THE COST OF DIABETES

REPORT

DIABETES UK

CARE. CONNECT. CAMPAIGN.

CONTENTS

ABOUT DIABETES

Diabetes is a condition where there is too much glucose in the blood because the body cannot use it properly. This happens because the pancreas does not produce any insulin, or not enough, or the insulin it does produce is unable to work properly. This is a problem because insulin is the key that unlocks the door to the body's cells so glucose can enter them. So with diabetes, the body is unable to use glucose as fuel and instead glucose builds up in the blood.

There are two main types of diabetes

Type 1 and Type 2. They are different conditions, with different causes. The treatments can be different too. Both types are serious, lifelong conditions that can lead to devastating complications if they are not managed well. But with the right treatment and support, people with diabetes can reduce their risk of developing complications.

Type 1 diabetes

People with Type 1 diabetes cannot produce insulin. About 10 per cent of people diagnosed with diabetes have Type 1. No one knows exactly what causes it, but it's not to do with being overweight and it isn't currently preventable. It is usually diagnosed in children or young adults, starting suddenly and getting worse quickly.

Type 2 diabetes

People with Type 2 diabetes don't produce enough insulin or the insulin they produce doesn't work properly. About 90 per cent of people diagnosed with diabetes have Type 2. They might get Type 2 diabetes because their family history, age or ethnic background puts them at increased risk. They are also more likely to get Type 2 diabetes if they are overweight. It starts gradually, usually later in life, and it can be years before people realise they have it.

There are other forms of diabetes, such as MODY (Maturity onset diabetes of the young), but these are much rarer than Type 1 and Type 2 diabetes.

So far, there is no cure for diabetes.

ABOUT DIABETES UK

Diabetes UK is the leading UK charity that cares for, connects with, and campaigns on behalf of people affected by and at risk of diabetes:

- We help people manage their diabetes effectively by providing information, advice and support
- We campaign with people with diabetes and with healthcare professionals to improve the quality of care across the UK's health services
- We fund pioneering research into care, cure and prevention for all types of diabetes
- We campaign to stem the rising tide of diabetes.

INTRODUCTION

Diabetes is expensive. It costs the NHS £10 billion each year. But this is mainly because its complications, things like amputation, blindness, kidney failure and stroke, cost a lot of money. And the cost pressure that diabetes puts on the NHS is projected to get worse. But acting early to prevent complications developing and treating them as early as possible both limits their impact on the person's life and saves the NHS money. There are a series of opportunities to improve care for people with diabetes while cutting costs or providing very highly cost effective care.

Of course, the best way to reduce the cost of diabetes is to prevent Type 2 diabetes in the first place. This is why improved take-up of NHS Health Checks could lead to people at high risk of Type 2 diabetes getting the support for intensive lifestyle behaviour change that can help prevent it. NHS Health Checks can also help identify the 600,000 people who have undiagnosed Type 2 diabetes so they start getting the support they need to manage their condition.

For people who have already been diagnosed, structured education courses help them understand and manage their condition. Annual checks of blood glucose levels, blood pressure, cholesterol, eyes, feet, kidneys, weight and smoking status are all recommended by NICE and are essential for people to keep on top of their diabetes. There are now widely-used cost-saving drugs to reduce blood pressure, cholesterol and kidney damage.

People with diabetes are at risk of developing serious problems in hospital and effective interventions exist that improve the quality of their care. This means they can leave more quickly and so cost less money because they are not occupying a hospital bed for as long. Inside and outside of hospital, people with diabetes are at high risk of developing problems with their feet that lead to amputations – fast access to specialist multidisciplinary footcare teams reduces amputations and saves money.

The international peer-reviewed literature often finds that interventions work best when a number are put together, such as education, screening and a pharmaceutical therapy. Good quality diabetes care is about co-ordinating a wide range of services. High quality care planning does this by ensuring that routine consultations between clinicians and people with long-term conditions are truly collaborative. It can be cost neutral and recent experience from pilot areas suggests it secures better outcomes.

The cost pressures facing the NHS will not go away in a couple of years and expenditure on diabetes is rising. It is only by acting now to get the care right that we will reduce the rate of complications and so ease the cost pressure on the NHS. But too often, the opposite is happening, with short-term budget cuts being made that will inevitably store up huge costs – in terms of both money and human suffering – for the future.

PART ONE
THE COST OF DIABETES NOW AND IN THE FUTURE

Diabetes accounts for about 10 per cent of the NHS budget and 80 per cent of these costs are due to complications. Demographic changes and the high obesity rate mean that, if the costs of treating a patient with diabetes stay the same, the overall costs of diabetes are set to grow over the next 20 years, when it is projected to account for 17 per cent of the entire NHS budget.

Diabetes will also increase the costs of social care; if someone has an amputation then their ability to look after themselves independently will be much reduced. This means the direct costs of diabetes to the health and social care system will be even higher.

The scale of diabetes

- There are around 3.8 million people in the UK with diabetes[1].
- Of these, 3.2 million have been diagnosed with either Type 1 or Type 2 diabetes. The rest have Type 2 diabetes but don't know they have it because they haven't been diagnosed.
- Over one in 20 people in the UK has diabetes[2].

The human costs

- Each year in the UK, 24,000 people with diabetes die early[3].
- Diabetes is the leading cause of blindness in people of working age in the UK[4 5].
- Over 100 amputations are carried out every week on people with diabetes because of complications connected with their condition. Up to 80 per cent of these are preventable[6].

