

Is diabetes all about target-driven care?

David Cavan

ARTICLE POINTS

1 Targets are an essential tool in the modernisation of the NHS.

2 Diabetes targets provide a framework for structuring care and designing care pathways to help achieve better outcomes for patients.

3 They also provide a lever to secure resources for diabetes care.

4 The challenge for diabetes specialists is to use them to help improve diabetes care and not dictate it.

5 The targets most likely to be achieved are those agreed by both patient and carer.

KEY WORDS

- Diabetes care
- Targets
- Tools
- Goals
- Outcomes

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Introduction

'Target' is a relatively new term in medicine and is unlikely to be found in any medical dictionary. Yet targets have become an essential tool in the Government's plans for modernising the NHS. While many have criticised targets as being crude and indiscriminate tools that can distort clinical priorities, others see them as an effective incentive to improve services. Indeed, the Healthcare Commission (2005) has recently reported that areas of healthcare that are not subject to targets have been left behind in recent years. In this article, Dr Cavan looks at some of the diabetes targets, and suggests that diabetes specialists need to consider very carefully not just the targets prescribed from above, but also the desired goals of the individual, and of the professionals involved in the care of that individual, if these targets are to be met.

In my dictionary, 'target' is defined either as 'a desired goal' or 'an object of criticism or attack'. This is very apt, for while health targets are perceived by the Government as a desired goal, their implementation can lead to criticism.

Take, for example, the target whereby acute trusts are obliged to treat every patient attending accident and emergency (A&E) departments within 4 hours. This is undoubtedly desirable for the patient who presents to A&E, as well as for trusts who, in the past year, stood to gain several hundred thousand pounds if they met this target.

However, often no additional resources were made available to meet this target, and so reports abound of ways in which hospitals have complied with the letter, but not the spirit, of this target. Hence we hear of medical staff diverted from seeing more seriously ill patients not subject to the target, of areas within A&E being redesignated, and of patients being moved to other areas of the hospital even if they have not been fully assessed, just to meet the target (Gulland, 2003).

National Service Framework targets

Diabetes now has targets of its own. The first came with the publication of the *National Service Framework for Diabetes: Delivery*

Strategy in 2003 (Department of Health [DoH], 2003a). These targets included the following.

- By 2006, a minimum of 80% of people with diabetes will be offered screening for the early detection (and treatment if needed) of diabetic retinopathy as part of a systematic programme that meets national standards.
- In primary care, practice-based registers will be updated so that patients with coronary heart disease (CHD) and diabetes continue to receive appropriate advice and treatment in line with National Service Framework (NSF) standards.

Funding has been made available to support the implementation of retinal screening, but otherwise the diabetes NSF did not come with any ring-fenced resources. Hence, other targets are less prescriptive. For example, the NSF states that a local approach to addressing the needs of the newly diagnosed could offer the following.

- Information and appropriate psychological support and the opportunity to participate in structured (usually group) education to people diagnosed with diabetes after April 2003.

The National Institute for Health and Clinical Excellence (NICE; formerly known as the National Institute for Clinical Excellence) subsequently issued guidance on structured

education in 2003 (NICE, 2003), but with no date by which it had to be implemented and no resources to support its implementation. It is to the credit of diabetes specialist teams and primary care trusts (PCTs) across the UK that so many have made real progress in implementing structured education programmes by making better use of their existing resources.

This shows that a target which is perceived by healthcare professionals as a priority does not need the carrot and stick approach so favoured by the Government. The stick has now been applied, namely an implementation date set for January 2006 (DoH, 2005), and this may be a welcome prompt into action for those areas that saw structured education as a lesser priority.

General Medical Services contract targets

In 2004, the new General Medical Services (nGMS) contract was implemented (DoH, 2003b). This introduced targets for a number of diabetes-related processes and outcomes. This time, financial incentives are attached to the attainment of these targets, some of which are listed in *Table 1*.

These targets also have desired goals, namely that people with diabetes are protected from developing micro- or macrovascular complications of diabetes. They do this by encouraging practices to screen patients for complications and to treat to achieve 'safe' levels of HbA_{1c}, blood pressure and total cholesterol. These are indeed laudable aims, but attaining them is not always without risk.

