

Delivering Healthy Ambitions Better for Less



Overview.

Simple primary care measures to support diabetics manage their condition through glucose control will improve their quality of care, reduce exacerbations that can result in coma and limb amputation, and significantly reduce unplanned admissions and A+E attendances.

Poor glucose control leads to increased risk of emergency treatment and likelihood of hospital admission.

Why diabetes?

Across Yorkshire and the Humber we spent around £100m on diabetes services and this figure is likely to rise significantly as diabetes prevalence increases.

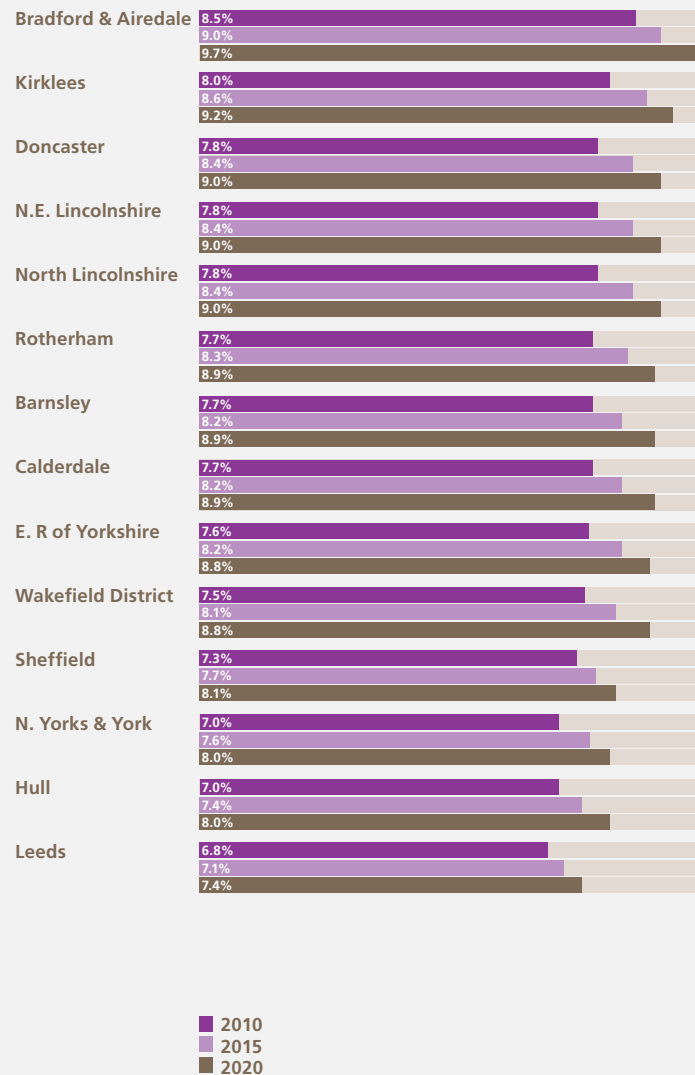
We currently have over 220,000 people registered with diabetes across Yorkshire and the Humber. This figure is projected to rise to over 350,000 in the next ten years.

Healthy Ambitions identified diabetes as an "an area of concern", prevalence in our region is set to increase substantially in the next 3 years and as a chronic and progressive disease it has an impact on almost every aspect of life.

Emergency admissions due to diabetic ketoacidosis are twice as high in some areas of Y&H compared to others. There is also large variation in lower limb amputations between PCTs.

Healthy Ambitions pledged to help people in Yorkshire and the Humber "live with, not suffer from" their long term condition and to "halve the number of preventable admissions from diabetes".