1 This is based on the number of diagnosed people (three million) plus the number who don't know they have diabetes or have no confirmed diagnosis (850,000). From: Diabetes UK. **Diabetes in the UK 2011 to 2012: Key statistics on diabetes.** 2011.

2 Based on the 3.75 million people who have diabetes (diagnosed and undiagnosed) as a proportion of the current UK population of 62.3 million. Source: **www.statistics.gov.uk**.

3 Every year, 75,000 people with diabetes die, but of that number, 24,000 die earlier than we would expect for their age group / demographic. Source: **The Information Centre for Health and Social Care**. (2011). National Diabetes Audit Mortality Analysis.

4 Kohner E, Allwinkle J, Andrews J et al (1996). **Saint Vincent and improving diabetes care: report of the Visual Handicap Group**. Diabetic Medicine 13, suppl 4; s13–s26.

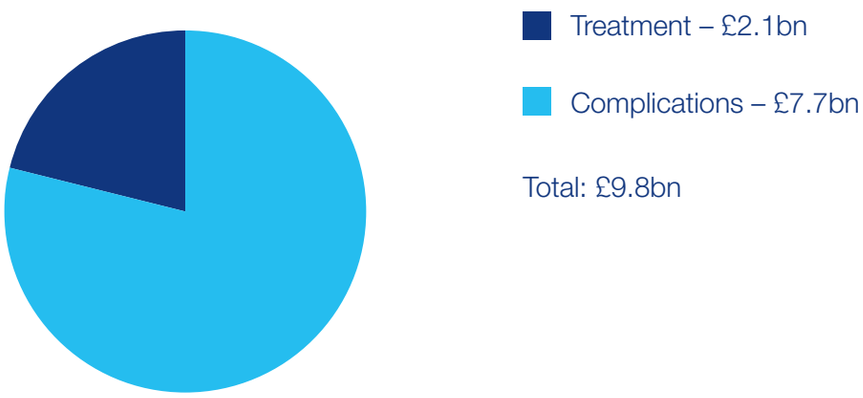
5 Arun CS, Ngugi N, Lovelock L et al (2003). **Effectiveness of screening and prevention of blindness due to diabetic retinopathy**. Diabetic Medicine 20 (3); 186–190

6 N. Holman & R. J. Young & W. J. Jeffcoate (2012); **Variation in the recorded incidence of amputation of the lower limb in England**. Diabetologia: 55:1919–1925.

The financial costs of diabetes

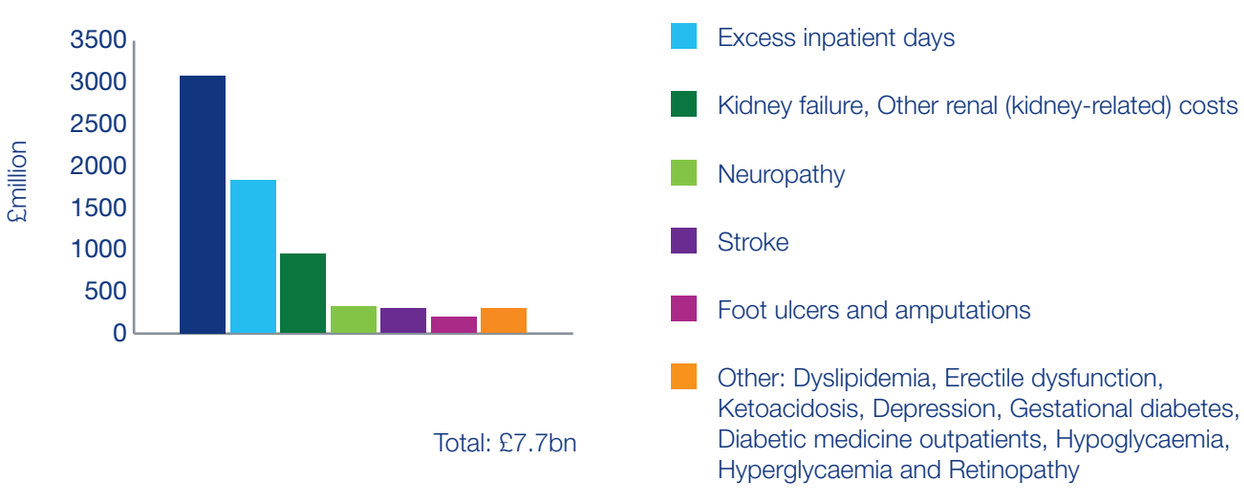
The most comprehensive analysis to date concludes that the cost of diabetes to the NHS is £9.8bn in direct costs in 2010/11 with £1bn for Type 1 and £8.8bn for Type 2[7]. **Around 80 per cent is spent on complications.**