Achieving an HbA_{1c} of 7.4% in a person with longstanding diabetes is likely to require the use of multiple oral antidiabetic agents and/or insulin. It is well established that patients on insulin with an HbA_{1c} of 7% are at significantly increased risk of hypoglycaemia (Diabetes Control and Complications Trial [DCCT] Research Group, 1993), to which older people (who comprise a significant proportion of the diabetes population, yet are rarely included in trials on whose evidence such recommendations are based) may be particularly vulnerable.

A particular criticism of the current target is that a fall in HbA_{1c} from 9% to 8% is associated with a significant reduction in risk

of complications (UK Prospective Diabetes Study [UKPDS] Group, 1998a), yet this achievement is not recognised by the nGMS contract.

It may be argued that an HbA_{1c} of 8% may be more appropriate in some patients, such as an older person on insulin. Similar considerations might apply to an overweight person with suboptimal glycaemic control, in whom the next step would be insulin therapy. Starting insulin in this group may not lead to a significant fall in HbA_{1c}, but is often associated with hypoglycaemia and also weight gain, which itself is associated with an increase in vascular risk (Nicholls et al, 2005).

Achieving the blood pressure target can also cause problems. Antihypertensive drugs are commonly associated with side effects, and achieving a blood pressure of 145/85mmHg often requires the use of three or more agents (UKPDS Group, 1998b). Again, older people are at particular risk from such treatment, which may cause postural hypotension and increase the risk of falls.

For men, antihypertensive treatment may be associated with an increased frequency of erectile dysfunction, which may not be a price they feel is worth paying for very tight blood pressure control. As with HbA_{1c}, a systolic blood pressure reduction from 180mmHg to 160mmHg is associated with a significant reduction in vascular risk (UKPDS, 1998b), and an individual patient may forgo the additional benefit of a further reduction to 140mmHg if it means that he can maintain his erectile function.

In contrast, achieving a target lipid level is often much easier. The use of statins, which inhibit cholesterol formation, has led to a

PAGE POINTS

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2 Financial incentives are attached to the attainment of these targets.

3 While the aims of these targets are laudable, attaining them is not always without risk.

4 An individualised approach, taking both the patient goals and professional goals into consideration, is needed.

Table 1. Extract from the nGMS diabetes targets.

Indicator	Points	Maximum threshold
DM6* The percentage of patients with diabetes in whom the last HbA _{1c} is 7.4% or less in last 15 months	16	50%
DM12 The percentage of patients with diabetes in whom the last blood pressure is 145/85 mmHg or less	17	55%
DM13 The percentage of patients with diabetes who have a record of microalbuminuria testing in the previous 15 months (exception reporting for patients with proteinuria)	3	90%
DM17 The percentage of patients with diabetes in whom the last measured total cholesterol within the previous 15 months is 5 mmol/l or less	6	60%

(*DM=diabetes mellitus)

PAGE POINTS

1 When implementing targets in individuals, we need to consider not just the targets, but also the desired goals of the individual and our own professional goals.

2 The services that we provide therefore need to be structured to help achieve these goals.

3 The effect of striving towards a given target should be assessed in terms of whether it will help or hinder patients in achieving their own goal(s), and us in achieving ours.

4 My professional goal is 'to enable a person with diabetes to remain healthy and symptom free, with minimal disruption to their lifestyle or psychological wellbeing.'

5 This means that I have to provide services, or 'tools' that are consistent with meeting that goal.

significant reduction in cholesterol levels in many people with diabetes. Such reductions can occur with little effort on the part of the patient, other than taking a tablet every day, and usually with no side effects.

However, since the publication of the Heart Protection Study (HPS; Collins et al, 2003), there has been a move to higher prescribed doses of statin (e.g. 40mg simvastatin, from 10mg), and to broaden their use to a much wider patient group (for example, including younger people) regardless of the specific vascular risk (and hence benefit from statin use) in an individual person.

Anecdotally, this appears to have led to a higher incidence of side effects (commonly muscle pains), and even though the HPS provides an evidence base for widespread use of a higher dose of simvastatin, clinical experience suggests that a more individualised approach is preferable.