Figure 1. Diabetes Prevalence in Yorkshire and the Humber

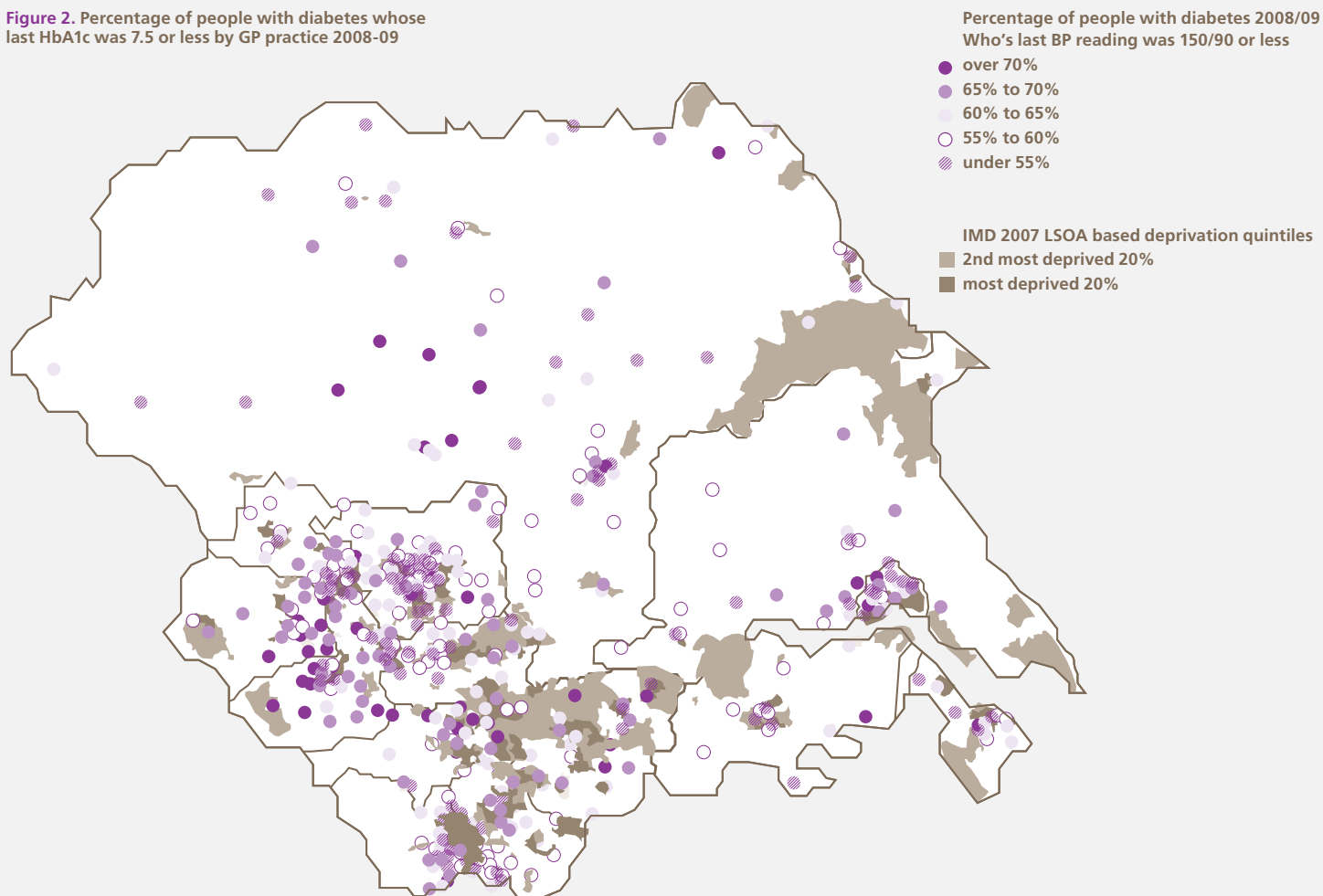


What is the challenge?

There are significant variations with the region, emergency admissions due to diabetic ketoacidosis (diabetic comas) are twice as high in some practices in Yorkshire and the Humber compared to others. This presents a huge quality and efficiency challenge to our local health services.

A well managed HbA1c level reduces the risk of developing diabetic complications. Analysis of GP QOF data in NHS YH confirmed previous evidence of variation in primary care management of people with some LTCs to achieve NICE recommended treatment outcomes. For example less than 10% of practices had over 70% of people with diabetes achieving HbA1c levels of 7.5% (used as a broad measure of effective measurement). HbA1c measures average blood sugar level over the past 6-8 weeks. The best level will vary for each patient but a figure of 7.5 is not unreasonable for most well managed patients.

Figure 2. Percentage of people with diabetes whose last HbA1c was 7.5 or less by GP practice 2008-09



Source: quality and Outcomes Framework; ONS Super Output area Boundaries.
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How could we provide better care for less?