The proportion of diabetes spending on complications and treatment



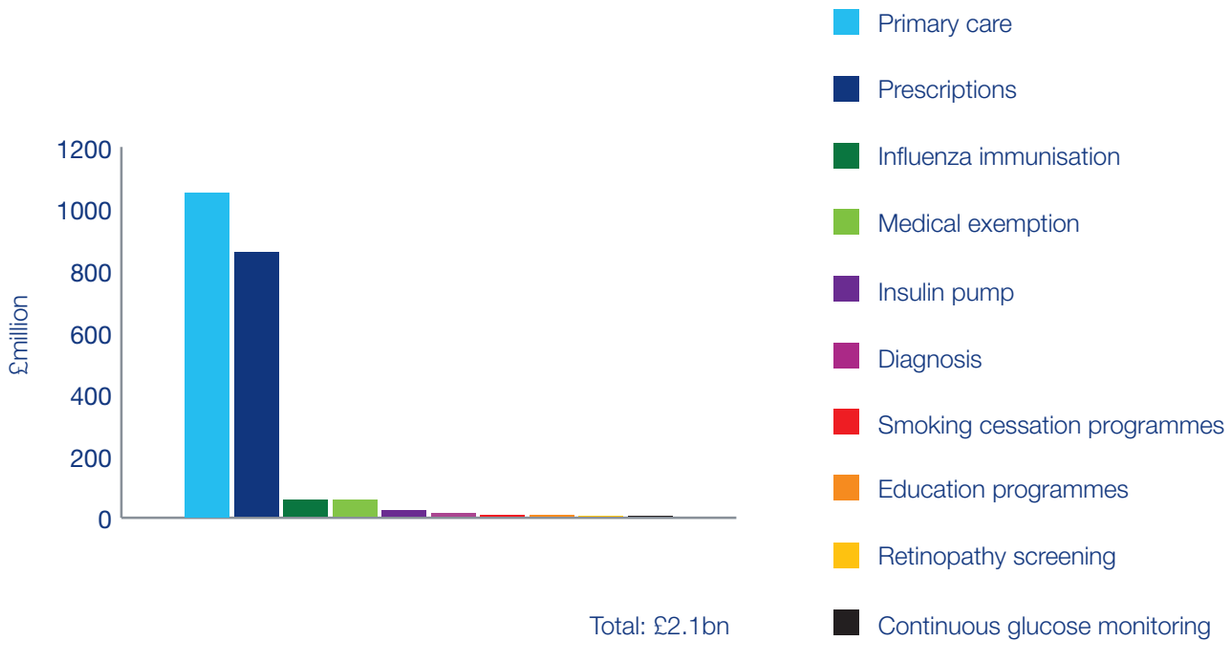
The largest costs for complications are excess inpatient days, cardiovascular disease and damaged kidneys and nerves.

The costs of complications of diabetes



7 Hex et al. **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 (2012). Available at: http://onlinelibrary.wiley.com/doi/10.1111/j.1464-5491.2012.03698.x/abstract

Treatment costs of diabetes



Treatment and intervention costs are dominated by the costs of primary care and prescriptions.

These treatment costs may be understated as there are important treatments for people with diabetes that could not be estimated by the authors of the study, such as footcare clinics and monitoring tests in primary care.

Social care

These figures do not include the costs of diabetes in social care. However, we do know that one in four care home residents have diabetes[8]. In the USA, 16.4 per cent of the cost of nursing and residential facilities is attributable to diabetes[9]. In the UK this figure may be lower as diabetes prevalence is lower.

International

An International Diabetes Federation study[10] shows that people with diabetes have medical costs that are two to three times more than age and sex matched patients without diabetes ie that if the average healthcare cost per person is $1,000, for a similar person with diabetes it will be $2,000-$3,000.

Earlier studies from the US show that the ratio in that country has fallen somewhat: from 2.5 in 1992 to 2.3 in 2007. Possible reasons for this fall suggested by the authors show how improved care can help cut costs:

- People with Type 2 might be diagnosed sooner, meaning the average person will be less likely to develop complications.

8 P5 in Diabetes UK. **Good clinical practice guidelines for care home residents with diabetes**. (January 2010). Available at: http://www.diabetes.org.uk/About_us/Position-statements--recommendations/Care-recommendations/Good-clinical-practice-guidelines-for-care-home-residents-with-diabetes/

9 Yang et al. **Economic costs of diabetes in the US in 2012**. Diabetes Care. 2013. http://care.diabetesjournals.org/content/early/2013/03/05/dc12-2625.full.pdf

10 Zhang et al. **Economic impact of diabetes in Diabetes Atlas fourth edition**. International Diabetes Federation: Brussels. 2009. http://www.idf.org/sites/default/files/Economic_impact_of_Diabetes.pdf

- Keeping levels of blood glucose, cholesterol and blood pressure under control, which in turn reduce risk of complications, has been improving in developed countries. The drugs we know to be highly effective in preventing cardiovascular complications have also improved.
- Effective drugs in diabetes are now off-patent.

Nevertheless, increased prevalence means the overall costs are increasing[11].

Indirect costs

While this is an underdeveloped area of research, the costs of reduced productivity at work (due to people with diabetes not working because of death or poor health or working at a lower level of productivity) are estimated at nearly £9billion[12].

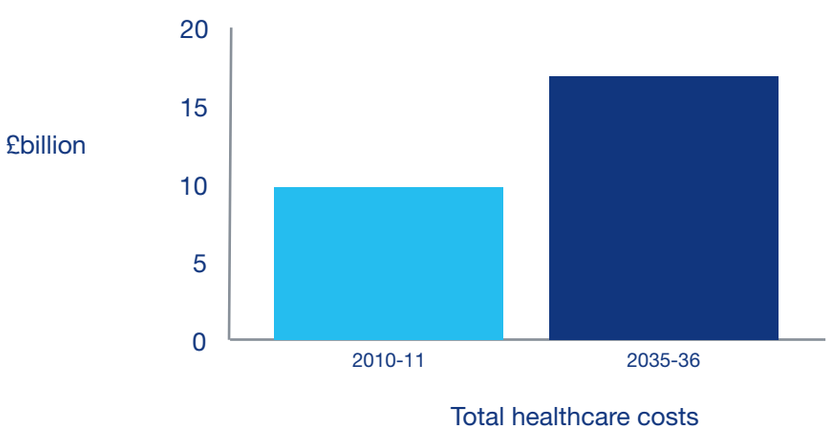
According to the International Diabetes Federation, lost productivity in the US is equivalent to about half the direct healthcare costs.

