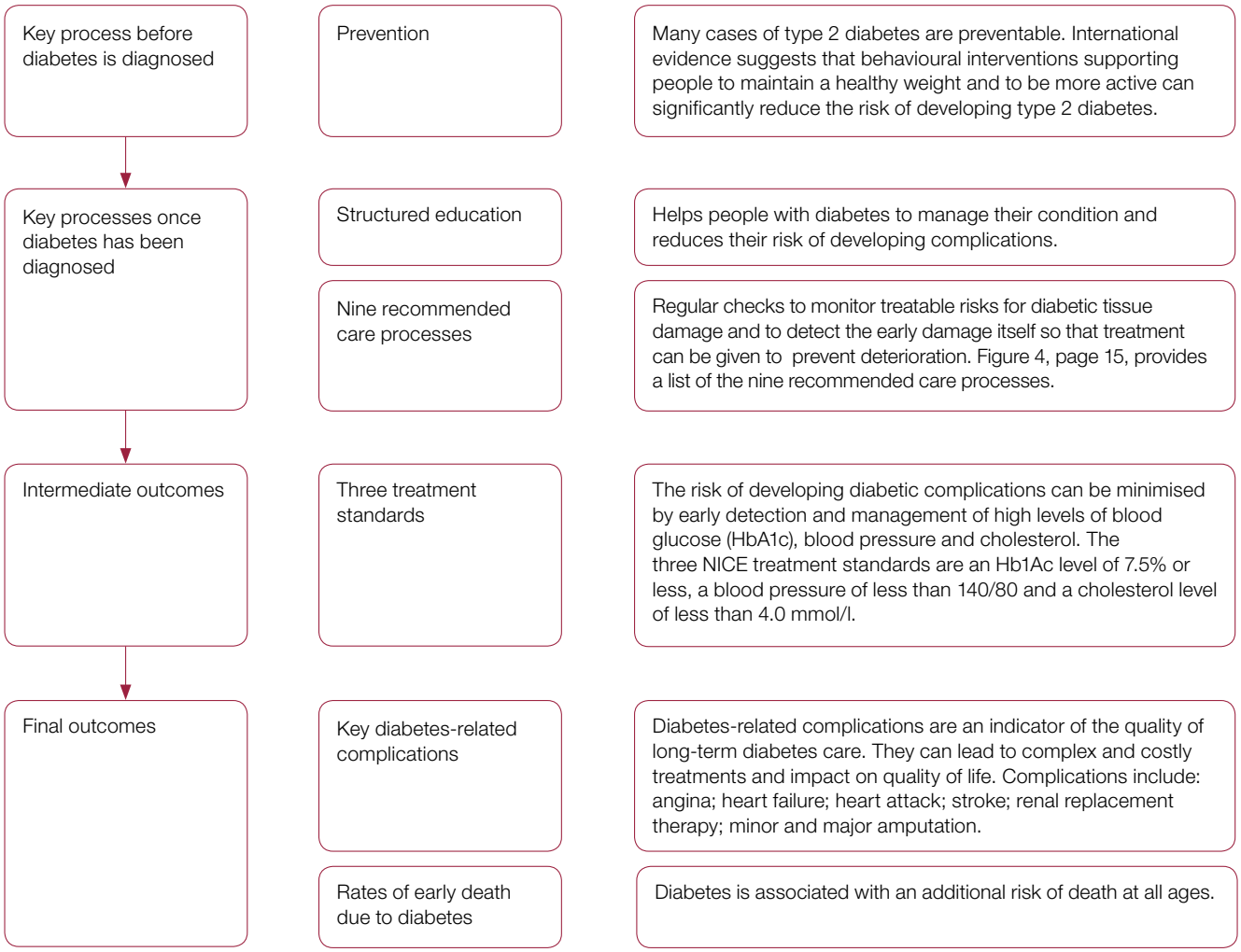
Note

1 Other types of diabetes include maturity onset diabetes of the young and rare types of diabetes which are often linked to genetically inherited syndromes.

Source: National Audit Office

Figure 2

Key processes and outcomes in the management of diabetes



Source: National Audit Office

6 In 2012, we reported on *The management of adult diabetes services in the NHS*.[1] The Committee of Public Accounts took evidence on the report and concluded that too many people with diabetes were developing complications because they were not receiving the care and support they needed.[2] The Committee made seven recommendations aimed at improving services and achieving better outcomes for people with diabetes and minimising the growth in the number of people with diabetes.