The assessment and management of blood glucose control is fundamental to the care of people with diabetes.

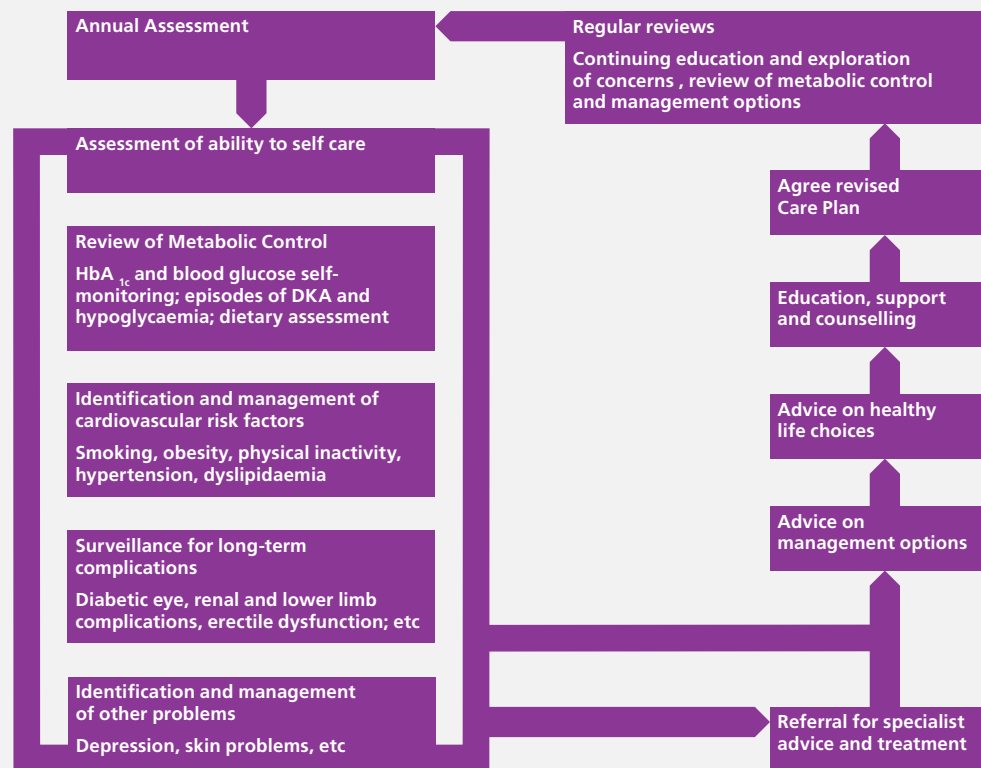
Health professionals should work in partnership with people with diabetes to achieve the best possible level of metabolic control, with HbA1c stabilised in the normal range – ideally an HbA1c of 7.5% by the end of the first year after diagnosis. However, the risk of hypoglycaemia should also be taken into consideration when agreeing goals for blood glucose control with individuals who have diabetes.

Greater progress can be made towards achieving these goals through improved self-care as part of a care planning approach in primary care. The care planning approach has additional benefits for patients with more than one LTC and is the subject of a separate Better for Less Briefing (see references).

Once the diabetes is stabilised and good blood glucose control has been established, longer-term management targets should be negotiated and agreed for blood glucose control, weight, diet, physical activity levels, smoking cessation, blood pressure and blood lipids.

These targets should be based on the most recent evidence about the optimum weight, physical activity level, blood pressure and blood lipid levels required to achieve the desired health outcomes, but should also be tailored to the individual, taking account of what it is possible and safe to achieve. They should be reviewed at least annually.

Figure 3. Continuing care of adults with diabetes



All adults with diabetes should receive continuing support, including psychological support, for the rest of their lives to enable them to adjust their lifestyle, where required, and to cope with and manage their own diabetes. Those who are not able to undertake certain elements of self-care should receive additional support as necessary. For example, those who have difficulty undertaking their own routine foot care, including those who are visually impaired, should be offered access to regular podiatry care.

Blood glucose control should be reviewed regularly at intervals negotiated between the person with diabetes and those providing their diabetes care, but usually at least once every six months and more frequently in young adults and in those whose control is suboptimal.