Costs are set to grow

The Association of Public Health Observatories Diabetes Prevalence Model has projected the prevalence of diabetes in 2035/36[13].

- They take account of changes in the age and ethnic structure of the population and assume the increase in levels of overweight and obesity continue. If this rise is less severe than projected then costs will rise more slowly.
- Assuming there is no inflation, **costs will rise to £16.9 billion in 2035/36[14]**.

The costs of diabetes in 2010/11 vs. the project costs for 2035/36



11 Yang et al. Economic costs of diabetes in the US in 2012. Diabetes Care. 2013. http://care.diabetesjournals.org/content/early/2013/03/05/dc12-2625.full.pdf

12 Hex et al. 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 (2012). Available at: http://onlinelibrary.wiley.com/doi/10.1111/j.1464-5491.2012.03698.x/abstract

13 Yorkshire and Humber Public Health Observatory. APHO Diabetes prevalence model: Key findings for England. Yorkshire and Humber Public Health Observatory: June 2010. Available at:

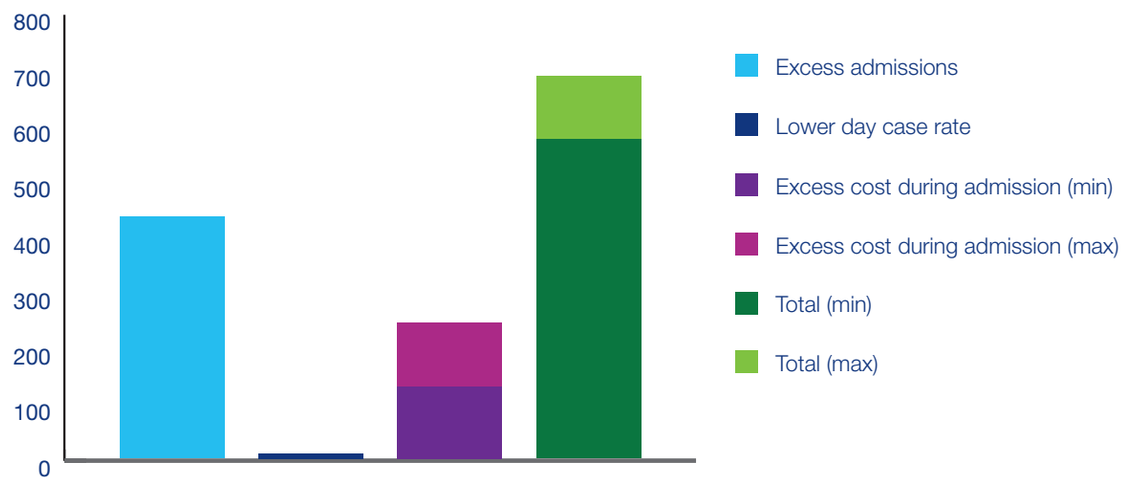
14 Hex et al. Estimating the current and future costs of Type 1 and Type 2 diabetes in the UK, including direct health costs and indirect societal and productivity costs. Diabetic Medicine (2012). Available at: http://onlinelibrary.wiley.com/doi/10.1111/j.1464-5491.2012.03698.x/abstract

PART TWO
WHERE CAN SAVINGS BE MADE THAT ALSO DELIVER QUALITY CARE?

1. Inpatient care

Economic modelling[15] for NHS Diabetes (now part of NHS Improving Quality) suggests that the NHS in England spends around £2.3billion to £2.5 billion a year on inpatient care for people with diabetes, which is approximately 11 per cent of total NHS expenditure on inpatient care. Despite this spending, people with diabetes can receive very bad care, but there is good evidence that specialist teams can improve care and cut costs.

Excess inpatient costs



Of that sum an estimated £573 million to £686 million is excess expenditure on diabetes. That is, over and above the sum spent on a population of the same age and gender without the condition. Key reasons for this are:

- People with diabetes are more likely to be admitted to hospital than people without the condition[16].
  - In 2009-10 there were 160,000 more admissions for people with diabetes than would be expected for people of the same age without the condition.
- They have longer hospital stays and are more often admitted overnight for planned procedures that could be performed as day cases. There were:
  - 570,000 extra bed days for people with diabetes
  - 40,000 more overnight admissions that would be performed as day cases in people without diabetes.

The average cost of inpatient care for people with diabetes exceeds the NHS tariff paid to hospitals by up to 8.5 per cent. However, while there have been improvements in the last few years some serious problems persist.

The 2012 National Diabetes Inpatient Audit (NaDIA)[17] found that during a five-day period, more than 60 people with diabetes developed diabetic ketoacidosis (DKA) – a life-threatening condition that is caused by not having insulin. This means that one in every 200 times someone with diabetes is admitted to hospital, they become seriously ill, entirely unnecessarily. The audit also found that over a third of inpatients experienced a medication

15 Kerr, M. Inpatient Care for People with Diabetes: The Economic Case for Change. NHS Diabetes. (November 2011). Available at: www.diabetes.nhs.uk/document.php?o=3488

16 Adjustment for age, gender and admission type lead to a lower figure than Hex et al in their estimate for the overall costs of diabetes to the NHS.