Responding to the targets

So, how should we as diabetes specialists respond to these targets? First, they should be welcomed as they do provide a framework for structuring diabetes care and designing care pathways to help achieve better outcomes for patients. Second, as with all targets, they can provide a lever to securing resources for diabetes care.

However, when it comes to implementing them in individual people with diabetes, we need to consider very carefully not just the targets prescribed from above, but also the desired goals of the individual, and of ourselves as professionals involved in the care of that individual.

In this context it may be helpful to consider what our goal is in providing care for people with diabetes. We can then structure the services that we provide to help achieve these goals, and assess the effect of striving towards a given target in terms of whether it will help or hinder patients in achieving their own goal(s), and us in achieving ours.

I would describe my goal as being:

'To enable a person with diabetes to remain healthy and symptom free, with minimal disruption to their lifestyle and psychological wellbeing.'

At a service level, this means that I have to provide services, or 'tools', that are consistent

with meeting that goal, e.g. a service in which people with diabetes:

- learn and maintain appropriate self-management skills
- have access to appropriate treatments consistent with the goal
- have access to screening for vascular risk factors and long-term complications of diabetes
- have access to treatment for acute and chronic complications.

Many process targets are entirely consistent with my overall goal. In type 1 diabetes, screening for microalbuminuria is important, as it is a marker of early diabetes-related renal disease. In type 2 diabetes, however, it is a marker of vascular risk, and previously we did not screen this group for microalbuminuria but focused on reducing overall vascular risk, while also screening for overt proteinuria (a marker of more severe renal disease).

The nGMS contract, however, stipulates that all diabetes patients should be screened for microalbuminuria in primary care. As a result, a number of patients with type 2 diabetes have now been identified as having quite marked levels of proteinuria. This suggests that our previous recommendation of proteinuria screening had not been implemented for these patients. Whatever the merits of microalbuminuria screening, applying a target and financial incentive to it has been effective in identifying individuals with previously undiagnosed proteinuria, which, as a result of the incentive, has been appropriately treated.

My approach to biomedical targets will be dictated by whether they will help achieve my stated goal, which, because of its emphasis on psychological wellbeing, has to take into account the personal targets of the patient. Hence, prescribing an angiotensin-converting enzyme (ACE) inhibitor to a young person with type 1 diabetes and microalbuminuria is likely to help them remain healthy. And if that can be achieved without causing side effects then they will remain symptom free.

However, if the ACE inhibitor causes dizziness or a cough, the potential long-term gains will be offset by real and immediate symptoms. These may be disruptive to the person's lifestyle and psychological wellbeing, especially if that person is depressed about

having diabetes and the restrictions it places on him/her. In such cases, taking extra medication is unlikely to be a high priority, and the individual is likely not to take it. The person's goals will be his/her priority, and unless those goals are known, understood and respected by the professional, and at least taken into account by the professional's goals, then the latter are unlikely to be achieved.

Consider the case of a man in his 30s with type 1 diabetes from childhood. His HbA_{1c} was 8.2% and he had frequent hypoglycaemia on a twice-daily insulin regimen. He felt very restricted by his diabetes and frustrated about the effects it had on his lifestyle, including the fact that he had never felt able to eat out at a restaurant. His goal was to have the confidence to take his wife out for a meal, knowing how much insulin to take without running the risk of having a hypoglycaemic episode.

To help achieve his goal, he switched to multiple daily injections and attended an intensive education programme from which he gained the knowledge and confidence to match his insulin dose to his carbohydrate intake. Now, he rarely experiences hypoglycaemia and, although his HbA_{1c} has not gone down, the restrictions on his lifestyle have been reduced, and he has achieved his goal. As a result, he has embraced some of the 'professional' goals by starting treatment for his hypertension, and is keen to try to improve his HbA_{1c}. This is clearly a preferable outcome to an approach focused upon reducing his HbA_{1c} to meet an arbitrary target, which would have risked increasing his hypoglycaemia and made his goal appear even less attainable.

Figure 1 shows how a care pathway incorporating management tools, patient goals and targets as 'a means to the end' can achieve the desired outcome, whereas one in which the target becomes the end in itself is likely to clash with a patient goal.