Scope

7 In 2014, the Committee asked us to review progress in improving diabetes services. This review was a short, focused piece of work looking specifically at progress against the Committee's recommendations and progress against key outcomes, rather than an examination of value for money. This report covers:

- an overview of NHS services for people with diabetes (Part One);
- progress against recommended standards of care and key outcomes (Part Two); and
- improving the performance of diabetes services (Part Three).

8 This review draws heavily on data that were already available. The latest data are for 2012-13. In Appendix One we assess progress against the Committee's recommendations. Our audit approach is in Appendix Two.

Findings

9 An estimated 200,000 people are newly diagnosed with diabetes each year. A number of NHS initiatives aim to minimise the growth in numbers. For example, the NHS Health Check programme, commissioned by local authorities, addresses the top seven causes of preventable mortality: high blood pressure; smoking; cholesterol; obesity; poor diet; physical inactivity; and alcohol consumption. And in March 2015, the national NHS Diabetes Prevention Programme was launched, which targets people at high risk of developing type 2 diabetes (paragraphs 2.3 to 2.8).

10 Few newly diagnosed diabetes patients are recorded as being offered structured education or taking up the offer. The percentage of newly diagnosed diabetes patients recorded as being offered structured education and recorded as taking up the offer is improving each year, but in 2012-13 these percentages were only 16% and 4% respectively. In some areas, poor recording of the take-up of education programmes is an issue. Potential barriers to the take-up of diabetes education and support include: variable levels of provision across the country; patients being given little information about the aims and benefits of the education; practical difficulties in attending courses; and healthcare professionals' lack of awareness of the benefits of education programmes (paragraphs 2.9 to 2.13).

1 Comptroller and Auditor General, *The management of adult diabetes services in the NHS*, Session 2012-13, HC 21, National Audit Office, May 2012.
2 HC Committee of Public Accounts, *The management of adult diabetes services in the NHS*, Seventeenth Report of Session 2012-13, HC 289, November 2012.

11 NHS performance in delivering the nine recommended care processes has not improved since we last reported on diabetes services. Between 2009-10 and 2012-13, the percentage of registered diabetes patients receiving all the care processes except eye screening, monitored through the National Diabetes Audit, remained at around 60%. Data on eye screening is now reported independently through the NHS diabetic eye screening programme (paragraphs 2.15 and 2.16).

12 The percentage of diabetes patients achieving all three treatment standards has improved slightly since 2009-10 but did not change between 2011-12 and 2012-13. Between 2009-10 and 2011-12, the percentage of registered diabetes patients achieving the recommended NICE treatment standards to control blood glucose, blood pressure and cholesterol increased from 19.4% to 20.9%. In 2012-13, the Health and Social Care Information Centre modified the blood pressure treatment standard. As a result, the percentage of registered diabetes patients achieving all three treatment standards increased to 36% in 2012-13. However, underlying performance did not change between 2011-12 and 2012-13 (paragraphs 2.21 and 2.22).

13 Diabetes specialist staffing levels in hospitals have not changed since we last reported on diabetes services. The percentage of beds in acute hospitals in England occupied by people with diabetes increased from 14.8% in 2010 to 15.7% in 2013. However, the level of diabetes specialists has not significantly changed. In 2013, nearly one-third of hospitals in England taking part in the National Diabetes Inpatient Audit still had no diabetes inpatient specialist nurse and 6% did not have any consultant time for diabetes inpatient care (paragraphs 1.8 and 2.29).

14 Current funding models do not support the delivery of integrated diabetes services. Most of the organisations we spoke to told us that diabetes care needs to be more integrated if performance against the nine recommended care processes and three treatment standards is to improve. Most of the organisations also told us that current organisation-based funding models do not support integrated diabetes care. Where more integrated care is being delivered, this has been achieved despite the system, not because of it (paragraph 3.6).

15 There has been a statistically significant reduction in premature death for those with type 2 diabetes since we last reported on diabetes services. In 2013, people with diabetes were 34% more likely to die that year than the general population in England, an improvement since 2011 when they were 44% more likely to die. A benchmarking study of 19 countries, published in 2013, indicated that in 2010 the UK had the lowest rates of early death due to diabetes. In addition, the relative risk for a person with type 1 or type 2 diabetes developing a diabetes-related complication has not changed or has fallen for most complications. The exception is minor amputation, which is increasing. The increase in the number of people with diabetes means, however, that the absolute number of diabetes patients with complications is rising (paragraphs 2.32, 2.34 and 2.35).