17 Health and Social Care Information Centre. National Diabetes Inpatient Audit 2012. (2013). Available at: https://catalogue.ic.nhs.uk/publications/clinical/diabetes/nati-diab-inp-audi-12/nati-diab-inp-audi-12-nat-rep.pdf

error during the five days of the study. And 40 per cent of inpatients, who should have seen a specialist diabetes care team, did not see one.

Clinical studies suggest that specialist diabetes inpatient teams can reduce prescribing errors; improve patient outcomes; reduce length of stay; increase day case rates and reduce the number of admissions. Economic modelling for NHS Diabetes suggests that the savings from introduction of these teams can substantially outweigh the cost of the team.

Examples are:

- At an annual cost of £51,682 for a diabetes inpatient specialist nurse with a clinical support worker, Norfolk and Norwich University Hospital NHS Foundation Trust made savings in bed days worth £299,250.
- A specialist nurse team set up in Derriford Hospital Plymouth is estimated to have saved between 1.7 and three times its costs in reduced length of stay for emergency admissions. A second team focussed on elective admission management is estimated to have saved between 2.5 and three times its cost.
- A team at New Cross Hospital in Wolverhampton is, on the basis of a short study, estimated to have saved six times its cost.

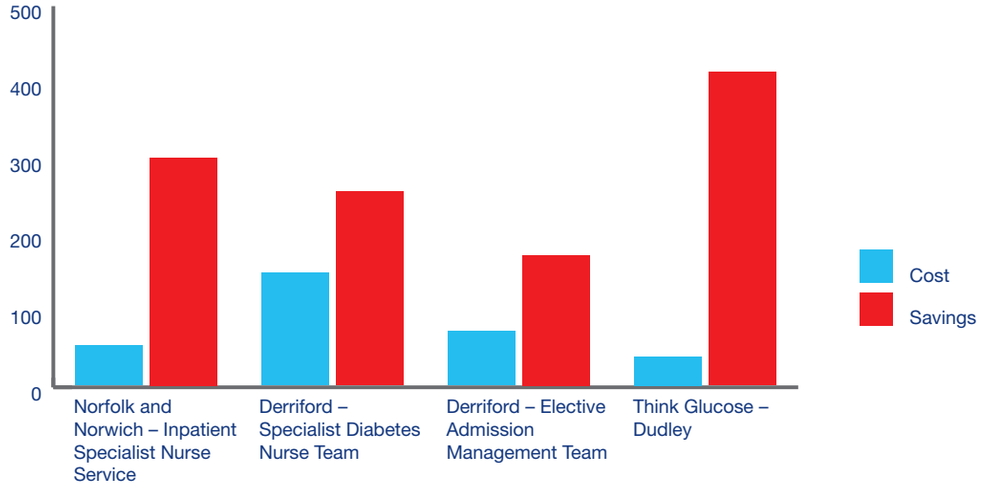
The 10 UK studies that the NHS Diabetes analysis draws on have different definitions of an inpatient team, they achieved different outcomes and only a few were randomised controlled trials. This means decision-making on the introduction of new services will need to be based on local data and costs while the baseline provision of specialist inpatient care will vary as well.

Think Glucose – Dudley

The Think Glucose programme also reduces inpatient costs through better care that leads to a shorter length of stay. The programme aims to increase the awareness of diabetes in inpatients as well as staff. Specialists are involved early with and prescription errors are reduced through publicising the relevant guidelines.

The Dudley Group of Hospitals NHS Trust report a reduction in average length of stay of 0.61 days, which was worth £411,000 to the Trust. The programme cost £38,000 to implement for staff time and programme support[18].

Cost vs saving in inpatient care



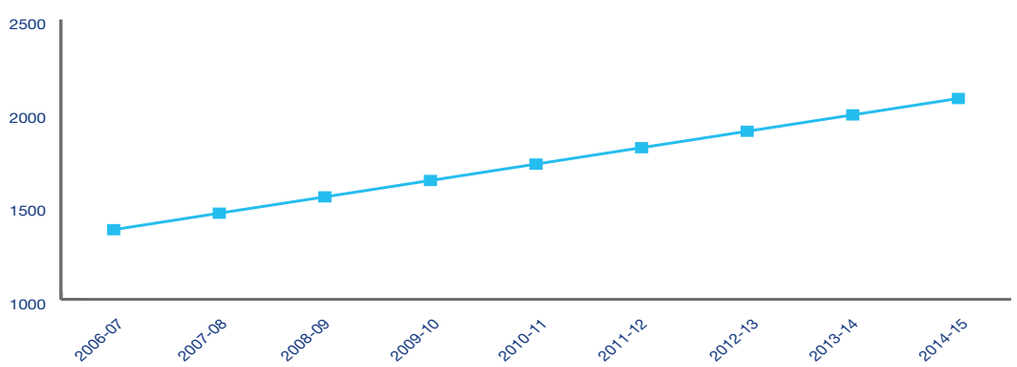
18 NHS Institute for Innovation and Improvement. 'Quality and Productivity: Proven case study - Diabetes inpatient care: Think-Glucose programme'. NICE (2013). Available at: http://arms.evidence.nhs.uk/resources/qipp/1008647/attachment

2. Footcare

Each week in England there are over 100 amputations among people with diabetes. People who have had amputations have a very low quality of life. The majority of diabetes-related amputations are caused by 'foot attack', a foot ulcer or infection that fails to heal. People with a foot attack are much less likely to have to have an amputation if they get rapid access for treatment by a specialist multidisciplinary team.