Conclusion

Targets are here to stay in diabetes care. They can be a desired goal or an object of criticism and our challenge is to use them to help improve diabetes care and not dictate it. The targets that really matter, and which are likely to be successfully achieved, are

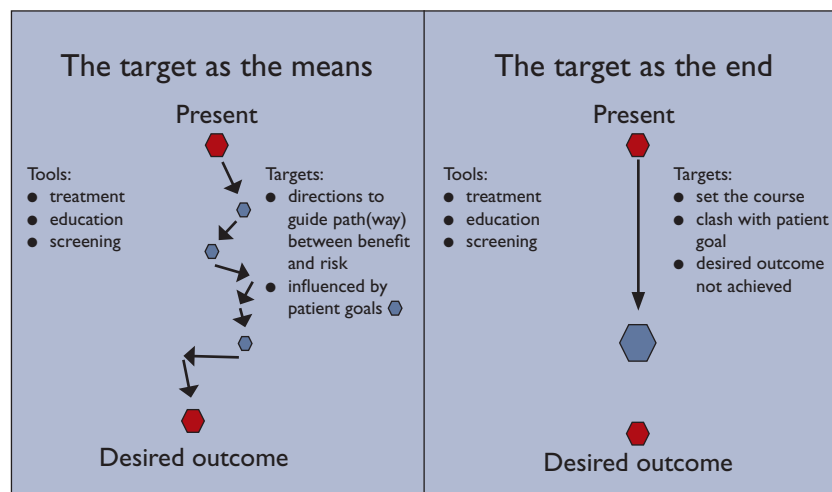


Figure 1. Using tools, targets and patients' goals to achieve the desired outcome.

those agreed by both patient and carer. Finally, targets can and should be ignored if, in an individual situation, they would do more harm than good. ■

Collins R, Armitage J, Parish S, Sleight P, Peto R; Heart Protection Study Collaborative Group (2003) MRC/BHF Heart Protection Study of cholesterol-lowering with simvastatin in 5963 people with diabetes: a randomised placebo-controlled trial. *Lancet* **361**(9374): 2005–16

Department of Health (DoH; 2003a) *National Service Framework for Diabetes: Delivery Strategy*. DoH, London

DoH (2003b) *Investing in General Practice: The new General Medical Services contract*. DoH, London

DoH (2005) *Structured patient education in diabetes: Report from the Patient Education Working Group*. DoH, London. Available at <http://www.dh.gov.uk/assetRoot/04/11/31/97/04113197.pdf> (accessed 08.12.2005)

Diabetes Control and Complications Trial Research Group (1993) The effect of intensive treatment of diabetes on the development and progression of long-term complications in insulin-dependent diabetes mellitus. *New England Journal of Medicine* **329**(14): 977–86

Healthcare Commission (2005) *State of Healthcare 2005*. Commission for Healthcare Audit and Inspection, London

Gulland A (2003) NHS staff cheat to hit government targets, MPs say. *British Medical Journal* **327**(7408): 179

National Institute for Clinical Excellence (NICE; 2003) *Guidance on the Use of Patient Education Models in Diabetes*. NICE, London

Nicholls H, Miles P, Knott J, Cavan D, Kerr D (2005) Treat the target or treat the patient? *Diabetic Medicine* **22** (Suppl 2): 26–7

UK Prospective Diabetes Study (UKPDS) Group (1998a) Intensive blood-glucose control with sulphonylureas or insulin compared with conventional treatment and risk of complications in patients with type 2 diabetes (UKPDS 33). *Lancet* **352**(9131): 837–53

UKPDS Group (1998b) Tight blood pressure control and risk of macrovascular and microvascular complications in type 2 diabetes (UKPDS 38). *British Medical Journal* **317**(7160): 703–13

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1 The patient's goals will be his/her priority, and unless these are known, understood and respected by the professional, and at least taken into account by the professional's goals, then the latter are unlikely to be achieved.

2 The targets that really matter, and which are likely to be successfully achieved, are those agreed by both patient and carer

3 Targets can and should be ignored if, in an individual situation, they would do more harm than good.