All adults with diabetes should receive regular surveillance for and management of cardiovascular risk factors. This should take place at least annually in adults with Type 1 and Type 2 diabetes. This assessment should include:

- calculation of body mass index (BMI) and, ideally, measurement of waist circumference (WC) and/or calculation of waist hip ratio (WHR)
- assessment of physical activity levels
- dietary assessment
- review of smoking status
- measurement of blood pressure
- measurement of blood lipids
- calculation of coronary risk using the most recently available tables, calculators or programmes (eg those included in the British National Formulary).

Costs of managing long-term conditions

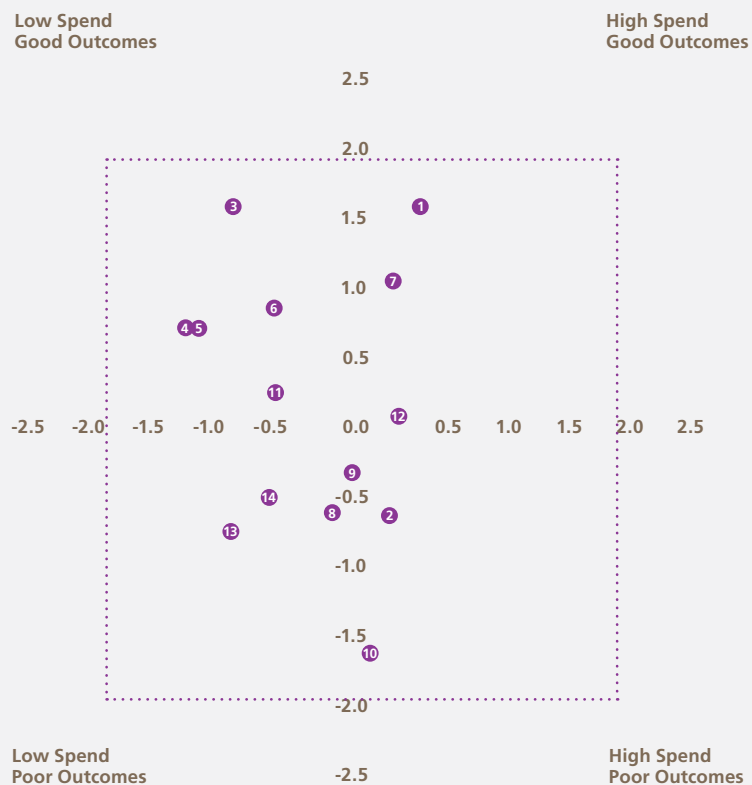
The financial cost of treating and caring for people with long term conditions (LTC) like diabetes is very high.

Caring for patients with LTCs is estimated to account for 69% of the NHS primary and acute care budget. Patients with LTCs are proportionately far higher users of health services and account for 55% of GP appointments, 68% of A&E attendances, and 77% of in-patient bed days. Furthermore in comparison to some other Western nations, England has high levels (estimated to be up to threefold more) of unplanned admissions to hospitals, over 75% of these relate to complications of LTCs.

Savings from implementing better primary care management of blood glucose are potentially significant driven by a reduction in emergency admissions and procedures. The rate of emergency admissions varies dramatically by PBC consortia driven by a number of factors including the management of patients with diabetes and other long term conditions.

The figure below demonstrates the large variation that exists in the relationship between spend and outcomes for diabetes between Yorkshire and the Humber PCTs. This plot compares total diabetes programme budgeting expenditure with the proportion of people with diabetes with a HbA1c of 7.5% or less. Barnsley has the highest spend and best outcomes by these measures, Calderdale achieves a similar level of outcomes with less expenditure. This variation also exists at practice level within PCTs.

Figure 4. Programme budgeting expenditure on diabetes and % of people with diabetes with hbA1c <7.5%



- 1. Barnsley
- 2. Bradford & Airedale
- 3. Calderdale
- 4. Doncaster
- 5. East Riding of Yorkshire
- 6. Hull
- 7. Kirklees
- 8. Leeds
- 9. North East Lincolnshire
- 10. North Lincolnshire
- 11. North Yorkshire & York
- 12. Rotherham
- 13. Sheffield
- 14. Wakefield

Potential Savings

If we look at the costs directly attributable to emergency admissions for diabetic ketoacidosis and limb amputations for people with diabetes we can make some assumptions about the scale of potential savings. Clinicians tell us that effective blood glucose control should dramatically reduce exacerbations and emergency episode. If we model the impact of a 60% and an 80% reduction in these emergency admissions and amputations then the average PCT will see potential savings of £225,000 to £300,000 by ensuring NICE guidelines are followed in primary care. Potential savings per PCT are illustrated on Fig.5 over the page.