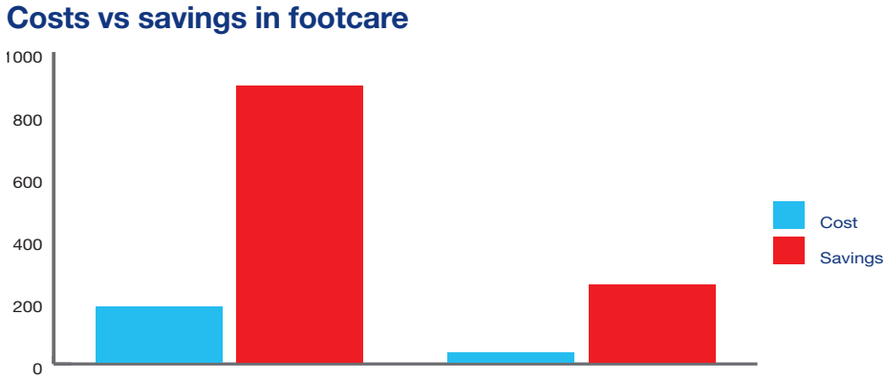
The number of amputations is rising. In England and Wales they have gone from 5,700 in 2009/10 to more than 6,000 in 2010/11. There is an eight-fold variation in amputation rates that cannot be explained by demographics. We need to get every area giving the quality of treatment that already happens in the best performing areas.

Estiamted Number of People With Major Amputations
(Based on NDA Major Amputations Prevalence and QOF Diabetes Prevalence)



In 2010 to 2011 the NHS spent an estimated £639 million to 662 million on diabetic footcare. Amputations have been reduced by over 50 per cent where hospitals have introduced multidisciplinary footcare teams and promoted rapid access to them. These teams can save over four times their cost[19].

Costs vs savings in footcare



19 Kerr, M. Foot care in diabetes: the economic case for change. NHS Diabetes (2012).

Two studies from the UK show the impact of improved care on costs:

- Southampton University Hospitals spent £179,860, which was accompanied by falls in the length of stay and major amputations and saved £888,979.
- James Cook Hospital in Middlesbrough spent £33,078, which was accompanied by a reduction in the number of amputations worth £249,459.

This evidence is backed by a Swedish study[20] of the cost-effectiveness of comprehensive footcare. This includes:

- Foot inspection and examination with documentation of foot status in medical records at least once a year.
- Access to and use of appropriate footwear
- Access to appropriate footcare
- Education of patient, family and health care providers.

The study found that for all diabetic patients with a specific risk factor, such as having a foot ulcer, comprehensive footcare was cost-saving.

20 Tennvall GR, Apelqvist J. Prevention of diabetes-related foot ulcers and amputations: a cost utility analysis based on Markov model simulations. Diabetologia. (2001). Available at: http://link.springer.com/content/pdf/10.1007%2Fs001250100013.pdf

3. Behaviour change and patient education

NICE guidance recommends an intensive lifestyle change programme for people with a high risk of Type 2 diabetes. This involves a programme of advice and support on physical activity, weight management and diet. The modelling suggests more intensive lifestyle-change programmes are more cost effective than cheaper, less intensive, programmes.

The authors of a systematic review[21] of the cost-effectiveness of diabetes interventions go further:

"Among all the interventions considered, evidence for the CE [cost effectiveness] of primary prevention through intensive lifestyle modification was the strongest regarding the quantity and quality of the CE studies and efficacy data. Several well-conducted clinical trials have shown the efficacy of intensive lifestyle modification in preventing diabetes in different country settings. The results from these studies consistently showed that intensive lifestyle modification in persons with impaired glucose tolerance was cost saving or very cost-effective in the long run."

As well as specific interventions for people at high risk of developing Type 2 diabetes, Diabetes UK supports a 'whole system' approach to reducing obesity that is less about health service spending than developing an environment in which it is easier to have a healthy weight. Policies that need to be pursued include: improved town planning, regulation of food marketing and clearer labelling of food and drink.

Patient education

People with diabetes are constantly managing their condition and may only come into contact with healthcare professionals a couple of times a year. So it is obvious that education programmes to give people the knowledge and motivation to manage their condition are essential.

Education for people with Type 1 diabetes

Dose Adjustment Normal Eating (Dafne) is an education course that trains people to estimate the carbohydrate in each meal and to inject the right dose of insulin. A cost-effectiveness analysis[22] based on cost-effectiveness data from randomised control trials on Dafne and similar programmes in Germany and Austria shows very good results. A seven year follow-up on UK patients who went on a Dafne course showed that their glycaemic control remained better than a similar group who had not been on the course[23].

The programme breaks even at the four year stage. Over 10 years, structured treatment and teaching programmes save £2,200 per patient. The majority of the savings arise from avoiding dialysis and foot ulceration.

21 Li et al. Cost-effectiveness of interventions to prevent and control diabetes mellitus: a systematic review. Diabetes Care (2010). Available at: http://stacks.cdc.gov/view/cdc/7107/

22 Shearer et al. Cost-effectiveness of flexible intensive insulin management to enable dietary freedom in people with Type 1 diabetes in the UK. Diabetic Medicine. 2004. Available at: http://www.ncbi.nlm.nih.gov/pubmed/15089791

23 Gunn, D. Mansell, P. Glycaemic control and weight seven yers after Dafne structured education in Type 1 diabetes. Diabetic Medicine (2012) Available at: http://www.ncbi.nlm.nih.gov/pubmed/22132868

Education for people with Type 2 diabetes

Education for people with Type 2 diabetes is also cost effective. Data from a leading education programme, X-PERT, shows the costs are outweighed by savings in cardiovascular and diabetes medication[24]. A systematic review rated X-PERT as very cost-effective[25].