16 Some groups of diabetes patients receive worse routine care and treatment and have poorer outcomes. Younger people with type 1 and type 2 diabetes and people with type 1 diabetes of all ages receive fewer of the recommended care processes and are less likely to achieve the three treatment standards. This can lead to poorer outcomes. For example, the relative risk of premature death for young women (aged 15 to 34) with type 1 diabetes is particularly high (paragraphs 2.18, 2.24, 2.31 and 2.36).

17 There are significant geographical variations in delivering care processes, achieving treatment standards and in outcomes for diabetes patients. For example, across clinical commissioning groups: the percentage of people with diabetes receiving all the recommended care processes, apart from eye screening, ranged from 30% to 76% in 2012-13; the percentage of people with diabetes achieving all three treatment standards ranged from 28% to 48% in 2012-13; and the additional risk of death among people with diabetes within a one-year follow-up period, ranged from 10% to 65%. Variations across GP practices are likely to be larger, but limited data at this level are available (paragraphs 2.11, 2.19, 2.25 and 2.33).

Conclusion

18 Data now available since we last reported on diabetes services in 2012 show that the Department, its arm's-length bodies and the NHS have made progress in reducing the additional risk of death for people with diabetes. The risk of complications for people with diabetes has been stable or has reduced for most complications. Improvements in delivering the nine recommended care processes and achieving three treatment standards between 2004 and 2010, highlighted in our previous report, are likely to have contributed to the improvements in excess mortality.

19 However, performance in delivering the nine care processes and achieving the three treatment standards is no longer improving. Very few newly diagnosed diabetes patients are recorded as attending structured education that could help them manage their diabetes. Improving performance across these areas is vital if performance in reducing the additional risk of complications and reducing additional mortality is to continue. This, in turn, will help to control the costs of diabetes, given that complications account for over two-thirds of the estimated costs of diabetes to the NHS.

20 The significant variations across England in delivering care processes, achieving treatment standards and improving outcomes for diabetes patients suggests there is considerable scope to improve diabetes services and outcomes. Addressing these variations, along with aligning financial incentives to enable care to be more integrated, will be key to ensuring outcomes for diabetes patients improve. The experiences of other countries suggest that the NHS Diabetes Prevention Programme has the potential to minimise growth in the number of people with diabetes.

Recommendations

a **Significant geographic variations persist in the quality of care for people with diabetes and in their outcomes.** NHS England should set out how it intends to hold clinical commissioning groups to account for poor performance in delivering the nine care processes, the three treatment standards and longer-term outcomes.

b **Information on variations in care processes and outcomes is not complete.** NHS England should ensure that gaps in data are filled and that clear, high-quality information is available to help improve services. In particular it should address the following issues: not all GP practices provide data on their performance in delivering the recommended care processes and achieving all three diabetes-related treatment targets; GP practice-level data on these are currently not publicly available; and recorded take-up of patient education may not be a true picture of actual take-up.

c **Some groups of diabetes patients, such as patients with type 1 diabetes, receive worse routine care and have poorer outcomes.** To improve performance for groups that receive worse care and have poorer outcomes, NHS England should consider setting separate targets for different groups of diabetes patients, such as by type and age. Targets would be for the percentage of patients receiving the recommended care process and achieving all three treatment standards.

d **With access to education and support, many people with diabetes can manage their condition effectively, but few people with diabetes are recorded as receiving patient education.** NHS England should work with clinical commissioning groups to broaden the education offer available locally, for example by offering e-learning. It should build up an evidence base of what works in improving take-up rates, and disseminate this knowledge to commissioners.

e **The percentage of hospital beds occupied by diabetes patients is increasing but levels of diabetes specialist staff have not changed.** Where shortfalls in specialist diabetes staff persist, NHS England and clinical commissioning groups should ensure that hospital services comply with NICE guidance that people with diabetes admitted to hospital are cared for by appropriately trained staff.

f **Current payment mechanisms within the NHS are not offering incentives to integrate diabetes care.** NHS England and Monitor should examine ways to support integrated diabetes care and spread best practice from areas that are already delivering more integrated diabetes care across primary, community and hospital care settings.