Potential savings from better primary care management of blood glucose come from across the diabetes pathway, from reducing numbers of ambulance journeys, to fewer GP visits and emergency admissions. We cannot accurately model all of these savings.

Patient benefits

Patients will be in control of their condition supported by strong primary care. The advantages of self-management include reducing the impact of a condition on a patient's lifestyle, fewer visits to general practice, fewer exacerbations and emergency episodes (including trips to hospital). Evidence shows patients value being involved in treatment decisions and discussing their concerns using the care planning approach to improve management of LTCs also allows self-directed goals to be identified.

Figure 5. Costs and potential savings per PCT

PCT	Costs		Total Savings	
	Coma	Amputation	60% reduction	80% reduction
Barnsley	81,903	78,113	96,009	128,012
Bradford & Airedale	293,211	115,607	245,291	327,055
Calderdale	78,627	90,611	101,542	135,390
Doncaster	221,137	109,358	198,297	264,396
East Riding of Yorkshire	126,130	99,984	135,669	180,891
Hull	126,130	162,474	173,163	230,884
Kirklees	176,910	87,486	158,638	211,517
Leeds	362,010	156,225	310,941	414,588
North East Lincolnshire	52,418	96,860	89,566	119,422
North Lincolnshire	88,455	59,366	88,692	118,256
North Yorkshire & York	229,327	328,073	334,440	445,920
Rotherham	165,443	62,490	136,760	182,347
Sheffield	239,156	303,077	325,340	433,786
Wakefield District	201,480	124,980	195,876	261,169
Yorkshire & the Humber	2,442,337	1,874,704	2,590,224	3,453,633
PCT Average	212,819	165,013	226,699	302,266
PCT Average coma & amputation		377,832		

Evidence

The findings of the UK Prospective Diabetes Study (2000) indicate that any reduction in a person's HbA1c level is likely to reduce the risk of non-acute complications in diabetes.

NICE state that people with poor glucose control are more likely to suffer from complications of diabetes, such as ischaemic heart disease and microvascular disease (for example, renal and eye disease) and are more likely to die from a diabetes related cause. Poor glucose control leads to increased risk of emergency treatment and likelihood of hospital admission.

NICE guidance suggests that most people with type 2 diabetes should be set a target HbA1C level of between 6.5% and 7.5%. Source: NICE clinical guideline 87 Type 2 diabetes: the management of type 2 diabetes.

NICE guidance is clear that "in addition to encouraging a healthy lifestyle and modifying levels of blood pressure and lipids, good care for people with diabetes includes lowering blood glucose in order to reduce the risk of complications". NICE guidance on lowering blood glucose (see references) includes the following:

"When setting a target glycated haemoglobin (HbA1c): involve the person in decisions about their individual HbA1c target level, which may be above that of 6.5% set for people with type 2 diabetes in general encourage the person to maintain their individual target unless the resulting side effects (including hypoglycaemia) or their efforts to achieve this impair their quality of life offer therapy (lifestyle and medication) to help achieve and maintain the HbA1c target level inform a person with a higher HbA1c that any reduction in HbA1c towards the agreed target is advantageous to future health avoid pursuing highly intensive management to levels of less than 6.5%.

"Measure the individual's HbA1c levels at: 2–6-monthly intervals (tailored to individual needs) until the blood glucose level is stable on unchanging therapy; use a measurement made at an interval of less than 3 months as a indicator of direction of change, rather than as a new steady state 6-monthly intervals once the blood glucose level and blood glucose-lowering therapy are stable."

This guidance should be followed and implemented by all practices.

References

NICE Guidelines

<http://www.nice.org.uk/nicemedia/live/12165/44320/44320.pdf>

<http://guidance.nice.org.uk/CG87/NICEGuidance/pdf/English>

Better for Less Briefing –
Care Planning, NHS Yorkshire and the Humber

www.healthyambitions.co.uk/betterforless

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