Another major education programme, Diabetes Education and Self Management for Ongoing and Newly Diagnosed (Desmond), is also likely to be cost effective with the key benefits being reductions in weight and smoking rate[26 27].

Smoking cessation

People with diabetes have an increased risk of cardiovascular disease, including heart attack, stroke or circulatory problems in the legs. When combined with smoking (which can also double the risk of complications), the chances of developing these diseases becomes even higher[28].

The UK has the most comprehensive national stop smoking service in the world. There are no cost-effectiveness studies on the UK services for people with diabetes. However, they are effective and cost-effective for the general population in the UK[29] and a well-conducted US study[30] has found that smoking cessation is cost-effective for people with diabetes.

Given the extra risk that smoking poses for people with diabetes, Diabetes UK is a member of the Smokefree Action Coalition and supports low-cost or revenue raising population-level interventions including high tobacco prices and standard cigarette packs.

24 Deakin, T. The diabetes pandemic: is structured education the solution or an unnecessary expense? Practical Diabetes. VOL. 28 NO. 8. 2011. Available at: http://onlinelibrary.wiley.com/doi/10.1002/pdi.1635/abstract

25 Jacobs-Van Der Bruggen MAM, et al. Cost-effectiveness of lifestyle modification in diabetic patients. Diabetes Care 2009;32:1453–8.

26 Gillett et al. Delivering the diabetes education and self management for ongoing and newly diagnosed (DESMOND) programme for people with newly diagnosed type 2 diabetes: cost effectiveness analysis. BMJ (2010) Available at: http://dx. doi.org/10.1136/bmj.c4093

27 Davies MJ, et al. Effectiveness of the diabetes education for ongoing and newly diagnosed (DESMOND) programme for people with newly diagnosed type 2 diabetes: cluster randomised controlled trial. BMJ 2008;336(7642):491–5)

28 Diabetes UK. Smoking and diabetes. Available at: http://www.diabetes.org.uk/Guide-to-diabetes/Healthy_lifestyle/Smoking/Smoking_and_Diabetes/

29 Bauld, L. The effectiveness and cost-effectiveness of the NHS Stop Smoking Services in Inquiry into the effectiveness and cost-effectiveness of tobacco control. APPG Smoking and Health: London. http://www.ash.org.uk/APPGoct2010

30 Earnshaw et al. Optimal Allocation of Resources across Four Interventions for Type 2 Diabetes. Medical Decision Making. (2002). http://mdm.sagepub.com/content/22/suppl_1/s80.short

4. Primary care and screening

NHS Health Check

NICE guidance supports the NHS Health Check programme to identify people with, and at risk of, Type 2 diabetes[31]. When set against the costs of each check, the cost per quality adjusted life year is £2,142, making it a very cost effective intervention.

A key reason for its cost effectiveness is that it can set people on a path of treatment that stops them developing Type 2 diabetes. Up to 9,700 cases of Type 2 diabetes could be prevented each year through finding non-diabetic hyperglycaemia, also known as 'pre-diabetes'. This could produce an estimated gross saving of £40 million a year after four years. In addition, up to 19,000 cases of diabetes could be detected earlier each year in England, producing a gross saving of £1 million a year after the first four years.

Overall, the NHS Health Check could produce a gross saving of £132 million a year over 10 years due to averted strokes, averted myocardial infarctions, Type 2 diabetes prevented and detected early and chronic kidney disease detected early. These savings would grow over time as the pool grows of people who have had diabetes and other conditions detected and acted upon[32].

Care Planning: Year of Care

The 'Year of Care' is an approach to primary care for people with long-term conditions. By redesigning how routine care is provided there is a more personalised approach with fewer, but longer and more collaborative GP consultations. With 'care planning', patients and doctors discuss their goals for the year ahead and the support they need to reach their goals. A key part of this is help for people to manage their own condition, so-called 'self-management'.

Year of Care has been successfully implemented using diabetes as an exemplar. The care planning involved in the Year of Care model is cost neutral. The average organisational cost per patient before Year of Care planning was £21 and after changes to staff organisation and systems was the same (£21)[33]. GPs in the evaluation believed it improved outcomes for patients.

There is not an overall cost-benefit analysis of the Year of Care programme. However, a Health Foundation review[34] suggests that it is worthwhile to support self-management, in particular through focusing on behaviour change and supporting self-efficacy. Care planning is also an important part of the North West London Integrated Care Pilot and looking for improvements in diabetes control will be a part of its second year evaluation[35].

A comprehensive approach

The importance of a comprehensive approach is emphasised in the international peer-reviewed literature. Studies from Germany, Switzerland, UK and USA show that multicomponent interventions save money. They typically include standard care as well as education, ACE Inhibitors (a pharmaceutical therapy for hypertension and kidney disease), and screening for damage to kidneys and eyes.

31 NICE Public Health Guidance 38 (July 2012). Preventing Type 2 Diabetes: Risk Identification and Interventions for Individuals at High Risk

32 Kerr, M. NHS Health Check: costs, benefits and savings. NHS Diabetes and Kidney Care. (16 November 2011). Available at: http://www.healthcheck.nhs.uk/document.php?o=91

33 Year of Care Partnership Report of Findings from the pilot programme. June 2011. Available at: www.diabetes.nhs.uk/ document.php?o=2926

34 De Silva, D. Helping people help themselves. Health Foundation. (May 2011) Available at: http://selfmanagementsupport.health. org.uk/about-self-management-support/evidence-sms-improves-outcomes/

35 Bardsley M. Smith J. Trist. Evaluation of the first year of the Inner North West London Integrated Care Pilot. Nuffield Trust (May 2013). Available at: http://www.nuffieldtrust.org.uk/publications/evaluation-first-year-inner-north-west-london-integrated-care-pilot

In a UK example, Greenwich PCT had some of the poorest outcomes for diabetes before piloting more systematic implementation of NICE primary care guidelines. By taking a comprehensive approach, the pilot GP practices reduced outpatient medicine attendances and cardiovascular admissions leading to savings of more than £200,000[36].

The role of innovation

Pharmaceutical therapies can help reduce the cost of diabetes[37]. They include drugs for high blood pressure and end-stage kidney disease. Statins are very cost-effective for people with Type 2 diabetes with hyperlipidemia (an abnormal amount of fats in the blood such as cholesterol) and a history of cardio-vascular disease.

However, unlike many other cost-saving interventions, it seems that these are mostly already being used effectively and so there is only limited scope for improvement.

36 NHS Greenwich. 'Quality and Productivity: Proven case study - Reducing hospital admission rates for people with diabetes: a systematic approach to improving primary care outcomes'. NICE (2013). Available at: http://arms.evidence.nhs.uk/resources/qipp/899089/attachment

37 The drugs are: ACE Inhibitors for control of hypertension, ACE Inhibitors and ARB for end-stage kidney disease and early irbesartan therapy following microalburinuria to prevent end-stage renal disease. From: Li et al. Cost-effectiveness of interventions to prevent and control diabetes mellitus: a systematic review. Diabetes Care (2010). Available at: http://stacks. cdc.gov/view/cdc/7107/

PART THREE
WHAT NOT TO DO

Problems in diabetes care multiply when things are put off. As this report has shown, what works is: prevention of Type 2, early diagnosis, support for self-management, good control of the condition and early intervention to deal with complications.

Attempts to save money in the short term can often lead to having to spend much more money in the long term and can have a devastating impact on the lives of people with diabetes.

Arbitrary limits on test strips

An online survey by Diabetes UK has shown that there is a widespread problem of people with diabetes being denied the chance to monitor their blood glucose levels because vital test strips are being rationed to save money[38].

They had either been refused a prescription for blood glucose test strips, or had their prescription restricted. This is despite the fact that monitoring blood glucose levels is essential for people with Type 1 and people with Type 2 diabetes on glucose lowering medication, including insulin. It carries the risk of hypoglycaemia because people with diabetes need to know their blood glucose level so they can adjust their treatment accordingly.

Failure to do so can lead to short-term complications such as potentially fatal diabetic ketoacidosis and hypoglycaemia. In the long term, high blood glucose levels can lead to serious and expensive complications. Test strips cost around £15 for 50.

Poorly planned shift to primary care

Primary care can be a good place for people with diabetes to have their 'general' care. Nevertheless, there needs to be ready access to specialists for some types of care, such as insulin pumps. Specialist care can also be needed if there are issues that are not being resolved. However, we have reports of people with foot ulcers not being referred to specialist teams meaning that the problem carries on getting worse until the ulcer has deteriorated so badly that they need an amputation.

38 Diabetes UK. Access to test strips – A postcode lottery?. Diabetes UK. (August 2013) Available at: http://www.diabetes.org.uk/Documents/Reports/access-test-strips-report-0813.pdf

PART FOUR
WHY IS THERE A PROBLEM?

This report highlights a series of interventions in diabetes that improve care and save money or are very highly cost-effective. But many are not happening or need to take place on a greater scale. The table below sets out why this might be.

- Costs are saved over a longer period than it is easy for organisations to plan for.
- The costs of an intervention are paid by one part of the NHS, but the savings benefit another organisation.

These issues underline the need for strong and far-sighted commissioning to ensure that the right actions are taken to provide the best value-for-money for the whole system.

National action can also help. For example, NHS Health Checks have benefits across primary and secondary care that can take a number of years to become clear. A national approach ensures that people in almost all parts of England can benefit.

Ministers have also taken action to address the issue of test strip rationing by writing to all CCGs to say that the use of test strips for people with Type 1 diabetes should be decided by doctors and patients working together so they use the amount they need.

The evidence base for cost-effective care presents a strong case for action. However, there is still work to do to publicise and further develop the evidence base. This report draws heavily on the work of NHS Diabetes and we need the successor organisation for its functions, NHS Improving Quality to continue its vital work.

Diabetes UK will continue to make the case for the best interventions to improve the lives of people with diabetes.

Intervention	Cost-effectiveness	Which organisation pays?	Which organisation saves?	Time Horizon
Specialist inpatient care	Cost-saving	Hospital	Hospital	Within a year
Footcare MDTs	Cost-saving	Hospital	Hospital and primary care	Within a year
Comprehensive footcare	Cost-saving	Primary and hospital	Whole system	Five Years
Patient education Type 1	Cost-saving	Primary care	Whole system	Breaks even after four years and then cost-saving
Patient education Type 2	Cost-effective	Primary care	Whole system	Lifetime
NHS Health Checks	Very cost-effective	Primary care	Whole system	Lifetime
Care planning in Year of Care	Cost neutral	Primary care	Whole system	Cost neutral to implement

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CALL US: 0345 123 2399

EMAIL US: INFO@DIABETES.ORG.UK

WEBSITE: WWW.DIABETES.ORG.UK

ADDRESS: MACLEOD HOUSE,
10 PARKWAY,
LONDON NW1 7AA

DIABETES UK

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